Government of Andhra Pradesh
Department of School Education

Suggestive Syllabus for
Mega DSC - 2024

State Council of Educational
Research and Training

GOVERNMENT OF ANDHRA PRADESH

DEPARTMENT OF SCHOOL EDUCATION

State Council of Educational Research and Training

SUGGESTIVE SYLLABUS FOR MEGA DSC - 2024

Follow 2023-24 Academic Year syllabus for 3 to 10 Classes

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PGT

PRINCIPALS

PHYSICAL EDUCATION

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC - 2024
SGT – SECONDARY GRADE TEACHER SYLLABUS

SGT Syllabus

1.	**G.K & Current Affairs**	–	**08M**
2.	**Perspectives in Education**	–	**04M**
3.	**Educational Psychology**	–	**08M**
4.	**Content & Methodologies**	–	**60M (40+20)**
	Total	–	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 08)

PART - II

II. Perspectives in Education (Marks: 04)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya

Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005**: Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy -2020**

PART - III

III. Educational Psychology – 8Marks

1. **Development of Child:** Development, Growth & Maturation – Concept & Nature. Principles of development and their education implications. Factors influencing Development – Biological, Psychological, Sociological, emotional. Dimensions of Development and their interrelationship – Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Childhood, Adolescence. Understanding Development – Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson.
2. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Classroom implementation.
3. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation – Children with special needs – Inclusive Education.
4. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART – IV (Language – 1_Optional)

Telugu: - Content (Class III to VIII – Difficulty level up to Class X): 8మార్కులు

1) తెలుగు వాచకాలలో పాఠ్యభాగ విషయాలు

A) కవి పరిచయాలు

B) పాత్రలు

C) ఇతి వృత్తాలు

D) సందర్భాలు

E) నేపధ్యాలు

F) విద్యా ప్రమాణాలు

2) పదజాలం: -

A) అర్థాలు

B) పర్యాయపదాలు

C) నానార్థాలు

D) వ్యుత్పత్త్యర్థాలు

E) జాతీయాలు

F) సామెతలు – వివరణ, గుర్తించడం.

G) పొడుపు కథలు

3) భాషాంశాలు:

A) విభక్తి ప్రత్యయాలు

B) ఔపవిభక్తికాలు

C) పారిభాషిక పదాలు – (ద్రుత ప్రకృతికాలు, కళలు, ఆమ్రేడితం, సంధి, వచనాలు, కాలాలు,లింగాలు, సమాసం, ఆగమం, ఆదేశం, బహుళం)

D) సంధులు – తెలుగు సంధులు– (అత్వ, ఇత్వ, ఉత్వ, యడాగమ, సరళాదేశ, ఆమ్రేడిత, ద్విరుక్తటకార, గసడదవాదేశ సంధులు.)
సంస్కృత సంధులు– (సవర్ణదీర్ఘ, గుణ, యణాదేశ, వృద్ధి సంధులు.)

E) సమాసాలు – (ద్వంద్వ, ద్విగు, తత్పురుష సమాసాలు)

F) ఛందస్సు – గణవిభజన, గణాల గుర్తింపు

G) అలంకారాలు –
వృత్యనుప్రాస, ఛేకానుప్రాస, అంత్యానుప్రాస (శబ్దాలంకారాలు) ఉపమా, ఉత్ప్రేక్ష, అతిశయోక్తి (అర్థాలంకారాలు). అలంకారాలు గుర్తించుట, లక్ష్య లక్షణ సమన్వయం చేయుట.

H) వాక్యాలు– (ఆశ్చర్యార్థక, విధ్యర్థక, నిషేధార్థక, అనుమత్యర్థక, సామర్థ్యార్థక, సందేహార్థక, ఆశీరర్థక, ప్రార్థనార్థక, ప్రశ్నార్థక, హేత్వర్థక, కర్తరి, కర్మణి వాక్యాలు)

తెలుగు బోధనా పద్ధతులు: 04 మార్కులు

ప్రాథమికస్థాయిలో భాషాభివృద్ధి మరియు అవగాహన

1) తెలుగు భాషా బోధన, ఉద్దేశాలు, విలువలు, లక్ష్యాలు, స్పష్టీకరణలు.

2) భాష – సమాజం – సాహిత్య ప్రక్రియలు

3) మాతృభాష స్వభావం, నిర్మాణం, ప్రాధాన్యత, భాషోత్పత్తివాదాలు, ధ్వని, అర్థ విపరిణామాలు

4) పాఠ్యపుస్తకాలు – బోధన శాస్త్రంపై అవగాహన

5) భాషా సామర్థ్యాలు విద్యా ప్రమాణాలు

6) బోధనా పద్ధతులు – బోధనాభ్యసన ప్రక్రియల నిర్వహణ

7) ప్రణాళికా రచన

8) బోధనాభ్యసన సామాగ్రి

9) ఆంధ్రప్రదేశ్‌లో భాషాభివృద్ధి కార్యక్రమాలు

10) భాష – మూల్యాంకనం

(OR)

Urdu (Class III to VIII – Difficulty level up to Class X):

Content: 8 Marks

I جماعت سوم تا جماعت ہشتم تک کی درسی کتب کا نصاب شامل ہے۔
- A. شعراء و ادباء کا تعارف
- B. اسباق میں موجود مختلف کرداروں کا پس منظر موقع و محل کا جائزہ
- C. تعلیمی معیارات

II لفظیات
- A. معنی
- B. مترادفات
- C. ذو معنی
- D. سابقے ، لاحقے
- E. محاورے

III زبان شناسی : اردو زبان کے عناصر
1. کلمہ ، مستقل کلمہ
2. ضمیر اور اس کے اقسام
3. رموز و اوقاف
4. فعل حال کے اقسام
5. زمانے
6. حروف شمسی اور قمری
7. مفرد اور مرکب الفاظ
8. مرکب توصیفی
9. متضاد
10. تشبیہ

Methodology: 04 Marks

تحتانوی سطح پر زبان کی ترقی اور فہم

سال اول

1. تحتانوی سطح پر زبان کی استعدادوں کی ترویج
2. درسی کتب - طریقہ تدریس کا فہم
3. کمرہ جماعت کا منصوبہ - اکتساب زبان ، احتساب

سال دوم

1. زبان اور سماج
2. زبان کی استعدادوں کی ترقی کرنا

3. زبان کے وسائل اور اس کا استعمال
4. زبان کی ترقی و ترویج کی کارکردگیاں
5. اکتساب زبان - متوقع نتائج
6. زبان – طریقہ تدریس کا انعقاد تحتانوی سطح پر منصوبے
7. زبان کی جانچ

(OR)

Kannada (Class III to VIII – Difficulty level up to Class X):

Content: 8 Marks

- **3 ರಿಂದ 8ನೇ ತರಗತಿಗಳ ಕನ್ನಡ ಪಠ್ಯಪುಸ್ತಕಗಳು, ಪೂರಕ ಪಾಠಗಳಲ್ಲಿನ ವಿಷಯಗಳು :**

  ಕವಿ – ಕಾವ್ಯಗಳು, ಲೇಖಕರು – ಕೃತಿಗಳು ಮತ್ತು ನಾಟಕಗಳ ಪರಿಚಯ, ಪಾಠದ ವಿವರಣೆ, ಹಿನ್ನೆಲೆ. ಪಾತ್ರಗಳ ಪರಿಚಯ, ಸಂದರ್ಭಗಳು, ಸನ್ನಿವೇಶಗಳು.

- **ಪದಸಂಪತ್ತು :**

  ಅರ್ಥಗಳು, ನಾನಾರ್ಥಗಳು, ಸಮನಾರ್ಥಕ ಪದಗಳು, ವ್ಯುತ್ಪತ್ತಿ ಅರ್ಥಗಳು, ನುಡಿಗಟ್ಟುಗಳು ಮತ್ತು ಲೋಕೋಕ್ತಿಗಳು – ವಿವರಣೆ, ಗುರ್ತಿಸುವುದು.

- **ಭಾಷಾಂಶಗಳು :**

  1. ವಿಭಕ್ತಿ ಪ್ರತ್ಯಯಗಳು
  2. ಪಾರಿಭಾಷಿಕ ಪದಗಳು
  3. ವಚನಗಳು, ಲಿಂಗಗಳು, ಕಾಲಗಳು, ಸಮಾಸಗಳು, ಒಗಟುಗಳು
  4. **ಸಂಽಗಳು :** ಕನ್ನಡ ಮತ್ತು ಸಂಸ್ಕೃತ ಸಂಽಗಳು, ಲಕ್ಷಣಗಳನ್ನು ಗುರುತಿಸುವುದು
  5. **ಸಂಽಗಳು :** ಸಮಾಸಗಳನ್ನು ಗುರ್ತಿಸುವುದು, ವಿಗ್ರಹವಾಕ್ಯ ಮಾಡುವುದು, ಲಕ್ಷಣಗಳನ್ನು ಸಮನ್ವಯ ಗೊಳಿಸುವುದು
  6. **ಛಂದಸ್ಸು :** ಮಾತ್ರಾಗಣ, ಅಕ್ಷರಗಣ ಗುರುತಿಸುವಿಕೆ
  7. **ಅಲಂಕಾರಗಳು :** ವೃತ್ಯಾನುಪ್ರಾಸ, ಛೇಕಾನುಪ್ರಾಸ, ಅಂತ್ಯಪ್ರಾಸ (ಶಬ್ದಾಲಂಕಾರ) ಉಪಮ, ಉತ್ಪ್ರೇಕ್ಷ, ರೂಪಕ, ದೃಷ್ಟಾಂತ (ಅರ್ಥಾಂಲಕಾರ) ಅಲಂಕಾರಗಳನ್ನು ಗುರ್ತಿಸುವುದು, ಲಕ್ಷಣಗಳನ್ನು ಸಮನ್ವಯ ಗೊಳಿಸುವುದು.
  8. **ವಾಕ್ಯಗಳು :** ಭಾವಸೂಚಕ, ವಿದ್ಯರ್ಥಕ, ನಿಷೇಧಾರ್ಥಕ, ಸಂಭವನಾತ್ಮಕ, ಪ್ರಶ್ನಾರ್ಥಕ, ನಕಾರಾತ್ಮಕ, ಕರ್ತರಿ, ಕರ್ಮಣಿ ವಾಕ್ಯಗಳು

Methodology: 04 Marks

ಕನ್ನಡ ಭಾಷಾ ಬೋಧನಾ ಪದ್ಧತಿಗಳು :

1. **ಕನ್ನಡ ಭಾಷಾ ಬೋಧನೆ ಮತ್ತು ಬೋಧಕ** : ಬೋಧನೆಯ ಉದ್ದೇಶಗಳು ಮತ್ತು ಗುರಿಗಳು, ವಿಧಾನಗಳು
2. **ಭಾಷಾ ಕೌಶಲ್ಯಗಳು :** ವಾಚನ ಕೌಶಲ್ಯ – ಉದ್ದೇಶಗಳು, ಪ್ರಕಾರಗಳು, ಮಹತ್ವ, ಓದುಗಾರಿಕೆಯ ವಿಧಾನಗಳು, ಗಮನಿಸಬೇಕಾದ ಅಂಶಗಳು, ಧ್ವನ್ಯಂಗಗಳ ಉತ್ಪಾದನಾ ಕಾರ್ಯ.
3. **ಲೇಖನ ಕೌಶಲ್ಯಗಳು :** ಲೇಖನ ಕೌಶಲ್ಯ – ಉದ್ದೇಶಗಳು – ಕಲಿಸುವ ಕ್ರಮಗಳು – ಗಮನಿಸಬೇಕಾದ ಅಂಶಗಳು – ದೋಷಗಳ ನಿವಾರಣೋಪಾಯಗಳು.

4. **ಮಾತುಗಾರಿಕೆ** : ಉದ್ದೇಶಗಳು – ಉತ್ತಮ ಪಡಿಸುವ ಚಟುವಟಿಕೆಗಳು – ದೋಷಗಳು ಮತ್ತು ನಿವಾರಣೆ ಉಪಾಯಗಳು
5. **ಬೋಧನಾ ಪದ್ಧತಿಗಳು** : ಪದ್ಯ ಬೋಧನೆ ಮಹತ್ವ – ಬೋsಸುವ ಕ್ರಮ – ಪದ್ಧತಿಗಳು, ಗದ್ಯ ಬೋಧನೆ– ಮಹತ್ವ –ಕ್ರಮ – ಪದ್ಧತಿಗಳು, ವ್ಯಾಕರಣ ಬೋಧನೆ – ಮಹತ್ವ – ಉದ್ದೇಶ – ಗುರಿಗಳು –ಪದ್ಧತಿಗಳು – ವಿಧಾನಗಳು.
6. **ಪಠ್ಯಕ್ರಮ ರಚನೆ** : ತತ್ವಗಳು – ಗಮನಿಸಬೇಕಾದ ಅಂಶಗಳು – ದಾಷ್ಟೀಕರಣ – ವಾಚನಾಲಯ
7. **ಬೋಧನಾ ಸಂಪನ್ಮೂಲಗಳು** : ಬೋಧನೋಪಕರಣಗಳ ಮಹತ್ವ – ಪಾತ್ರ – ವರ್ಗೀಕರಣ ಬೋಧನೋಪಕರಣಗಳನ್ನು ಬಳಸುವ ರೀತಿ.
8. **ಮೌಲ್ಯಮಾಪನ** : ಭಾಷಾಭಿವೃದ್ಧಿಯನ್ನು ಅಳೆಯಲು ವಿವಿಧ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳು – ಮೌಲ್ಯಮಾಪನ ವಿಧಗಳು – ನೀಲ ನಕ್ಷೆ

(OR)

Oriya (Class III To VIII – Difficulty level up to Class X):

Content: 8 Marks

1) ତୃତୀୟ ଶ୍ରେଣୀଠାରୁ ଅଷ୍ଟମ ଶ୍ରେଣୀ ପର୍ଯ୍ୟନ୍ତ ସାହିତ୍ୟ ପାଠ୍ୟ ବହି ଅନ୍ତର୍ଗତ :-
   - ବିଷୟବସ୍ତୁ, କବି/ଲେଖକ ପରିଚୟ, ବିଭିନ୍ନ ଚରିତ୍ର, ପୃଷ୍ଠଭୂମି, ପୂର୍ବା ପର ପ୍ରସଙ୍ଗ, ବୈଶିଷ୍ଟ୍ୟ, ବିଭିନ୍ନ ଶିକ୍ଷାମାନ ସହ ଅନ୍ୱୟ ।

2) ଶବ୍ଦ ଭଣ୍ଡାର :-
   - ଶବ୍ଦାର୍ଥ, ପ୍ରତିଶବ୍ଦ , ଭିନ୍ନାର୍ଥ, ମୌଳିକ ତଥା ବ୍ୟୁତ୍ପନ୍ନ ଶବ୍ଦ, ଶବ୍ଦର ଗଠନଧାରା , ଲିଙ୍ଗ, ପୁରୁଷ, ବଚନ, ସାଧାରଣ ଅଶୁଦ୍ଧି ଶବ୍ଦ, ପ୍ରତ୍ୟୟ ଶବ୍ଦ, ବିପରୀତାର୍ଥ, ଭିନ୍ନ ଜାତୀୟ ଶବ୍ଦ, ଏକପଦରେ ପ୍ରକାଶ ।
3) ଭାଷା ପ୍ରକରଣ :-
   - ବିଶେଷ୍ୟ, ବିଶେଷଣ, ସର୍ବନାମ, କ୍ରିୟା, ଅବ୍ୟୟ, ସନ୍ଧି, ସମାସ, ଛନ୍ଦ, ଅଳଙ୍କାର, ବାକ୍ୟର ପ୍ରକାର ଭେଦ ଆଦିର ସଂଜ୍ଞା, ସ୍ୱରୂପ, ଗଠନରୀତି ଓ ପ୍ରକାର ଭେଦ ।

METHODOLOGY – 4 Marks

1) ପ୍ରାଥମିକ ସ୍ତରରେ ମାତୃଭାଷା ଶିକ୍ଷାଦାନର ଗୁରୁତ୍ୱ, ଲକ୍ଷ୍ୟ ଓ ଉଦ୍ଦେଶ୍ୟ
2) ଭାଷା କୌଶଳ
3) ଶିକ୍ଷଣ କାର୍ଯ୍ୟଭିତ୍ତିକ ପାଠ ଯୋଜନା
4) ଶିକ୍ଷାଦାନ ପଦ୍ଧତି
5) ମୂଲ୍ୟାୟନ [CCE]

(OR)

Tamil (Class III To VIII – Difficulty level up to Class X):

Content: 08 Marks

I. **புரிந்துகொள்ளுதல் - விடையளித்தல்**

அ) அறியாப் பத்தி ஆ) அறியாச் செய்யுள்

II. **3ஆம் வகுப்பிலிருந்து 8ஆம் வகுப்பு வரை தமிழ் பாடப் புத்தகத்திலுள்ள அனைத்தும்.**

அ) ஆசிரியர் குறிப்பு (3ஆம் வகுப்பிலிருந்து 8ஆம் வகுப்புவரை)

ஆ) சிறப்பம்சங்கள் (3ஆம் வகுப்பிலிருந்து 8ஆம் வகுப்புவரை செய்யுள்)

சொல்லாக்கம் :

3ஆம் வகுப்பிலிருந்து 8ஆம் வகுப்புவரையுள்ள

அ) சொற்பொருள் ஆ) தொகைச்சொல் இ) பிரித்து எழுதுக ஈ) சேர்த்துஎழுதுக உ) மரபுச் சொற்கள் ஊ) பிறமொழி சொல்லுக்கு தமிழ்ச்சொல் எ) வழக்கு (பேச்சு, எழுத்து) ஏ) ஒரு பொருள் குறித்த பல சொற்கள்.

III. **மொழித்திறன் :**

3ஆம் வகுப்பிலிருந்து 8ஆம் வகுப்புவரையுள்ள

அ) எழுத்து (முதலெழுத்து, சார்பெழுத்து) ஆ) காலம் இ) பால் ஈ) இடம் உ) திணை ஊ) மூவகைப்போலி எ) நால்வகைச்சொற்கள் ஏ) வேற்றுமை உருபுமட்டு ஐ) புணர்ச்சி (இயல்பு, விகாரம்) ஒ) யாப்பு (அசைகளை அடையாளம் காணல்) ஓ) அணி செய்யுளில் அமைந்துள்ள அணியை அடையாளம் காண்) ஔ) தொடர்கள் (செய்வினை, உணர்ச்சி, கட்டளை, எதிர்மறை)

Methodology: 04 Marks

* **தமிழ்மொழி கற்பித்தல் முறைகள் :**

முதலாம் ஆண்டு D.Ed.

* தமிழ் மொழித்திறன் வளர்த்தல்.
* மொழியின் இயல்பும் கற்பித்தலும்.
* அடிப்படைத் திறன்கள் - பாடங்களைக் கற்பித்தல்.
* பாடம் கற்பிப்புத் திட்டம்.

இரண்டாம் ஆண்டு D.Ed.

* பாட ஏற்பாடு - சொற்களஞ்சியம் பெருக்குதல்.
* தமிழ் மொழித்திறன் வளர்த்தல்.
* தமிழ் கற்பித்தலில் தகவல் தொழில் நுட்பம்.
* தேர்வும் - மதிப்பீடும்.

PART – V (Language – II)

English (Marks: 8) (Class III To VIII – Difficulty level up to Class X):

1. Poets, Essayists, Novelists, Dramatists and their works
2. Writing of discourse - Story, Essay, Letter writing, Editorial, Precis writing, note-making, autobiography and biography
3. Pronunciation - Sounds - Use of dictionary
4. Parts of Speech
5. Tenses
6. Types of Sentences
7. Articles and Prepositions

Methodology - English (Marks: 04)

1. Aspects of English:- (a) English language - History, Nature, Importance, Principles of English as Second Language (b) Problems of Teaching / Learning English.
2. Objectives of Teaching English.
3. Development of Language skills:- (a) Listening, Speaking, Reading & Writing (LSRW) (b) Communicative skills.
5. Approaches, Methods, Techniques of teaching English: Introduction, Definition and Types of Approaches, Methods and Techniques of Teaching English, Remedial Teaching.
6. Teaching of Structures and Vocabulary items.
7. Teaching Learning Materials in English
8. Lesson Planning
9. Curriculum & Textbooks
10. Evaluation in English language

PART - VI

Mathematics Content (8 Marks) (Class III To VIII – Difficulty level upto Class X):

I. Numbers :

Numbers - Four fundamental operations (Addition, Subtraction, Multiplication, Division) - Knowing about Numbers - Hindu-Arabic system of numeration (Indian system of numeration) - International system of numeration (British system of numeration) - Place value and Face value of a digit in a number - Comparing and Ordering of Numbers - Whole Numbers - Factors and Multiples - Prime and Composite numbers - Even and Odd numbers - Tests for Divisibility of Numbers - Common Factors and Common Multiples - Prime factorisation - Highest Common Factor (G.C.D) - Lowest Common Multiple - Integers - properties and fundamental operations - Fractions and decimals - Types of fractions - comparison - Applications of fractions in daily life - four fundamental operations on fractions and decimals - Rational Numbers - Properties of Rational Numbers - Rational Numbers between two rational numbers - Four fundamental Operations on Rational Numbers - Product of reciprocals - Squares - Square roots (Numbers and Decimals) - Properties of Square Numbers - Cubes - Cube roots of Numbers - Playing with Numbers - Games with Numbers - Letters for Digits.

II. Arithmetic :

BODMAS rule - Ratios and Proportions (Direct, Inverse) - comparing quantities using ratios, proportion, percentage and their applications - Profit and Loss - Discount - Sales Tax/Value Added Tax/Goods and Services Tax - Simple, Compound Interest and their applications.

III. Geometry :

Basic geometrical concepts (Point, Line, Line segment, Ray, Curves, Polygons, Angles) - Measuring of Lines - Pairs of Lines - Elements of Angles - Measuring of Angles - Types of Angles - Naming of the given 2D figures of Triangles, Square and Rectangle - The Triangle - Types of Triangles and its Properties - Classification of Polygons - Angle sum property - Kinds of Quadrilaterals (Trapezium, Kite, Parallelogram) - Some special parallelograms (Rhombus, Rectangle, Square) - Constructing different types of Quadrilaterals - Views of 3D-Shapes - Identification of Edges, Vertices and Faces of 3D figures (Euler's Rule) - Nets for building 3D shapes.

IV. Data Handling:

Reading and interpreting and analysing the Data (pictograph, tally marks, bar graphs, double bar graph, pie charts) - Arithmetic Mean - Mode - Median of un-grouped data - Chance and Probability.

V. Algebra:

Patterns - making rules - The idea of variables - formation of algebraic expressions -Terms, Factors and Coefficients - Linear equations in one variable - terms and types of algebraic expressions - finding the value of an expression - Addition, Subtraction and Multiplication of Algebraic Expressions - Multiplying a Monomial by a Monomial and polynomial - Multiplying a Polynomial by a Polynomial - Standard Identities and their applications - Applications of simple equations to practical situations - Exponents and Powers - Negative exponents - Laws of exponents - Expressing large numbers in the standard form -

Factorisation - Division of Algebraic Expressions Continued (Polynomial ÷ Polynomial) - Linear Graphs.

VI. Mensuration:
Measuring Length, Weight, Capacity, Time-Seasons, Calendar, Money, Area - Symmetry (Line and Rotational) - Perimeter of Triangle, Square, Rectangle, Rhombus, Trapezium, Parallelogram, Circle and Polygon), Area of a Quadrilateral, Surface Area and Volume of Cube, Cuboid and Cylinder -Volume and capacity.

Mathematics Methodology (04 Marks)

1. Nature and Definitions of Mathematics
2. Aims, values and instructional objectives of teaching Mathematics
3. Methods of Teaching & Remedial measures in Mathematics
4. Instructional Material, TLM and Resource Utilization in Mathematics
5. Curriculum, Textbooks & Instructional Planning.
6. Evaluation and Continuous Comprehensive Evaluation

PART – VII

Science Content (Marks: 08) (Class III To VIII – Difficulty level upto Class X):

1. Living World:

Living and non-living things - Characteristics of living organisms

Plants -Types of plants- Herb, shrub, Tree, basing on habitat – Terrestrial, Aquatic, Desert etc, plant parts -functions

Animals – Animals around us – Oviparous, viviparous; herbivore, carnivore, omnivore; shelters of different animals, Birds – beaks, Domestic animals, Wild animals, Types of animals basing on habitat, herbivore, carnivore, omnivore, Animals sounds, Movements in animals, Different types of habitat and adaptation, Homes of animals, Nests of birds.

Human beings - Body parts, Healthy body – good habits, Sense organs and their care, concern for differently abled persons, Good touch and Bad touch, Skeletal parts – Bones, Joints, Cartilage; muscles, Safety measures – at home, school safety, Road safety, water hazards, First- aid.

Food - Food, Need of food, Sources of food – plants, animals, Types of food, Cooked and raw foods, Utensils, Mid-day meal, Methods of preparing food, Food wastage, Preservation of food, Good food habits, Our food, Components of food, Balanced diet, Junk food, Deficiency diseases

Agricultural Practices, Tools used in agriculture, Methods of agriculture, Storage of food, Food from Animals, Food for birds and animals.

Family - Role of family members, Family Tree, Types of family, Changing family structure, Family Budget, Shelter for all, Different types of houses, Home appliances, Migration – Reasons, Effects, Slums, Homeless people.

Cell – The basic unit of life, Types of cells, Cell structure and function.

Microorganisms - Introduction to microorganisms – types, Useful Microorganisms, Harmful microorganism.

Games and recreation- indoor, outdoor, local games, uses, materials used and the rules.

2. Life processes :

Nutrition - Nutrition in plants – Autotrophic, Parasitic, saprophytic, Insectivorous, Different ways of taking food, Digestion in humans, Digestion in grass eating animals, feeding and digestion in amoeba.

Respiration - Types of respiration, Respiration in animals, Respiration in plants,

Circulation - Circulatory system in human being -Transport of substances in plants.

Excretion in animals,

Coordination- Nervous system,

Reproduction - Modes of reproduction – sexual, asexual and vegetative, Seed dispersal, Sexual and Asexual Reproduction in Animals, Adolescence and puberty – changes, role of hormones, Reproductive phase, Sex determination, Hormones other than sex hormones, Metamorphosis, Reproductive health

3. Natural Phenomena :

OBJECTS AND MATERIALS

Objects around us – Properties of materials - classification of materials, Properties and uses of Metals and Non-metals, Reactivity order of metals, Methods of separation– Saturated and unsaturated solutions. Acids, bases and salts, indicators, Neutralization, Physical and chemical changes, Rusting of Iron, Galvanization, Crystallization.

MEASUREMENT OF DISTANCES – MOTION

Measurement of distances, Standard units and non-standard units of measurements, Motion and rest, Types of motion, Motion and time – speed, average speed, Uniform and non-uniform motions, Measurement of time, Time period, Units of time and speed, Measuring speed, Distance-time graph,

LIGHT

Light, shadows, and reflections, Transparent, opaque and translucent objects, pin hole camera, mirrors and reflection, Regular and Diffused Reflection, multiple images, kaleidoscope, periscope, Characteristics of images formed by mirrors, Spherical mirrors and images, Lenses and images, Sunlight – dispersion, Human Eye, Care of the Eyes, Braille System, Visually Impaired Persons

ELECTRICITY

Simple electric circuit and its components, Symbols of electric components, Electric conductors and insulators, Heating effects of electric current, CFL, LED, Fuse and MCB, Magnetic effects of electric current, Electromagnet, Electric bell, Chemical Effects Of Electric Current, Good/Poor Conducting Liquids, Electroplating.

MAGNETISM

Magnets – Discovery of magnets, Magnetic and non magnetic substances, Types of magnets, Properties of magnets, Magnetic compass, Storing of magnets.

HEAT

Heat – temperature, measuring temperature, Units of temperature, Types of Thermometers, Transfer of heat – conduction, convection, radiation.

FORCE, FRICTION AND PRESSURE

Force – push or pull, Exploring forces, net force, Effect of force on objects, Contact and non contact forces, Pressure, Fluid pressure, Atmospheric pressure, Friction, Factors effecting friction, Friction: A necessary evil, Increasing and reducing friction, Types of friction.

COMBUSTION AND FUELS

Exhaustible and inexhaustible resources, Fuels–Types, Coal, Uses of Coal and Coal products, Refining of petroleum, Petrochemical products in various sectors, Various Constituents of Petroleum and their Uses, Formation of coal and petroleum, Natural Gas, Misuse of Energy resources and Consequences. Combustion, Types of Combustion, Ignition temperature, Inflammable substances, Flame, Fuel Efficiency, Burning of Fuels Leads to Harmful Products, Fire control, Structure of flame – colour zones–Intensities.

FIBRES

Natural and Synthetic fibres, Preparation and uses, Types and Characteristics of Synthetic Fibres, Our dress our culture, Kinds of clothes we wear in winter and summer, Plastics as Materials of Choice, Types of plastics, Plastics and environment, Biodegradable – Non biodegradable materials.

SOUND

Sound - a form of energy, Production of sound, Some musical instruments, Propagation of sound, Human ear, Hearing Impairment, Noise and Music, Types of waves (longitudinal and transverse), Characteristics of sound waves (Wavelength, Frequency, Time period, Speed of the wave),Pitch, Loudness and Quality, Audible and Inaudible sounds, Noise pollution.

SOME NATURAL PHENOMENA

The Story of Lightning, Charging by Rubbing, Electric charge and properties of electric charge, Types of charges and their interactions, Transfer of charge, lightning, lightning safety, lightning conductors, Earth quake, Tsunami, Causes and effects, Protective measures.

OUR UNIVERSE

The Moon, The Moon's Surface, Phases of Moon, Eclipses (Solar and lunar eclipses), The Stars, Movement of Stars(Constellation, polestar), Movement of the Sun, Solar System, Planets and Some Other Members of the Solar System, Artificial Satellites.

4. Transportation and Communication:

Transportation - Story of transport – Objects-signs and signboards used for transport – Places associated with transport –Modes of travel in the present and in the past – Methods of transport in different topographical conditions (Transport in hilly areas, Forests, Deserts, Snowy areas, Rivers & Canals) - Need for an international transport -Import and export of the goods- different means of transport of goods-Importance of tourism and seven wonders of the world.

Communication – Means and objects of Communication-Types of Communication both in Human and Animals (different feelings and gestures) Modern forms of communication – Communication used in the past and present-Advantage of Mass Communication-Communication through Postcard, Cell Phone, E-Mail, News Paper, Radio, TV, and Social Media etc.,

How communication and transport brings the entire world together.

5. Professions and Services:

Household materials with reference to profession (farmer, cobbler, tailor etc)-Different professions and their need to the society- villager/farmer (seeds/manure/ agri methods etc.,) , helping agents (bank, e- seva, PHC, panchayat office, post office/etc.,) Governance and Services - Local Self Govt, State, Central Govt, Judiciary.

6. OUR ENVIRONMENT

Climate – Climate change, Weather- Climate- rain- floods-Cyclones-disaster management,

Global environmental issues – Green house effect, Global warming, Acid rains. Eco-friendly activities, Say 'no' to plastic.

Air - Presence of air, Components of air, Properties of air, Availability of oxygen to animals and plants, Replacement of oxygen in the atmosphere, uses of air, Nitrogen cycle, Air pollution -causes, effects and prevention.

Water - Forms of water, Uses of water, source, scarcity, protected water, wastage of water, Water resources, Tank pollution, safe drinking water, tank management, journey of rain drop – Water cycle, water magic, water properties, Water resources, major rivers in AP, fisherman, water transport, tragedy of rivers, drought and floods, water pollutions - Causes, effects and prevention. Sewage, Treatment of polluted water, Better house keeping practices, Sanitation and Disease, Alternative arrangement for sewage disposal.

Biodiversity - Forests, Flora, fauna, interrelation of organisms, Green world, Advantages of forests, Deforestation - effects, Chipko movement, Conservation of forest and wildlife – Protecting areas, endangered and endemic species.

Methodology: (04 Marks)

1. Nature, Scope, History and development of science.
2. Aims, Values, Objectives specifications of teaching Science, Academic Standards.
3. Methods, approaches and techniques of teaching science.
4. Teaching learning material, Improvised teaching aids.
5. Science curriculum, Text – book.
6. Assessment and Evaluation
7. Science laboratories.
8. Planning in science teaching (Year Plan, Lesson Plan)
9. Role of Science Teacher
10. Science Fairs, Science clubs, Field – trips, Science museums.

PART - VIII

Social Studies Content - 8Marks (Class III To VIII – Difficulty level up to Class X):

Theme - I: Our Universe

The shape of the Earth, The Universe- Origin, solar System, Our Earth in the Solar System – Celestial bodies, Constellations, Realms of the Earth- Latitudes and Longitudes -Movements of Earth – Solar System- Globe-Model of Earth – Axis of Earth, Equinox – Eclipses.

Maps – Directions, Scale, Symbols, Patterns, Types, Where are we-Village, Mandal, District, country maps.

The Earth - Environment – Components, Interior of the Earth, Atmosphere, Biosphere, Pollution, Disasters.

Land Forms – Major Land Forms in AP, Podu cultivation, Diversity in Lifestyles.

Forests-Climatic Regions - Types of Forests, Forests in AP, Uses - Deforestation, Conservation of Forests.

Land, Soil, Water, Natural Vegetation and Wildlife Resources.

Theme - II: Production Exchange and Livelihoods

Migration of people- Reasons for migration, effects of migration, Slums, Family Budget, Profession and services- Farmer, Tailor.

Resources – Types, Conservation, Mineral and Power Resources – Types of Minerals, Distribution, Conservation Power Resources: Conventional, Non-Conventional.

Human Resources - Distribution of Population, Density of Population, Population Change, population composition.

Agriculture – Types of farming, Major crops; industries- Classification and Distribution.

Weavers, Iron Smelters, factory owners, Indian Textile and the world market-The sword of Tipu Sultan and Wootz steel, Public facilities, Water as a part of fundamental Right to Life-Govt. Role.

Markets around Us - Types of Markets - Consumer Protection.

Transport system, International Transport, Exports and Imports, Global Village, Road ways, My bicycle, Vehicles other than Transport, Transport in Hill areas, Forests, deserts, snowy areas, rivers and canals, Road Safety, Traffic symbols, Road safety measures, pedestrian safety, safe cycling, safety travelling.

Theme -III: Political Systems and Governance

Early Life to Settled life- Early people, Nomadic life, Belum caves, Rock paintings, Growing plants, Rearing animals, Towards a settled life, Emergence of Kingdoms and Republics, Mahajanapadas, Magadha, Vajji Kingdoms and Empires- Mauryan, Guptas, Satavahanas, Pallava, Chalukya Dynasties.

Delhi Sultanate, Kakatiyas, Vijayanagara Empire, Mughals, Contemporary Kingdoms.

Governments – Types, Monarchy, Democracy, Different levels, Local and Self Government, State and Central Governments; Why do we need a Parliament?, The role of the Parliament,

Who are the people in the parliament?; State Government – Legislature, Executive, Judiciary-Role, Independent Judiciary, Structure of Courts in India, Different Branches of the legal system- Understanding our Criminal Justice System – the role of police and Public Prosecutor, Judge, Fair Trail- Law and Social Justice – Bhopal gas Tragedy, Enforcement of Safety Laws, New laws to protect the Environment.

The Indian Constitution, key features – Fundamental Rights – Fundamental Duties; Understanding Secularism, Understanding Laws.

- Civilizing the "Native" Educating the nation- How the British saw Education? – What happened to the local schools?- the agenda for a National Education, How Important are Dates, How do we periodise, What is Colonial?,- From Trade to Territory-The Company establishes Power, East India Company, Battle of Plassey, Tippu Sultan, The Doctrine of Lapse, Setting up a new administration – Ruling the countryside – Diwani system, Munro system, Demand for Indian Indigo, The Blue Rebellion and after – Tribals, Dikus and the vision of Golden age-How did Tribal groups live?, How did colonial rule effect Tribal lives?, Forest Laws and their impact- Birsa Munda.

Indian Freedom struggle, When people Rebel 1857 and after- Policies and the people, Through the Eyes of the people, A Mutiny becomes a popular Rebellion, the company fights back, The making of the National Movement: 1870's to 1947- The emergence of nationalism, The growth of mass nationalism, The March to Dandi, Quit India and Later – India after Independence- A new and divided nation, A Constitution is written, How were states to be formed – Planning for development, A Nation sixty years on

Theme -IV: Social Organization and Inequities

Inequality, Steps towards equality – Constitutional provisions, Remedial measures for abolishing inequality, Will Discrimination and inequalities stop people from achieving their goal.

Women Change the World, Women's movement, Inspirational Women- Women, Caste and Reforms- Working towards change: Changing the lives of Widows, Girls begin going to School, Women write about women, Caste and social reform: Gulamgiri who could enter, The Non Brahman Movement.

Understanding Marginalisation – Adivasis and Development, Minorities and Marginalisation-Confronting Marginalisation- Invoking Fundamental Rights-Laws for the Marginalised, Protecting the rights of the Dalits and Adivasis, Adivasis Demands and the 1989 Act.

Theme - V: Religion and Society

Religions – Hinduism, Jainism, Buddhism, Islam and Sikhism, Unity in Diversity; Bhakthi and Sufi Movements

Theme -VI: Culture and Communication

Together with everyone – communication, Postal services, mobiles, E-mail, Mass communication, Newspaper, Radio, TV, Social Media.

Let us Visit-Historical and Tourist places in AP; Early Civilisations- Indus Valley civilisation, vedic period, vedic literature; Indian Culture, Languages.

Methodology: (04 Marks)

1. Nature, Scope, History and development of Social.
2. Aims, Values, Objectives specifications of teaching Social, Academic Standards.
3. Methods, approaches and techniques of teaching Social.
4. Teaching learning material, Improvised teaching aids.
5. Social curriculum, Textbook.
6. Assessment and Evaluation
7. Social laboratories.
8. Planning in Social teaching (Year Plan, Lesson Plan)
9. Social Teacher roles and responsibilities.
10. Fairs, Clubs, Field – trips, museums

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC – 2024_Special Education
SGT – SECONDARY GRADE TEACHER SYLLABUS

1.	**G.K & Current Affairs**	**–**	**08M**
2.	**Perspectives in Education**	**–**	**04M**
3.	**Educational Psychology**	**–**	**08M**
4.	**Category of disability specialization**	**–**	**20M**
5.	**Content & Methodologies**	**–**	**40M (25+15)**
	Total	**–**	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 08)

II. Perspectives in Special Education and Inclusive Education (Marks: 04)
(As per Rehabilitation Council of India, D.Ed. Spl.Ed Curriculum)

1. Nature of Education
2. Philosophical Foundations of Education
3. Agencies of Education
4. Educational Provisions in India
5. Education of children with hearing and speech disabilities / Low vision
6. School Administration

III. Psychology with reference to CWSN - 08Marks
(As per Rehabilitation Council of India, D.Ed. Spl.Ed Curriculum)

1. Growth and Development
2. Ages and stages of development (Birth to Childhood)
3. Psychology and Learning
4. Psychological processes and their Implications for Children with different Disabilities
5. Classroom Management

PART – II

I. Category of disability specialization – 20Marks

(As per Rehabilitation Council of India, D.Ed. Spl.Ed Curriculum)

i. HI-Hearing Impairment

Hearing & Deafness, Causes, Prevention and Effects of Deafness, Identification of Deafness and Assessment of Hearing, Amplification Devices, Auditory Learning, Communication & Language, Modes and methods of Linguistic Communication, Assessment of Language, Methods and techniques of language development in DHH students, Literacy for DHH children, Introduction to speech and speech production, Description of speech sounds, Development of speech, Speech problems in children with hearing impairment, Teaching speech to the children with hearing impairment, Introduction to Curriculum and Curricular Strategies, Curriculum and Adaptations, Techniques of Evaluation for Curricular Activities, Role of Language in Education and Teaching Strategies with Necessary adaptations for the children with hearing impairment, Universal Design for Learning (UDL), inclusive education, Diversity and Inclusivity, Concept and Meaning of Inclusive Education, Creating supports for inclusive education , Curricular strategies for inclusive education , Collaborations for inclusive education, Deaf gain and Identity, Sign Languages in Education, family and community, Understanding family , Family and disability, Role of family in early childhood care and education (ECCE), Community for disability rehabilitation , Role of community in education of children with disabilities

(OR)

ii. VI-Visual Impairment

Introduction to disabilities, Understanding Disability, Early Identification and Intervention, Human Resource in Disability Sector, Definition, Causes & Preventive measures, Types, Educational Implications, and Management of disabilities, Psycho-educational implications of blindness and low vision, Anatomy and Physiology of Human Eye, Effects of Blindness and Low Vision, Educational Perspectives: Blindness and Low Vision, Children with Visual Impairment with Additional disabilities (VIAD), Management of Children with VIAD, teaching of expanded core curriculum to children with blindness and low vision, Expanded Core Curriculum & Concept Formation, Teaching of Braille, Sensory Training, Teaching of Orientation and Mobility, Teaching of Daily Living Activities, Social Skills and Assistive Devices, inclusive education, Diversity and Inclusivity, Concept and Meaning of Inclusive Education, Creating supports for inclusive education, Curricular strategies for inclusive education, Collaborations for inclusive education, family and community, Understanding family, Family and disability, Role of family in early childhood care and education (ECCE), Community for disability rehabilitation, Role of community in education of children with disabilities

PART - III

Telugu: - Content (Class III to VIII): 5మార్కులు

1) తెలుగు వాచకాలలో పాఠ్యభాగ విషయాలు

A) కవి పరిచయాలు

B) పాత్రలు

C) ఇతి వృత్తాలు

D) సందర్భాలు

E) నేపథ్యాలు

F) విద్యా ప్రమాణాలు

2) పదజాలం:-

A) అర్థాలు

B) పర్యాయపదాలు

C) నానార్థాలు

D) వ్యుత్పత్త్యర్థాలు

E) జాతీయాలు

F) సామెతలు – వివరణ, గుర్తించడం.

G) పొడుపు కథలు

3) భాషాంశాలు:

A) విభక్తి ప్రత్యయాలు

B) ఔపవిభక్తికాలు

C) పారిభాషిక పదాలు – (ద్రుత ప్రకృతికాలు, కళలు, ఆమ్రేడితం, సంధి, వచనాలు, కాలాలు,లింగాలు, సమాసం, ఆగమం, ఆదేశం, బహుళం)

D) సంధులు – తెలుగు సంధులు– (అత్వ, ఇత్వ, ఉత్వ, యడాగమ, సరళాదేశ, ఆమ్రేడిత, ద్విరుక్తటకార, గసడదవాదేశ సంధులు.)
సంస్కృత సంధులు– (సవర్ణదీర్ఘ, గుణ, యణాదేశ, వృద్ధి సంధులు.)

E) సమాసాలు – (ద్వంద్వ, ద్విగు, తత్పురుష సమాసాలు)

F) ఛందస్సు – గణవిభజన, గణాల గుర్తింపు

G) అలంకారాలు –
వృత్యనుప్రాస, ఛేకానుప్రాస, అంత్యానుప్రాస (శబ్దాలంకారాలు) ఉపమా, ఉత్ప్రేక్ష, అతిశయోక్తి (అర్థాలంకారాలు). అలంకారాలు గుర్తించుట, లక్ష్య లక్షణ సమన్వయం చేయుట.

H) వాక్యాలు– (ఆశ్చర్యార్థక, విధ్యర్థక, నిషేధార్థక, అనుమత్యర్థక, సామర్థ్యార్థక, సందేహార్థక, ఆశీరర్థక, ప్రార్థనార్థక, ప్రశ్నార్థక, హేత్వర్థక, కర్తరి, కర్మణి వాక్యాలు)

తెలుగు బోధనా పద్ధతులు: 03 మార్కులు

ప్రాథమికస్థాయిలో భాషాభివృద్ధి మరియు అవగాహన

1) తెలుగు భాషా బోధన, ఉద్దేశాలు, విలువలు, లక్ష్యాలు, స్పష్టీకరణలు.

2) భాష – సమాజం – సాహిత్య ప్రక్రియలు

3) మాతృభాష స్వభావం, నిర్మాణం, ప్రాధాన్యత, భాషోత్పత్తివాదాలు, ధ్వని, అర్థ విపరిణామాలు

4) పాఠ్యపుస్తకాలు – బోధన శాస్త్రంపై అవగాహన

5) భాషా సామర్థ్యాలు విద్యా ప్రమాణాలు

6) బోధనా పద్ధతులు – బోధనాభ్యసన ప్రక్రియల నిర్వహణ

7) ప్రణాళికా రచన

8) బోధనాభ్యసన సామాగ్రి

9) ఆంధ్రప్రదేశ్‌లో భాషాభివృద్ధి కార్యక్రమాలు

10) భాష – మూల్యాంకనం

Language – II English Content (Class III to VIII) (Marks: 5)

1. Poets, Essayists, Novelists, Dramatists and their works
2. Writing of discourses - Story, Essay, Letter writing, Editorial, Precis writing, note-making, autobiography and biography
3. Pronunciation - Sounds - Use of dictionary
4. Parts of Speech
5. Tenses
6. Types of Sentences
7. Articles and Prepositions

Methodology - English (Marks: 03)

1. Aspects of English:- (a) English language - History, Nature, Importance, Principles of English as Second Language (b) Problems of Teaching / Learning English.
2. Objectives of Teaching English.
3. Development of Language skills:- (a) Listening, Speaking, Reading & Writing (LSRW) (b) Communicative skills.
5. Approaches, Methods, Techniques of teaching English: Introduction, Definition and Types of Approaches, Methods and Techniques of Teaching English, Remedial Teaching.
6. Teaching of Structures and Vocabulary items.
7. Teaching Learning Materials in English
8. Lesson Planning
9. Curriculum & Textbooks
10. Evaluation in English language

Mathematics Content (Class III to VIII) (Marks: 5):

I. Numbers:

Numbers - Four fundamental operations (Addition, Subtraction, Multiplication, Division) - Knowing about Numbers - Hindu-Arabic system of numeration (Indian system of numeration) - International system of numeration (British system of numeration) - Place value and Face value of a digit in a number - Comparing and Ordering of Numbers - Whole Numbers - Factors and Multiples - Prime and Composite numbers - Even and Odd numbers - Tests for Divisibility of Numbers - Common Factors and Common Multiples - Prime factorisation - Highest Common Factor (G.C.D) - Lowest Common Multiple - Integers - properties and fundamental operations - Fractions and decimals - Types of fractions - comparison - Applications of fractions in daily life - four fundamental operations on fractions and decimals - Rational Numbers - Properties of Rational Numbers - Rational Numbers between two rational numbers - Four fundamental Operations on Rational Numbers - Product of reciprocals - Squares - Square roots (Numbers and Decimals) - Properties of Square Numbers - Cubes - Cube roots of Numbers - Playing with Numbers - Games with Numbers - Letters for Digits.

II. Arithmetic:

BODMAS rule - Ratios and Proportions (Direct, Inverse) - comparing quantities using ratios, proportion, percentage and their applications - Profit and Loss - Discount - Sales Tax/Value Added Tax/Goods and Services Tax - Simple, Compound Interest and their applications.

III.Geometry:

Basic geometrical concepts (Point, Line, Line segment, Ray, Curves, Polygons, Angles) - Measuring of Lines - Pairs of Lines - Elements of Angles - Measuring of Angles - Types of Angles - Naming of the given 2D figures of Triangles, Square and Rectangle - The Triangle - Types of Triangles and its Properties - Classification of Polygons - Angle sum property - Kinds of Quadrilaterals (Trapezium, Kite, Parallelogram) - Some special parallelograms (Rhombus, Rectangle, Square) - Constructing different types of Quadrilaterals - Views of 3D-Shapes - Identification of Edges, Vertices and Faces of 3D figures (Euler's Rule) - Nets for building 3D shapes.

IV. Data Handling:

Reading and interpreting and analysing the Data (pictograph, tally marks, bar graphs, double bar graph, pie charts) - Arithmetic Mean - Mode - Median of un-grouped data - Chance and Probability.

V. Algebra:

Patterns - making rules - The idea of variables - formation of algebraic expressions -Terms, Factors and Coefficients - Linear equations in one variable - terms and types of algebraic expressions - finding the value of an expression - Addition, Subtraction and Multiplication of Algebraic Expressions - Multiplying a Monomial by a Monomial and polynomial - Multiplying a Polynomial by a Polynomial - Standard Identities and their applications - Applications of simple equations to practical situations - Exponents and Powers - Negative exponents - Laws of exponents - Expressing large numbers in the standard form - Factorisation - Division of Algebraic Expressions Continued (Polynomial ÷ Polynomial) - Linear Graphs.

VI. Mensuration:

Measuring Length, Weight, Capacity, Time-Seasons, Calendar, Money, Area - Symmetry (Line and Rotational) - Perimeter of Triangle, Square, Rectangle, Rhombus, Trapezium, Parallelogram, Circle and Polygon), Area of a Quadrilateral, Surface Area and Volume of Cube, Cuboid and Cylinder -Volume and capacity.

Mathematics Methodology (03 Marks)

1. Nature and Definitions of Mathematics
2. Aims, values and instructional objectives of teaching Mathematics
3. Methods of Teaching & Remedial measures in Mathematics
4. Instructional Material, TLM and Resource Utilization in Mathematics
5. Curriculum, Textbooks Instructional Planning.
6. Evaluation and Continuous Comprehensive Evaluation

Science Content (Class III to VIII) (Marks: 5)

1. Living World:

Living and non-living things - Characteristics of living organisms

Plants -Types of plants- Herb, shrub, Tree, basing on habitat – Terrestrial, Aquatic, Desert etc, plant parts -functions

Animals – Animals around us – Oviparous, viviparous; herbivore, carnivore, omnivore; shelters of different animals, Birds – beaks, Domestic animals, Wild animals, Types of animals basing on habitat, herbivore, carnivore, omnivore, Animals sounds, Movements in animals, Different types of habitat and adaptation, Homes of animals, Nests of birds.

Human beings - Body parts, Healthy body – good habits, Sense organs and their care, concern for differently abled persons, Good touch and Bad touch, Skeletal parts – Bones, Joints, Cartilage; muscles, Safety measures – at home, school safety, Road safety, water hazards, First- aid.

Food - Food, Need of food, Sources of food – plants, animals, Types of food, Cooked and raw foods, Utensils, Mid-day meal, Methods of preparing food, Food wastage, Preservation of food, Good food habits, Our food, Components of food, Balanced diet, Junk food, Deficiency diseases

Agricultural Practices, Tools used in agriculture, Methods of agriculture, Storage of food, Food from Animals, Food for birds and animals.

Family - Role of family members, Family Tree, Types of family, Changing family structure, Family Budget, Shelter for all, Different types of houses, Home appliances, Migration – Reasons, Effects, Slums, Homeless people.

Cell – The basic unit of life, Types of cells, Cell structure and function.

Microorganisms - Introduction to microorganisms – types, Useful Microorganisms, Harmful microorganism.

Games and recreation- indoor, outdoor, local games, uses, materials used and the rules.

2. Life processes :

Nutrition - Nutrition in plants – Autotrophic, Parasitic, saprophytic, Insectivorous, Different ways of taking food, Digestion in humans, Digestion in grass eating animals, feeding and digestion in amoeba.

Respiration - Types of respiration, Respiration in animals, Respiration in plants,

Circulation - Circulatory system in human being -Transport of substances in plants.

Excretion in animals,

Coordination- Nervous system,

Reproduction - Modes of reproduction – sexual, asexual and vegetative, Seed dispersal, Sexual and Asexual Reproduction in Animals, Adolescence and puberty – changes, role of

hormones, Reproductive phase, Sex determination, Hormones other than sex hormones, Metamorphosis, Reproductive health

3. Natural Phenomena :

OBJECTS AND MATERIALS

Objects around us – Properties of materials - classification of materials, Properties and uses of Metals and Non-metals, Reactivity order of metals, Methods of separation– Saturated and unsaturated solutions. Acids, bases and salts, indicators, Neutralization, Physical and chemical changes, Rusting of Iron, Galvanization, Crystallization.

MEASUREMENT OF DISTANCES – MOTION

Measurement of distances, Standard units and non-standard units of measurements, Motion and rest, Types of motion, Motion and time – speed, average speed, Uniform and non-uniform motions, Measurement of time, Time period, Units of time and speed, Measuring speed, Distance-time graph,

LIGHT

Light, shadows, and reflections, Transparent, opaque and translucent objects, pin hole camera, mirrors and reflection, Regular and Diffused Reflection, multiple images, kaleidoscope, periscope, Characteristics of images formed by mirrors, Spherical mirrors and images, Lenses and images, Sunlight – dispersion, Human Eye, Care of the Eyes, Braille System, Visually Impaired Persons

ELECTRICITY

Simple electric circuit and its components, Symbols of electric components, Electric conductors and insulators, Heating effects of electric current, CFL, LED, Fuse and MCB, Magnetic effects of electric current, Electromagnet, Electric bell, Chemical Effects Of Electric Current, Good/Poor Conducting Liquids, Electroplating.

MAGNETISM

Magnets – Discovery of magnets, Magnetic and non-magnetic substances, Types of magnets, Properties of magnets, Magnetic compass, Storing of magnets.

HEAT

Heat – temperature, measuring temperature, Units of temperature, Types of Thermometers, Transfer of heat – conduction, convection, radiation.

FORCE, FRICTION AND PRESSURE

Force – push or pull, Exploring forces, net force, Effect of force on objects, Contact and non-contact forces, Pressure, Fluid pressure, Atmospheric pressure, Friction, Factors effecting friction, Friction: A necessary evil, Increasing and reducing friction, Types of friction.

COMBUSTION AND FUELS

Exhaustible and inexhaustible resources, Fuels–Types, Coal, Uses of Coal and Coal products, Refining of petroleum, Petrochemical products in various sectors, Various Constituents of Petroleum and their Uses, Formation of coal and petroleum, Natural Gas, Misuse of Energy resources and Consequences. Combustion, Types of Combustion, Ignition temperature, Inflammable substances, Flame, Fuel Efficiency, Burning of Fuels Leads to Harmful Products, Fire control, Structure of flame – colour zones–Intensities.

FIBRES

Natural and Synthetic fibres, Preparation and uses, Types and Characteristics of Synthetic Fibres, Our dress our culture, Kinds of clothes we wear in winter and summer, Plastics as Materials of Choice, Types of plastics, Plastics and environment, Biodegradable – Non biodegradable materials.

SOUND

Sound - a form of energy, Production of sound, Some musical instruments, Propagation of sound, Human ear, Hearing Impairment, Noise and Music, Types of waves (longitudinal and transverse), Characteristics of sound waves (Wavelength, Frequency, Time period, Speed of the wave),Pitch, Loudness and Quality, Audible and Inaudible sounds, Noise pollution.

SOME NATURAL PHENOMENA

The Story of Lightning, Charging by Rubbing, Electric charge and properties of electric charge, Types of charges and their interactions, Transfer of charge, lightning, lightning safety, lightning conductors, Earth quake, Tsunami, Causes and effects, Protective measures.

OUR UNIVERSE

The Moon, The Moon's Surface, Phases of Moon, Eclipses (Solar and lunar eclipses), The Stars, Movement of Stars(Constellation, polestar), Movement of the Sun, Solar System, Planets and Some Other Members of the Solar System, Artificial Satellites.

4. Transportation and Communication:

Transportation - Story of transport – Objects-signs and signboards used for transport – Places associated with transport –Modes of travel in the present and in the past – Methods of transport in different topographical conditions (Transport in hilly areas, Forests, Deserts, Snowy areas, Rivers & Canals) - Need for an international transport -Import and export of the goods- different means of transport of goods-Importance of tourism and seven wonders of the world.

Communication – Means and objects of Communication-Types of Communication both in Human and Animals (different feelings and gestures) Modern forms of communication – Communication used in the past and present-Advantage of Mass Communication-Communication through Postcard, Cell Phone, E-Mail, News Paper, Radio, TV, and Social Mediaetc.,

How communication and transport brings the entire world together.

5. Professions and Services:

Household materials with reference to profession (farmer, cobbler, tailor etc)-Different professions andtheir need to the society- villager/farmer (seeds/manure/ agri methods etc.,) , helping agents (bank, e- seva, PHC, panchayat office, post office/etc.,) Governance and Services - Local Self Govt, State, Central Govt, Judiciary.

6. OUR ENVIRONMENT

Climate – Climate change, Weather- Climate- rain- floods-Cyclones-disaster management,

Global environmental issues – Greenhouse effect, Global warming, Acid rains. Eco-friendly activities, Say 'no' to plastic.

Air - Presence of air, Components of air, Properties of air, Availability of oxygen to animals and plants, Replacement of oxygen in the atmosphere, uses of air, Nitrogen cycle, Air pollution -causes, effects and prevention.

Water - Forms of water, Uses of water, source, scarcity, protected water, wastage of water, Water resources, Tank pollution, safe drinking water, tank management, journey of rain drop – Water cycle, water magic, water properties, Water resources, major rivers in AP, fisherman, water transport, tragedy of rivers, drought and floods, water pollutions - Causes, effects and prevention. Sewage, Treatment of polluted water, Better house keeping practices, Sanitation and Disease, Alternative arrangement for sewage disposal.

Biodiversity - Forests, Flora, fauna, interrelation of organisms, Green world, Advantages of forests, Deforestation - effects, Chipko movement, Conservation of forest and wildlife – Protecting areas, endangered and endemic species.

Methodology: (03 Marks)

1. Nature, Scope, History and development of science.
2. Aims, Values, Objectives specifications of teaching Science, Academic Standards.
3. Methods, approaches and techniques of teaching science.
4. Teaching learning material, Improvised teaching aids.
5. Science curriculum, Textbook.
6. Assessment and Evaluation
7. Science laboratories.
8. Planning in science teaching (Year Plan, Lesson Plan)
9. Role of Science Teacher
10. Science Fairs, Science clubs, Field – trips, Science museums.

Social Studies Content (Class III to VIII) (Marks: 5)

Theme - I: Our Universe

The shape of the Earth, The Universe- Origin, solar System, Our Earth in the Solar System – Celestial bodies, Constellations, Realms of the Earth- Latitudes and Longitudes -Movements of Earth – Solar System- Globe-Model of Earth – Axis of Earth, Equinox – Eclipses.

Maps – Directions, Scale, Symbols, Patterns, Types, Where are we-Village, Mandal, District, country maps.

The Earth- Environment – Components, Interior of the Earth, Atmosphere, Biosphere, Pollution, Disasters.

Land Forms – Major Land Forms in AP, Podu cultivation, Diversity in Lifestyles.

Forests-Climatic Regions - Types of Forests, Forests in AP, Uses- Deforestation, Conservation of Forests.

Land, Soil, Water, Natural Vegetation and Wildlife Resources.

Theme - II: Production Exchange and Livelihoods

Migration of people- Reasons for migration, effects of migration, Slums, Family Budget, Profession and services- Farmer, Tailor.

Resources – Types, Conservation, Mineral and Power Resources – Types of Minerals, Distribution, Conservation Power Resources: Conventional, Non-Conventional.

Human Resources- Distribution of Population, Density of Population, Population Change, population composition.

Agriculture – Types of farming, Major crops; industries- Classification and Distribution.

Weavers, Iron Smelters, factory owners, Indian Textile and the world market-The sword of Tipu Sultan and Wootz steel, Public facilities, Water as a part of fundamental Right to Life-Govt. Role.

Markets Around Us- Types of Markets- Consumer Protection.

Transport system, International Transport, Exports and Imports, Global Village, Road ways, My bicycle, Vehicles other than Transport, Transport in Hill areas, Forests, deserts, snowy areas, rivers and canals, Road Safety, Traffic symbols, Road safety measures, pedestrian safety, safe cycling, safety travelling.

Theme -III: Political Systems and Governance

Early Life to Settled life- Early people, Nomadic life, Belum caves, Rock paintings, Growing plants, Rearing animals, Towards a settled life, Emergence of Kingdoms and Republics, Mahajanapadas, Magadha, Vajji Kingdoms and Empires- Mauryan, Guptas, Satavahanas, Pallava, Chalukya Dynasties.

Delhi Sultanate, Kakatiyas, Vijayanagara Empire, Mughals, Contemporary Kingdoms.

Governments – Types, Monarchy, Democracy, Different levels, Local and Self Government, State and Central Governments; Why do we need a Parliament?, The role of the Parliament, Who are the people in the parliament?; State Government – Legislature, Executive, Judiciary-

Role, Independent Judiciary, Structure of Courts in India, Different Branches of the legal system- Understanding our Criminal Justice System – the role of police and Public Prosecutor, Judge, Fair Trail- Law and Social Justice – Bhopal gas Tragedy, Enforcement of Safety Laws, New laws to protect the Environment.

The Indian Constitution, key features – Fundamental Rights – Fundamental Duties; Understanding Secularism, Understanding Laws.

- Civilizing the "Native" Educating the nation- How the British saw Education? – What happened to the local schools?- the agenda for a National Education, How Important are Dates, How do we periodise, What is Colonial?,- From Trade to Territory-The Company establishes Power, East India Company, Battle of Plassey, Tippu Sultan, The Doctrine of Lapse, Setting up a new administration – Ruling the countryside – Diwani system, Munro system, Demand for Indian Indigo, The Blue Rebellion and after – Tribals, Dikus and the vision of Golden age-How did Tribal groups live?, How did colonial rule effect Tribal lives?, Forest Laws and their impact- Birsa Munda.

Indian Freedom struggle, When people Rebel 1857 and after- Policies and the people, Through the Eyes of the people, A Mutiny becomes a popular Rebellion, the company fights back, The making of the National Movement: 1870's to 1947- The emergence of nationalism, The growth of mass nationalism, The March to Dandi, Quit India and Later – India after Independence- A new and divided nation, A Constitution is written, How were states to be formed – Planning for development, A Nation sixty years on

Theme -IV: Social Organization and Inequities

Inequality, Steps towards equality – Constitutional provisions, Remedial measures for abolishing inequality, Will Discrimination and inequalities stop people from achieving their goal.

Women Change the World, Women's movement, Inspirational Women- Women, Caste and Reforms- Working towards change: Changing the lives of Widows, Girls begin going to School, Women write about women, Caste and social reform: Gulamgiri who could enter, The Non Brahman Movement.

Understanding Marginalisation – Adivasis and Development, Minorities and Marginalisation- Confronting Marginalisation- Invoking Fundamental Rights-Laws for the Marginalised, Protecting the rights of the Dalits and Adivasis, Adivasis Demands and the 1989 Act.

Theme - V: Religion and Society

Religions – Hinduism, Jainism, Buddhism, Islam and Sikhism, Unity in Diversity; Bhakthi and Sufi Movements

Theme -VI: Culture and Communication

Together with everyone – communication, Postal services, mobiles, E-mail, Mass communication, Newspaper, Radio, TV, Social Media.

Let us Visit-Historical and Tourist places in AP; Early Civilisations- Indus Valley civilisation, vedic period, vedic literature; Indian Culture, Languages.

Methodology: (03 Marks)

1. Nature, Scope, History and development of Social.
2. Aims, Values, Objectives specifications of teaching Social, Academic Standards.
3. Methods, approaches and techniques of teaching Social.
4. Teaching learning material, Improvised teaching aids.
5. Social curriculum, Text – book.
6. Assessment and Evaluation
7. Social laboratories.
8. Planning in Social teaching (Year Plan, Lesson Plan)
9. Social Teacher roles and responsibilities.
10. Fairs, Clubs, Field – trips, museums

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
DSC – SCHOOL ASSISTANT SYLLABUS - ENGLISH

1. G.K & Current Affairs	**-**	**10M**
2. Perspectives in Education	**–**	**05M**
3. Classroom implications of Educational Psychology	**–**	**05M**
4. **English Content**	**-**	**40M**
5. English Methodology	**-**	**20M**
Total	**-**	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. History of Education :

- The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
- Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
- Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992

2. Teacher Empowerment:

- Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.

3. Educational Concerns in Contemporary India:

- Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
- Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
- Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
- Adolescence Education

- Value Education – Moral Value and Professional Ethics in Education.
- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005**: Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy -2020**

PART - III

III. Classroom Implications of Educational Psychology – 05m

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART – IV

IV. Content (40 Marks)

Literature Detailed Study

LITERATURE		LEVEL OR AREA OF TESTING
Background of English Literature		Poetical Types, Stanza forms, School and Movements, Dramatic Types, The Essay, The Novel, The Short Story
Literary Terms		*Parallelism, Prologue, epilogue, setting, the character, metre, diction, imagery, prosody, point of view, epic, mock epic, choreography, narration, classic, chorus, comedy, tragedy, conflict, plot, criticism, discourse, empathy, sympathy, style, theatre, feminism, soliloquy, folklore, structure; *Figures of Speech - Simile, Metaphor, Apostrophe, Personification, Metonymy, Synecdoche, irony and alliteration; *Rhyme Scheme
Poetry (Detailed Study)		1. Where the Mind Is without Fear (Rabindranath Tagore) 2. The cloud (P.B.Shelly) 3. The Nation's Strength (R.W.Emerson) 4. Palanquin Bearers (Sarojini Naidu) 5. The Road Not Taken (Robert Frost) 6. A Slumber did my spirit seal (William Wordsworth) 7. Telephone Conversation (Wole Soyinka) 8. The Night of the Scorpion (Nissim Ezekiel)
Prose / Essay (Detailed Study)		1. Of studies (Francis Bacon) 2. Self-reliance (R.W.Emerson) 3. On Shaking Hands (A.G.Gardiner) 4. What Makes a Nation (C. Rajagopalachari)
Novels (Detailed Study)		1. Animal Farm (George Orwell) 2. Swami and Friends (R.K.Narayan)
Drama (Detailed Study)		1. Twelfth Night (William Shakespeare) 2.The Importance of Being Earnest (Oscar Wilde)
Short Story (Detailed Study)		1. The Bet (Anton Chekhov) 2. Engine Trouble (R. K. Narayan) 3. After Twenty Years (O' Henry) 4. The Thief (Ruskin Bond)

(Class VI to Intermediate level syllabus)

VOCABULARY		LEVEL OF TESTING
Synonyms		Identification of Shades of Meaning
Antonyms		Identifying Antonyms in a Context
Homophones		Identification & Usage
Homonyms		Identification & Usage
Hypernyms & Hyponyms		Identification & Usage
Spelling		Spelling
One-word Substitutes		Referring to Persons / Professions, Places, Collections
Phrasal Verbs		Identification of Meaning and usage
Idiomatic Expressions		Identification, Usage
Proverbs		Proverbs
Word Formation		Suffixes, Prefixes and other forms
Short Forms - Full Forms		Common Short Forms - Full Forms
Abbreviations - Full Forms		Common Abbreviations - Full Forms
Word Collocations		Word Collocations
Foreign Phrases Used in English		Standard and common Foreign Phrases Used in English
GRAMMAR		**LEVEL OF TESTING**
Helping Verbs		Form, Function & Contractions
Modal Auxiliaries		Form, Function & Contractions
Ordinary Verbs		Form, Function & Contractions
Articles		Use of Articles Including Omissions
Prepositions		Simple, Compound Prepositions Including Prepositions following Certain Words and Prepositional Phrases

Clauses		Main Clauses, sub-ordinate Clauses, Adjectival Clauses, Noun Clauses, Adverbial Clauses, Relative Clauses, Finite and Non-finite Clauses
Sentence Structures		Sentence Structures
Degrees of Comparison		Form, Function, Construction, Transformation
Language Functions		Language Functions with social norms (formal and informal)
Question Tags		Imperatives and Statements with semi negatives and indefinites subjects
Types of Sentences		Types of Sentences
Sentence Improvement		Sentence Improvement
Direct Speech & Indirect Speech		Statements, Questions, Imperatives and Exclamatory Sentences
Active Voice & Passive Voice		Active Voice & Passive Voice
Tenses		Use of tenses and framing including 'IF' conditionals Type 1, 2 &3
Agreement between subject & Verb		Agreement between subject & Verb
Word Order		Word Order In a phrase or a sentence
Parts of Speech		Nouns, Pronouns, Adjectives, Adverbs, Conjunctions, Interjections - Types and functions
Linkers		Linkers
Transformation of Sentences		Simple. Compound and Complex Sentences
Common Errors		Based on all Vocabulary and Grammar Topics
MECHANICS OF WRITING		**LEVEL OF TESTING**
Punctuation and Capitalization		Use of capital letters, comma, full stop, question mark, exclamation mark and inverted commas
COMPOSITION		**LEVEL OF TESTING**
Writing of Discourses		Letter Writing, News Report, Diary Entry, Conversation, Description, Diary Entry, Biographical Sketch, Story, Script for a speech

DICTIONARY SKILLS		**LEVEL OF TESTING**
DICTIONARY SKILLS		DICTIONARY SKILLS
PRONUNCIATION		**LEVEL OF TESTING**
Phonetics, Stress & Intonation		Phonetic Transcription and stress marking including intonation in context
READING COMPREHENSION		LEVEL OF TESTING
Prose		Prose (GENERAL)

V. Methodology (20 Marks)

1. Aspects of language (English Language History, Nature, Importance, Principles of English as Second language and problems of Teaching / learning English)
2. Objectives of Teaching English
3. Development of language Skills (Listening, Speaking, Reading and Writing; Communicative Skills and Imparting values through Communication
4. Approaches, Methods and Techniques of Teaching English (Introduction, Definition, Types of Approaches, Methods and Techniques of Teaching including Remedial Teaching)
5. Teaching of Structures, Vocabulary and Grammar
6. Teaching Learning Materials in English
7. Lesson Planning
8. Curriculum and Textbooks - Importance and need
9. Evaluation in English Language
10. Pronunciation, Phonetics and Phonetic Transcription

Government of Andhra Pradesh
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SCHOOL ASSISTANT SYLLABUS - TELUGU

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Classroom implications of Educational Psychology**	–	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya

Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
    - Right of Children to Free and Compulsory Education Act - 2009
    - Right to Information Act - 2005
    - Child Rights
    - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
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PART – IV

IV. Content (40 Marks)

1) తెలుగు సాహిత్య చరిత్ర:

- కవులు, కాలం, రచనా విశేషాలు, బిరుదులు, ఇతివృత్తం, పాత్రలు, విశేషాంశాలు, వివిధ ప్రక్రియలు
- ఆధునిక కవిత్వ ధోరణులు, లక్షణాలు

2) తెలుగు భాషా చరిత్ర:

- మాండలిక భాష – స్వభావం, ఉత్పత్తి, భేదాలు
- గ్రాంథిక భాష, వ్యావహారిక భాష – ఆధునిక ప్రామాణిక భాష
- అర్థ విపరిణామం
- ధ్వని – ధ్వన్యుత్పత్తి స్థానాలు

3) సాహిత్య విమర్శ:

- కావ్యం – నిర్వచనం – కావ్య ప్రయోజనం – కవిత్వ హేతువులు – శైలి – సంస్కృత, పాశ్చాత్య లాక్షణికుల సిద్ధాంతాలు

4) బాల వ్యాకరణం:

- సంజ్ఞ, సంధి, తత్సమ, ఆచ్చిక, సమాస, పరిచ్ఛేదములు.

6వ తరగతి నుండి ఇంటర్మీడియట్ వరకు గల ఆంధ్రప్రదేశ్ ప్రభుత్వ పాఠ్యపుస్తకాలు

1) తెలుగు వాచకాలలోని అంశాలు: (ఉపవాచకాలతో సహా)

కవికాలాదులు, నేపథ్యాలు, ఉద్దేశాలు, మూల గ్రంథాలు, విశేషాంశాలు, ఇతివృత్తాలు, పాఠ్యాంశ విషయాలు మొ॥వి; విద్యాప్రమాణాలు.

2) పదజాలం:

అర్థాలు, పర్యాయపదాలు, నానార్థాలు, వ్యుత్పత్త్యర్థాలు, ప్రకృతి – వికృతులు, జాతీయాలు, సామెతలు మొ॥వి.

3) భాషాంశాలు:

సంధులు, సమాసాలు, ఛందస్సు, అలంకారాలు, పారిభాషికపదాలు క్రియలు, వాక్యాలు మొ॥వి.

4) ఛందస్సు: (వృత్తాలు, జాతులు, ఉపజాతులు)

యతులు, ప్రాసల రకాలు – ఛందో దర్పణం

V. తెలుగు బోధన పద్ధతులు : 20 మార్కులు

బి.ఎడ్ తెలుగు బోధన పద్ధతులు. (తెలుగు అకాడమీ ప్రచురణ)

1. భాష – వివిధ భావనలు
2. భాషానైపుణ్యాలు
3. ప్రణాళిక రచన – పాఠ్యగ్రంథాలు
4. విద్యా సాంకేతిక శాస్త్రం – సహపాఠ్య కార్యక్రమాలు
5. సాహిత్య ప్రక్రియలు – బోధన పద్ధతులు
6. మూల్యాంకనం – పరీక్షలు

Government of Andhra Pradesh
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SCHOOL ASSISTANT SYLLABUS - URDU

1.	**G.K & Current Affairs -**	-	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Classroom implications of Educational Psychology**	–	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
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2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA),

KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
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   - Child Rights
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5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Educational Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART – IV

IV. Content (40 Marks)(Class VI To Intermediate level syllabus)

I جماعت ششم تاانٹر میڈیٹ کی ریاست آندھراپردیش کی طبع شدہ درسی کتابوں میں موجود مضامین

A. شعراء وادباء کی سوانح حیات، ادبی کارنامے اوران کے کرداروں کا جائزہ

B. تصانیف، اسباق کے مرکزی خیالات

C. ایوارڈس

II لفظیات

A. معنی

B. مترادفات

C. ذومعنی

D. سابقے، لاحقے

E. اضداد

F. محاورے

G. کہاوتیں

III زبان شناسی:

A. کلمہ، مستقل کلمہ

B. ضمیراوراس کے اقسام

C. فعل حال کے اقسام

D. زمانے

E. حروف شمسی اور قمری

F. مفرداور مرکب الفاظ

G. مرکب توصیفی

H. متضاد

I. تشبیہ

IV

A. علم بیان

B. رموز واوقاف

C. حروف شمسی وقمری

D. صنعتیں

E. غزل کے اجزاء

F. علم اعداد

G. تکرار لفظی

H. اصناف نثر و نظم

I. تذکیر وتانیث

J. فعل، فاعل، مفعول

V اردو زبان کی تاریخ

A. زبان کی ابتدا، مفہوم وماہیت، ارتقائی عوامل

B. زبان کی ابتدااور مختلف نظریات

C. اقسام زبان

D. ہندوستانی دستوراور آندھراپردیش میں اردو کامقام وموقف

V. Methodology (20 Marks)

اردو طریقہ تدریس

A. زبان کی مہارتیں

B. اردو کے تدریسی مقاصد

C. معلم اردواور تدریس

D. تدریس اور اسباق کا منصوبہ

E. نصابی اور ہم نصابی مشاغل

F. اندازۂ قدر

G. قومی کونسل برائے فروغِ اردو، نئی دہلی کے خدمات

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Classroom implications of Educational Psychology**	–	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India -Pre-Vedic and Post-Vedic period, Medieval Education.
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   - Value Education – Moral Value and Professional Ethics in Education.
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Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

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PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
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PART - IV

IV. Content: (Marks: 40)(Class VI To Intermediate level syllabus)

1. **6-ஆம் வகுப்பு முதல் மேனிலை வகுப்பு வரை உள்ள ஆந்திர பிரதேச பாடப்புத்தகத்தில் உள்ள பாடப்பொருள்.**

   ஆசிரியர் குறிப்பு - பின்னனி - நோக்கம் - முதல் நூல்கள் - சிறப்பு அம்சங்கள் - முன் கருத்து - வாழ்க்கை குறிப்பு - பாடப்பொருள் கருத்துகள் - கல்வித்திறன்கள்.

2. **சொல்லாக்கம் :**

அருஞ்சொற்பொருள் - இருபொருள் - பலபொருள் குறித்த ஒரு சொல் - ஒரு பொருள் குறித்த பல சொற்கள் – மரபுத்தொடர் - பழமொழிகள் - வழக்கு - வழூஉச் சொற்கள் - தொகைச் சொற்கள்

3. **மொழித் திறன்கள் :**

புணர்ச்சி - வேற்றுமை - பிறமொழிச் சொற்கள் - வாக்கியங்கள் - தொடர்கள் - வினா விடை - பெயர் - வினை - பதம் - வல்லினம் மிகும்-மிகா பொருள் - இலக்கணக் குறிப்பு

4. **தமிழ் இலக்கிய வரலாறு :**
5. **தமிழ் மொழி வரலாறு :**

பேச்சு மொழி - எழுத்து மொழி - மொழியின் தோற்றம் - திராவிட மொழியினம் - கடன் வாங்கல் - மரூஉ - ஒலிக் குறிப்பு - கிளை மொழி - பொது மொழி - போலச் செய்தல் - வழக்கம் - இலக்கணம் - மொழியின் நிலை

6. **இலக்கிய திறனாய்வு :**
7. **குழந்தை இலக்கியம் மற்றும் இலக்கணம் :**

குழந்தை இலக்கணம் (அடிப்படை இலக்கணம்) திணை, பால், எண், இடம், காலம், மாத்திரை, வழு, போலி, இரட்டைக் கிளவி, அடுக்குத்தொடர்.

8. **யாப்பின் உறுப்புகள் - அணி - விளக்கம் - அடையாளம் காண வகைகள்**

V. Methodology (20 Marks)

தமிழ் மொழி கற்பித்தல் முறைகள்

1. மொழி பல்வேறு கருத்துகள்.
2. மொழித் திறன்கள்.
3. திட்டமிடுதல் பாடப் புத்தகங்கள்.
4. கல்வி தொழில்நுட்பவியல் - துணை கல்விச் செயற்பாடுகள்.
5. இலக்கிய செயல்முறைகள் - கற்பித்தல் முறைகள்.
6. மதிப்பீடு மற்றும் தேர்வுகள்.

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SCHOOL ASSISTANT SYLLABUS - KANNADA

1.	**G.K & Current Affairs -**	-	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Classroom implications of Educational Psychology**	–	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India -Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National

Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. Content: (Marks: 40) (Class VI To Intermediate level syllabus)

- **6 ರಿಂದ 12ನೇ ತರಗತಿ ಇಂಟರ್‌ಮೀಡಿಯೇಟ್ ತರಗತಿಗಳ ಪಠ್ಯಪುಸ್ತಕಗಳಲ್ಲಿನ ವಿಷಯಗಳು :**

  ಕವಿ – ಕಾವ್ಯಗಳು, ಲೇಖಕರು – ಕೃತಿಗಳು ಮತ್ತು ನಾಟಕಗಳ ಪರಿಚಯ, ಪಾಠದ ವಿವರಣೆ, ಹಿನ್ನೆಲೆ.
  ಪಾತ್ರಗಳ ಪರಿಚಯ, ಸಂದರ್ಭಗಳು, ಸನ್ನಿವೇಶಗಳು.

- **ಪದಸಂಪತ್ತು :**

  ಅರ್ಥಗಳು, ನಾನಾರ್ಥಗಳು, ಸಮನಾರ್ಥಕ ಪದಗಳು, ವ್ಯುತ್ಪತ್ತಿ ಅರ್ಥಗಳು, ನುಡಿಗಟ್ಟುಗಳು ಮತ್ತು
  ಲೋಕೋಕ್ತಿಗಳು, ದೇಶ್ಯ, ಅನ್ಯದೇಶ್ಯ ಪದಗಳು ಇತರೆ

➢ **ಭಾಷಾಂಶಗಳು :**

1. ವಿಭಕ್ತಿ ಪ್ರತ್ಯಯಗಳು
2. ಪಾರಿಭಾಷಿಕ ಪದಗಳು, ತತ್ಸಮ, ತದ್ಭವಗಳು
3. ವಚನಗಳು, ಲಿಂಗಗಳು, ವಿಭಕ್ತಿಗಳು, ಕಾಲಗಳು, ಸಂಽ ಮತ್ತು ಸಮಾಸಗಳು ಅವುಗಳ ಲಕ್ಷಣಗಳು, ವಿಗ್ರಹವಾಕ್ಯ ಹಾಗೂ ಲಕ್ಷಣಗಳನ್ನು ಸಮನ್ವಯಗೊಳಿಸುವುದು
4. **ಛಂದಸ್ಸು** : ಮಾತ್ರಾಗಣ, ಅಕ್ಷರಗಣ ಗುರುತಿಸುವಿಕೆ
5. **ಅಲಂಕಾರಗಳು** : ವೃತ್ಯಾನುಪ್ರಾಸ, ಛೇಕಾನುಪ್ರಾಸ, ಅಂತ್ಯಪ್ರಾಸ (ಶಬ್ದಾಲಂಕಾರ)
   ಉಪಮ, ಉತ್ಪ್ರೇಕ್ಷ, ರೂಪಕ, ದೃಷ್ಟಾಂತ (ಅರ್ಥಾಂಲಕಾರ) ಅಲಂಕಾರಗಳನ್ನು ಗುರ್ತಿಸುವುದು,
   ಲಕ್ಷಣಗಳನ್ನು ಸಮನ್ವಯ ಗೊಳಿಸುವುದು.
6. **ವಾಕ್ಯದ ವಿಧಗಳು** : ಸಾಮಾನ್ಯ, ಭಾವಸೂಚಕ, ವಿದ್ಯರ್ಥಕ, ನಿಷೇಧಾರ್ಥಕ, ಸಂಭವನಾತ್ಮಕ, ಪ್ರಶ್ನಾರ್ಥಕ, ನಕಾರಾತ್ಮಕ, ಕರ್ತರಿ ಮತ್ತು ಕರ್ಮಣಿ ವಾಕ್ಯಗಳು.
7. **ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ** : ಕನ್ನಡ ಭಾಷಾ ಚರಿತ್ರೆ, ಧ್ವನಿ, ಪ್ರಾದೇಶಿಕ ಮತ್ತು ಸಾಹಿತ್ಯ ಭಾಷೆ, ಗ್ರಾಂಥಿಕ ಭಾಷೆ, ವ್ಯವಹಾರಿಕ ಭಾಷೆ
8. **ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ** : ಭಾರತೀಯ ಮೀಮಾಂಸೆ, ಪಾಶ್ಚಾತ್ಯ ಮೀಮಾಂಸೆ ಹಾಗೂ ವಿಮರ್ಶೆ ಹಾಗೂ ಸಿದ್ಧಾಂತಗಳು, ವ್ಯಖ್ಯಾನಗಳು.

V. Methodology (20 Marks)

ಬಿ.ಇಡಿ. ಕನ್ನಡ ಭಾಷಾ ಬೋಧನಾ ಪದ್ಧತಿಗಳು :

(ಕರ್ನಾಟಕ ಬಿ.ಇಡಿ. ಬೋಧನಾ ಪದ್ಧತಿಗಳ ಎಲ್ಲಾ ವಿಶ್ವ ವಿದ್ಯಾಲಯಗಳ ಪಠ್ಯಕ್ರಮವನ್ನೊಳಗೊಂಡಂತೆ)

1. ಭಾಷೆ, ಸ್ವರೂಪ, ವ್ಯಾಖ್ಯಾನಗಳು
2. **ಭಾಷಾ ಕೌಶಲ್ಯಗಳು** : LSRW
3. ಯೋಜನೆಗಳ ರಚನೆ – ಪಠ್ಯಗ್ರಂಥಗಳು, ಬೋಧನಾ ಸಂಪನ್ಮೂಲಗಳು
4. ಶೈಕ್ಷಣಿಕ ಬೋಧನಾ ತಂತ್ರಗಳು – ಸಹಪಠ್ಯ ಚಟುವಟಿಕೆಗಳು
5. ಸಾಹಿತ್ಯ ಪ್ರಕ್ರಿಯೆಗಳು – ಬೋಧನಾ ಪದ್ಧತಿಗಳು / ವಿಧಾನಗಳು
6. ಮೌಲ್ಯಮಾಪನ – ಪರೀಕ್ಷೆಗಳು

Government of Andhra Pradesh
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SCHOOL ASSISTANT SYLLABUS - ODIYA

1.	**G.K & Current Affairs -**	-	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Classroom implications of Educational Psychology**	–	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
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2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education

- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. CONTENT:-[40Marks] (Class VI To Intermediate level syllabus)

1) ଷଷ୍ଠରୁ ଇଣ୍ଟରମିଡିଏଟ୍ ପର୍ଯ୍ୟନ୍ତ ପାଠ୍ୟପୁସ୍ତକ ଅନ୍ତର୍ଗତ ବିଷୟ :-
କବି ଓ ଲେଖକମାନଙ୍କ ସମୟ, ସୃଷ୍ଟି ସମ୍ପଦ, ସେମାନଙ୍କ ଉପାଧି ଓ ପ୍ରାପ୍ତ ପୁରସ୍କାର, ବିଷୟଗତ ମୁଖ୍ୟାଂଶ, ପୂର୍ବାପର ପ୍ରସଙ୍ଗ, ଉଦ୍ଦେଶ୍ୟ, ବୈଶିଷ୍ଟ୍ୟ, ମୂଳରଚନା ।

2) ଶବ୍ଦଭଣ୍ଡାର : -
ଶବ୍ଦାର୍ଥ, ପ୍ରତିଶବ୍ଦ, ଭିନ୍ନଜାତୀଶବ୍ଦ, ଯୁଗ୍ମଶବ୍ଦ, ବିପରୀତାର୍ଥବୋଧକ ଶବ୍ଦ, ସମୋଚ୍ଚାରିତ ଶବ୍ଦ, ଗଦ୍ୟ/ପଦ୍ୟ ରୂପ, ଏକପଦରେ ପ୍ରକାଶ, ଲିଙ୍ଗ, ବଚନ, ପୁରୁଷ, ରୂଢ଼ି,ଲୋକବାଣୀର ଅର୍ଥ ।

3) ଭାଷା ପ୍ରକରଣ :-
ସନ୍ଧି, ସମାସ, ଛନ୍ଦ, ଅଳଙ୍କାର, ବିଭକ୍ତି, କାରକ, ଉପସର୍ଗ, ତଦ୍ଧିତ, କୃଦନ୍ତ,'ଣ'ତ୍ୱ ବିଧି,'ଷ'ତ୍ୱ ବିଧି, ତତ୍ସମ, ତଦ୍ଭବ, ଦେଶଜ, ବୈଦେଶିକ ଓ ସାଧାରଣ ଅଶୁଦ୍ଧି ଶବ୍ଦ ।

4) ବାକ୍ୟ ଓ ପଦ ପ୍ରକରଣ : -
ବିଶେଷ୍ୟ, ବିଶେଷଣ, ସର୍ବନାମ, କ୍ରିୟା, ଅବ୍ୟୟ, ବାକ୍ୟବିଚାର, ପଦବିନ୍ୟାସ, ବାକ୍ୟର ପ୍ରକାର ଭେଦ, ବାକ୍ୟ ଓ ବାଚ୍ୟ ରୂପାନ୍ତର, ବାକ୍ୟ ସଂକ୍ଷେପଣ ।

5) ଓଡ଼ିଆ ସାହିତ୍ୟର ଇତିହାସ : -
ଆଦିଯୁଗ, ସାରଳାଯୁଗ, ପଞ୍ଚସଖାଯୁଗ, ରୀତିଯୁଗ ଏବଂ ଆଧୁନିକଯୁଗ ।

6) ଭାଷା ବିଜ୍ଞାନ ଅଧ୍ୟୟନର ଇତିହାସ :-
ଭାଷାବିଜ୍ଞାନର ସଂଜ୍ଞା ସ୍ୱରୂପ, ବିଭିନ୍ନ ବିଭାଗ ଓ ବିଭବ, ଧ୍ୱନି ବିଜ୍ଞାନ ଏବଂ ଓଡ଼ିଆ ଭାଷାର ଧ୍ୱନିଗତ ବୈଶିଷ୍ଟ୍ୟ, ଅର୍ଥ ବିଜ୍ଞାନ ।

7) ସାହିତ୍ୟ ସମାଲୋଚନା ଓ ଓଡିଆ ପତ୍ର ପତ୍ରିକା :-
ଓଡ଼ିଆ ସମାଲୋଚନା ସାହିତ୍ୟ ଏବଂ ଆଧୁନିକ ଓଡିଆ ସାହିତ୍ୟ ବିକାଶରେ ପତ୍ରପତ୍ରିକାର ଭୂମିକା

8) ଓଡ଼ିଆ ଭାଷାର ଉତ୍କ୍ଷେଷ ଓ ବିକାଶ : -
ଶିଳାଲେଖ, ପ୍ରାଚୀନ ପୁରାଣ, କାବ୍ୟ, କବିତା ଓ ଗଦ୍ୟ ସାହିତ୍ୟର ଓଡ଼ିଆ ଭାଷା ।

V. Methodology: - [20ମାର୍କ]

1. ମାତୃଭାଷାର ଗୁରୁତ୍ୱ ଏବଂ ଶିକ୍ଷାଦାନର ଲକ୍ଷ୍ୟ ଓ ଉଦ୍ଦେଶ୍ୟ ।
2. ଭାଷାକୌଶଳ ଏବଂ ଶିକ୍ଷାମାନ ।
3. ପାଠ୍ୟ ଯୋଜନା ।
4. ଶିକ୍ଷଣ ଉପକରଣର ଭୂମିକା ।
5. ମାତୃଭାଷା ଶିକ୍ଷାଦାନ ପଦ୍ଧତି ।
6. ସହପାଠ୍ୟ କାର୍ଯ୍ୟକ୍ରମ – ପ୍ରଯୁକ୍ତି ବିଦ୍ୟା ।
7. ଭାଷା ପ୍ରୟୋଗଶାଳା ।
8. ସୃଜନଶୀଳର ବିକାଶ ।
9. ନିରବଚ୍ଛିନ୍ନ ସଂବ୍ୟାପକ ମୂଲ୍ୟାୟନ [CCE]

1.	**G.K & Current Affairs**	–	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Classroom implications of Educational Psychology**	–	**05M**
4.	**Content**	–	**40M**
5.	**Methodology**	–	**20M**
	Total	–	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. History of Education :

- The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
- Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
- Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992

2. Teacher Empowerment:

- Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.

3. Educational Concerns in Contemporary India:

- Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
- Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
- Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
- Adolescence Education
- Value Education – Moral Value and Professional Ethics in Education.
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- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya

Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
    - Right of Children to Free and Compulsory Education Act - 2009
    - Right to Information Act - 2005
    - Child Rights
    - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Educational Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. CONTENT (Marks: 40) (Class VI to Intermediate level syllabus)

1. **हिंदी साहित्य का इतिहासः** काल विभाजन - विभिन्न विद्वानों के विचार आदिकाल, भक्ति काल, रीति काल और आधुनिक काल
2. **आधुनिक साहित्यः** विभिन्न प्रवृत्तियाँ और प्रमुखवाद (छायावाद, प्रगतिवाद,प्रयोगवाद, रहस्यवाद आदि) साहित्यक विधाएँ (कविता, कहानी, उपन्यास, नाटक आदि)
3. **हिंदी भाषा का इतिहासः** उद्भव और विकासः हिंदी राष्ट्र भाषा, राजभाषा और विश्व भाषा के रुप में हिंदी देवनागरी लिपि का विकास, देश की एकता और हिंदी।
4. **हिंदी भाषा का क्षेत्रः** उपभाषाएँ और बोलियाँ
5. **भारतीय काव्यशास्त्रः** अर्थ, परिभाषा, प्रयोजन और लक्षण, रस, छंद, अलंकार
6. **भाषा तत्व और व्याकरणः** वर्णमाला : (स्वर, व्यंजन भेद वर्णों का उच्चारण स्थान) **शब्दभेदः** (रूप परिवर्तन के अधार पर विकारी अविकारी शब्द व्युत्पत्ति के आधार पर शब्द भेद रुढी,यौगिक, योग रूढ) उपसर्ग, प्रत्यय, लिंग वचन, कारक - काल - संधि - समास। पर्यायावाची शब्द, विलोम शब्द, शब्द परिचय तत्सम, तद्भव, देशी, विदेशी, क्रिया - सकर्मक, अकर्मक प्रेरणार्थक क्रियाएँ - मुहावरे, लोकोक्ति, कहावत, विराम चिह्न। वाक्य भेद, वाक्य और प्रयोग, वाक्य संरचना, भेद वाच्य कर्तृ वाच्य, कर्म वाच्य और भाव वाच्य पद-परिचय
7. हिंदी पाठ्य पुस्तकें (द्वितीय भाषा) छठवीं कक्षा से दसवीं कक्षा सहित (उपवाचक और पठनहेतु साहित)

V. Methodology (Marks: 20)

1. भाषा-अर्थ, परिभाषा, महत्व, प्रकृति और स्वरूप, ध्वनि विज्ञान, शब्द विज्ञान, व ाक्य विज्ञान, विवध स्तरों पर हिंदी शिक्षण के लक्ष्य और उद्देश्य, प्रथम भाषा के रूप में हिंदी द्वितीय भाषा के रूप में हिंदी, त्रिभाषा सूत्र, भारतीय संविधान में ि हंदी का स्थान।
2. हिंदी भाषा शिक्षण प्राथमिक, माध्यमिक और उच्च माध्यमिक स्तर पर
   (1) हिंदी भाषा - शिक्षण के उद्धेश्य
   (2) अच्छे शिक्षण और अच्छे शिक्षण की विशेषताएँ।
   (3) हिंदी अध्यापक और शिक्षण की विशेषताएँ
   (4) भाषा - शिक्षण के सामान्य सिद्धांत
   (5) भाषा शिक्षण प्रणालियाँ
   (6) भाषा शिक्षण की पद्धतियाँ (प्रत्यक्ष, परोक्ष, खेल माँन्तेसरी, निर्देशित, डाल्टन, आगमन, सूक्ष्म शिक्षण आदि)
   (7) शिक्षण सूत्र
3. **शिक्षण में भाषा - कौशलों का महत्व**
   सुनना - ध्वनि की उत्पत्ति - ध्वनि और श्रवण का पारस्परिक संबंध
   बोलना - शब्दोच्चारण, वाक्यंत्र, शुदुधोच्चारण का अभ्यास, मौखिक अभिव्यक्ति, पाठशाला में वार्तालाप का अभ्यास।
   पढनाः वाचन की विशेषताएँ, प्रकार दोष और उपचार
   लिखनाः महत्व, नियम विधियाँ, प्रकार, अक्षर-विन्यास
4. **पाठ्यक्रम और सहगामी क्रियाएँ**
   पाठ्यक्रम-पाठ्य पुस्तक, पुस्तकालय - दृश्य - श्रव्य उपकरण (शिक्षण उपकरण) पाठ सहागामी क्रियाएँ, भाषा प्रयोगशाला।
5. **शिक्षण योजनाः**
   (1) पाठ-योजना (गद्य, पद्य, व्याकरण, पत्र लेखन और रचना)
   (2) इकाई पाठ योजना
   (3) सूक्ष्म शिक्षण पाठ योजना
6. **मूल्यांकन**
   मूल्यांकन की धारणा, निरंतर समग्र मूल्यांकन, उत्तम परीक्षा की विशेषताएँ, प्रश्न पत्र का निर्माण, उपलब्धि परीक्षा, निदानात्मक एंव उपचारात्मक शिक्षण, अभिलेख।
7. आंध्रप्रदेश में हिंदी शिक्षण में आनेवाली समस्याएँ व उनका निराकरण।
8. ध्वनि, वर्ण, शब्द, वाक्य रचना व शुद्धाशुद्ध वर्तनी व वाक्य ज्ञान।

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC -2024

SCHOOL ASSISTANT SYLLABUS - SANSKRIT

1.	**G.K & Current Affairs -**	-	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Classroom implications of Educational Psychology**	–	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India -Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
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2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National

Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

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4. **Acts / Rights:**
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5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
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PART - IV

IV. Content: (Marks: 40)(Class VI To Intermediate level syllabus)

Note: 6कक्ष्यातः12कक्ष्यापर्यन्तं प्राच्य / संयुक्त पाठशालासंस्कृतपाठ्यपुस्तेकषु विद्यमानांशाः पाठ्येतरांशाः च ।

कवयः - काव्यम् - रचयितारः - रचनाः स्तोत्राणि शास्त्रग्रन्थाः - कर्तारः (आलङ्कारिक - न्याय व्याकरणेत्यादि ग्रन्थाः।) इत्यादयः।

रचनाप्रक्रियाः इतिहास - पुराण - काव्य - नाटक - कथा - आत्मकथा - गीतम् - इत्यादि प्रक्रियानां स्वरूपविवरणम् - ।

वेदवाङ्मयम् - वेदाः - वेदाङ्गानि - उपनिषदः।

भाषास्वरूपम् - भाषोत्पत्ति विषयकवादाः - भाषाकुटुंबम् - वैदिकलौकिक संस्कृतयोः साम्यं वैषम्यं च।

साहित्यविमर्शः - काव्यप्रयोजनं - काव्यलक्षण - काव्यभेदाः - शैली - अलङ्कारसांप्रदायाः - रसवादाः च।

संस्कृतव्याकरणम् - संज्ञाप्रकरणम्
संधिप्रकरणम्
समासप्रकरणम्
स्त्रीप्रत्ययप्रकरणम्
विभक्त्यर्थप्रकरणम्

भाषांशाः समानार्थकाः
विरुद्धार्थकाः
छन्दः
अलङ्कारः
प्रत्ययाः
विभक्तिः
क्रियापदः
व्युत्पत्यर्थाः
संख्यावाचकाः
प्रयोगविपरिणामः इत्यादयः

पठनावगमनम् परिचित/अपरिचत पद्य/गद्यांशाः - तदाधारितप्रश्नाः।

V. Methodology (20 Marks)

पाठ्यक्रमे संस्कृतस्य महत्वम् - स्थानम्।
संस्कृतशिक्षणस्य उद्देश्यानि - सामान्यसिद्धान्ताः - शिक्षणापद्धतीः।
पाठ्यक्रमयोजना - पाठ्यग्रन्थः।
विद्यासांकेतिक - सहपाठ्यकार्यक्रमाः।
विद्यालयव्यवस्था।
साहित्यप्रक्रियाः बोधनापद्धतीः।
शिक्षणाकौशलानि।
मूल्याङ्कनम् - परीक्षा च।

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
DSC – SCHOOL ASSISTANT SYLLABUS -MATHAMETICS

1.	**G.K & Current Affairs**	-	**10M**
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3.	**Classroom implications of Educational Psychology**	–	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

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6. **National Education Policy-2020**

PART - III

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PART - IV

IV. Maths –Content (Class-VI to Intermediate Present syllabus) (40 Marks)

1. Arithmetic

BODMAS rule - Ratios and Proportions (Direct, Inverse) - comparing quantities using ratios, proportion, percentage and their applications - Profit and Loss - Discount - Sales Tax/Value Added Tax/Goods and Services Tax - Simple, Compound Interest and their applications.

2. Number System

Numbers - Four fundamental operations (Addition, Subtraction, Multiplication, Division) - Knowing about Numbers - Hindu-Arabic system of numeration (Indian system of numeration) - International system of numeration (British system of numeration) - Place value and Face values of a digit in a number - Comparing and Ordering of Numbers - Whole Numbers - Factors and Multiples - Prime and Composite numbers - Even and Odd numbers - Tests for Divisibility of Numbers - Common Factors and Common Multiples - Prime factorisation - Highest Common Factor (G.C.D) - Lowest Common Multiple - Integers - properties and fundamental operations - Fractions and decimals - Types of fractions - comparison - Applications of fractions in daily life - four fundamental operations on fractions and decimals - Euclid's Division Lemma and its application - Rational Numbers - Properties of Rational Numbers - Representation of Rational Numbers on the Number line - Rational Numbers between two rational numbers - Four fundamental Operations on Rational Numbers – Rational numbers and their decimal expansions - Non-terminating, recurring decimals in rational numbers - Product of reciprocals - Squares - Square roots (Numbers and Decimals) - Properties of Square Numbers - Cubes - Cube roots of Numbers - Playing with Numbers - Games with Numbers - Letters for Digits - Irrational numbers - Real Numbers and their Decimal Expansions - Operations on Real Numbers - Laws of Exponents for Real Numbers – Properties & Laws of logarithms.

Sets and their representation (Roster form and Set builder form) – Classification of sets (Empty, Universal, subset, Finite & Infinite, disjoint sets) - difference of sets - Equal sets - Using diagrams to represent sets - Venn diagrams and cardinality of sets - Basic operations on sets (Union, Intersection).

3. Geometry

Basic geometrical concepts (Point, Line, Line segment, Ray, Curves, Polygons, Angles) - Measuring of Lines - Pairs of Lines - Intersecting Lines and Non-intersecting Lines – Lines parallel to the same line - Elements of Angles - Measuring of Angles - Types of Angles – Pairs of Angles - Naming of the given 2D figures of Triangles, Square and Rectangle - The Triangle - Types of Triangles and its Properties – Congruence and some properties of Triangles - Some more criteria for Congruence of Triangles – Criteria for similarity of triangles – Areas of similar triangles – Pythagoras theorem - Classification of Polygons - Angle sum property - Kinds of Quadrilaterals (Trapezium, Kite, Parallelogram) - Some special parallelograms (Rhombus, Rectangle, Square) - Constructing different types of Quadrilaterals - Views of 3D-Shapes - Identification of Edges, Vertices and Faces of 3D figures (Euler’s Rule) - Nets for building 3D shapes – Introduction to Euclid’s geometry – Euclid’s definitions, axioms and postulates - Angle Subtended by a Chord at a Point - Perpendicular from the Centre to a Chord - Equal Chords and Their Distances from the Centre - Angle Subtended by an Arc of a Circle - Cyclic Quadrilaterals – Tangents of a circle – Number of Tangent to a Circle from any point – Segment of a circle formed by a Secant.

4. Mensuration

Measuring Length, Weight, Capacity, Time-Seasons, Calendar, Money, Area - Symmetry (Line and Rotational) - Perimeter of Triangle, Square, Rectangle, Rhombus, Trapezium, Parallelogram, Circle and Polygon, Properties of a Parallelogram - The Mid-point Theorem - Area of a Quadrilateral, Surface Area and Volume of Cube, Cuboid and Cylinder -Volume and capacity - Surface Area and volume of a Sphere - Volume of a Right Circular Cone – Surface area of the combination of Solids – Volume of combination of solids – Conversion of solid from one shape to another

5. Algebra

Patterns - making rules - The idea of variables - formation of algebraic expressions - Terms, Factors and Coefficients - Linear equations in one variable – Linear equations in two variables - Solutions of Pair of Linear Equations in Two Variables – Algebraic methods of finding the solutions for a pair of linear equations -Equations reducible to a pair of linear equations in two variables -Solution of a quadratic equation by factorisation & by completing the square – Nature of roots - terms and types of algebraic expressions - finding the value of an expression - Addition, Subtraction and Multiplication of Algebraic Expressions - Multiplying a Monomial by a Monomial and polynomial - Multiplying a Polynomial by a Polynomial - Standard Identities and their applications - Applications of simple equations to practical situations - Exponents and Powers - Negative exponents - Laws of exponents - Expressing large numbers in the standard form - Factorisation - Division of Algebraic Expressions Continued (Polynomial ÷ Polynomial) - Linear Graphs – Polynomials in one variable – Degree, Value, zeroes of a polynomial - Geometrical meaning of the Zeroes of a Polynomial - Graphical representation of linear, Quadratic and Cubic Polynomials - Factorisation of Polynomials - Algebraic Identities - Working with Polynomials – Division algorithm for polynomials - Arithmetic progressions – Parameters of Arithmetic progressions – n^{th} term of an Arithmetic progression – Sum of first n terms in Arithmetic progression – Geometric progressions – n^{th} term of a GP.

Functions :

- Ordered pair- Cartesian product of sets – Relation - Function & its types - image & pre-image – Definitions.
- Inverse functions and Theorems.
- Domain, Range, Inverse of real valued functions.

Mathematical Induction

- Principle of Mathematical Induction & Theorems.
- Applications of Mathematical Induction.
- Problems on divisibility.

Matrices:

- Types of matrices

- Scalar multiple of a matrix and multiplication of matrices
- Transpose of a matrix
- Determinants
- Adjoint and Inverse of a matrix
- Consistency and inconsistency of Equations- Rank of a matrix
- Solution of simultaneous linear equations

Complex Numbers:

- Complex number as an ordered pair of real numbers- fundamental operations
- Representation of complex numbers in the form a+ib.
- Modulus and amplitude of complex numbers –Illustrations.
- Geometrical and Polar Representation of complex numbers in Argand plane- Argand diagram.

De Moivre's Theorem:

- De Moivre's theorem- Integral and Rational indices.
- n^{th} roots of unity- Geometrical Interpretations – Illustrations.

Quadratic Expressions:

- Quadratic expressions, equations in one variable
- Sign of quadratic expressions – Change in signs – Maximum and minimum values
- Quadratic in-equations

Theory of Equations:

- The relation between the roots and coefficients in an equation
- Solving the equations when two or more roots of it are connected by certain relation
- Equation with real coefficients, occurrence of complex roots in conjugate pairs and its consequences
- Transformation of equations – Reciprocal Equations.

Permutations and Combinations:

- Fundamental Principle of counting – linear and circular permutations
- Permutations of 'n' dissimilar things taken 'r' at a time
- Permutations when repetitions allowed
- Circular permutations
- Permutations with constraint repetitions.
- Combinations-definitions and certain theorems

Binomial Theorem:

- Binomial theorem for positive integral index
- Binomial theorem for rational Index (without proof).
- Approximations using Binomial theorem

Partial fractions:

- Partial fractions of f(x)/g(x) when g(x) contains non –repeated linear factors.
- Partial fractions of f(x)/g(x) when g(x) contains repeated and/or non-repeated linear factors.
- Partial fractions of f(x)/g(x) when g(x) contains irreducible factors.

6. Statistics

DATA HANDLING -Frequency Distribution Tables and Graphs- Grouped data-ungrouped data – Measures of Central Tendency -Mean, median & mode of grouped and ungrouped data – Ogive curves.

MEASURES OF DISPERSION

- Range
- Mean deviation
- Variance and standard deviation of ungrouped/grouped data.
- Coefficient of variation and analysis of frequency distribution with equal means but different variances.

7. Probability

Probability - Linking chances to probability - Chance and probability related to real life - Probability - a theoretical approach - Mutually exclusive events - Finding probability - Complementary events and probability - Impossible and certain events - Deck of Cards and Probability – Use and Applications of probability.

- Random experiments and events
- Classical definition of probability, Axiomatic approach and addition theorem of probability.
- Independent and dependent events conditional probability- multiplication theorem and Bayee's theorem.

Random Variables and Probability Distributions:

- Random Variables
- Theoretical discrete distributions – Binomial and Poisson Distributions

8. Coordinate Geometry

Cartesian System – Distance between two points – distance between two points on a line parallel to the co-ordinate axis – Distance between any two points on a line in the x-y plane – Section formula – centroid of a triangle – Tri-sectional points of a line – Area of the triangle – Heron's formula- Collinearity – Straight lines – Slope of the straight line – slope of a line joining two points.

Locus :

- Definition of locus – Illustrations.
- To find equations of locus - Problems connected to it.

Transformation of Axes :

- Transformation of axes - Rules, Derivations and Illustrations.
- Rotation of axes - Derivations – Illustrations.

The Straight Line :

- Revision of fundamental results.
- Straight line - Normal form – Illustrations.
- Straight line - Symmetric form.
- Straight line - Reduction into various forms.
- Intersection of two Straight Lines.
- Family of straight lines - Concurrent lines.
- Condition for Concurrent lines.
- Angle between two lines.
- Length of perpendicular from a point to a Line.
- Distance between two parallel lines.
- Concurrent lines - properties related to a triangle.

Pair of Straight lines:

- Equations of pair of lines passing through origin, angle between a pair of lines.
- Condition for perpendicular and coincident lines, bisectors of angles.
- Pair of bisectors of angles.
- Pair of lines - second degree general equation.
- Conditions for parallel lines - distance between them, Point of intersection of pair of lines.
- Homogenizing a second degree equation with a first degree equation in X and Y.

Circle :

- Equation of circle -standard form-centre and radius of a circle with a given line segment as diameter & equation of circle through three non collinear points - parametric equations of a circle.
- Position of a point in the plane of a circle – power of a point-definition of tangent-length of tangent
- Position of a straight line in the plane of circle-conditions for a line to be tangent – chord joining two points on a circle – equation of the tangent at a point on the circle-point of contact-equation of normal.
- Chord of contact - pole and polar-conjugate points and conjugate lines - equation of chord with given middle point.
- Relative position of two circles- circles touching each other externally, internally common tangents-centres of similitude- equation of pair of tangents from an external point.

System of circles:

- Angle between two intersecting circles.
- Radical axis of two circles- properties- Common chord and common tangent of two circles – radical centre.
- Intersection of a line and a Circle.

Parabola:

- Conic sections –Parabola- equation of parabola in standard form-different forms of parabola- parametric equations.
- Equations of tangent and normal at a point on the parabola (Cartesian and parametric) - conditions for straight line to be a tangent.

Ellipse:

- Equation of ellipse in standard form- Parametric equations.
- Equation of tangent and normal at a point on the ellipse (Cartesian and parametric) - condition for a straight line to be a tangent.

Hyperbola:

- Equation of hyperbola in standard form- Parametric equations.
- Equations of tangent and normal at a point on the hyperbola (Cartesian and parametric) - conditions for a straight line to be a tangent- Asymptotes.

Three Dimensional Coordinates :

- Coordinates.
- Section formulas - Centroid of a triangle and tetrahedron.

Direction Cosines and Direction Ratios :

- Direction Cosines.
- Direction Ratios.

Plane :

- Cartesian equation of Plane - Simple Illustrations.

9. Trigonometry

Trigonometry – Naming the sides in a Right triangle – Trigonometric Ratios – Defining Trigonometric Ratios – Trigonometric ratios of some specific and complementary angles – Trigonometric identities – Applications of Trigonometry – Drawing figures to solve problems – solutions for two triangles.

Trigonometric Ratios up to Transformations:

- Graphs and Periodicity of Trigonometric functions.
- Trigonometric ratios and Compound angles.
- Trigonometric ratios of multiple and sub- multiple angles.
- Transformations - Sum and Product rules.

Trigonometric Equations:

- General Solution of Trigonometric Equations.
- Simple Trigonometric Equations – Solutions.

Inverse Trigonometric Functions:

- To reduce a Trigonometric Function into a bijection.
- Graphs of Inverse Trigonometric Functions.
- Properties of Inverse Trigonometric Functions.

Hyperbolic Functions:

- Definition of Hyperbolic Function – Graphs.
- Definition of Inverse Hyperbolic Functions – Graphs.
- Addition formulas of Hyperbolic Functions.

Properties of Triangles:

- Relation between sides and angles of a Triangle
- Sine, Cosine, Tangent and Projection rules.
- Half angle formulae and areas of a triangle
- In-circle and Ex-circle of a Triangle.

10. Vector Algebra

Addition of Vectors:

- Vectors as a triad of real numbers.
- Classification of vectors.
- Addition of vectors.
- Scalar multiplication.
- Angle between two non-zero vectors.
- Linear combination of vectors.
- Component of a vector in three dimensions.
- Vector equations of line and plane including their Cartesian equivalent forms.

Product of Vectors:

- Scalar Product - Geometrical Interpretations - orthogonal projections.
- Properties of dot product.
- Expression of dot product in i, j, k system – Angle between two vectors.
- Geometrical Vector methods.
- Vector equations of plane in normal form.
- Angle between two planes.
- Vector product of two vectors and properties.
- Vector product in i, j, k system.
- Vector Areas.
- Scalar Triple Product.
- Vector equations of plane in different forms, skew lines, shortest distance and their Cartesian equivalents. Plane through the line of intersection of two planes, condition for coplanarity of two lines, perpendicular distance of a point from a plane, Angle between line and a plane. Cartesian equivalents of all these results
- Vector Triple Product – Results

11. Calculus

Limits and Continuity:

- Intervals and neighbourhoods.
- Limits.
- Standard Limits.
- Continuity.

Differentiation:

- Derivative of a function.
- Elementary Properties.
- Trigonometric, Inverse Trigonometric, Hyperbolic, Inverse Hyperbolic Function - Derivatives.
- Methods of Differentiation.
- Second Order Derivatives.

Applications of Derivatives:

- Errors and approximations.
- Geometrical Interpretation of a derivative.
- Equations of tangents and normal's.
- Lengths of tangent, normal, sub tangent and sub normal.
- Angles between two curves and condition for orthogonality of curves.
- Derivative as Rate of change.
- Rolle's Theorem and Lagrange's Mean value theorem without proofs and their geometrical interpretation.
- Increasing and decreasing functions.
- Maxima and Minima.

Integration:

- Integration as the inverse process of differentiation- Standard forms –properties of integrals.
- Method of substitution- integration of Algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions. Integration by parts.
- Integration- Partial fractions method.
- Reduction formulae.

Definite Integrals:

- Definite Integral as the limit of sum
- Interpretation of Definite Integral as an area.
- Fundamental theorem of Integral Calculus.
- Properties.
- Reduction formulae.
- Application of Definite integral to areas.

Differential equations:

- Formation of differential equation-Degree and order of an ordinary differential equation.
- Solving differential equation by

    a) Variables separable method.

    b) Homogeneous differential equation.

    c) Non - Homogeneous differential equation.

    d) Linear differential equations.

V. Methodology (20 Marks)

1. Meaning and Nature of Mathematics, History of Mathematics.
2. Contributions of Great Mathematicians - Aryabhatta, Bhaskaracharya, Srinivasa Ramanujan, Euclid, Pythagoras, George cantor.
3. Aims and Values of teaching Mathematics, Instructional objectives (Blooms taxonomy)
4. Mathematics curriculum: Principles, approaches of curriculum construction, - Logical and Psychological, Topical and Concentric, Spiral approaches. Qualities of a good Mathematics text book.
5. Methods of teaching mathematics- Heuristic method, Laboratory method, Inductive and Deductive methods, Analytic and Synthetic methods, Project method and Problem Solving method.
6. Unit Plan, Year Plan, Lesson Planning in Mathematics.
7. Instructional materials, Edgar Dale's Cone of Experience.
8. Evolving strategies for the gifted students and slow learners,
9. Techniques of teaching mathematics like Oral work, written work, Drilling, Assignment, Project, Speed and Accuracy.
10. Mathematics club, Mathematics structure, Mathematics order and pattern sequence.
11. Evaluation - Types, Tools and Techniques of Evaluation, Preparation of Standard Assessment Tools Analysis, Characteristics of a good test.

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC – 2024

SCHOOL ASSISTANT SYLLABUS – PHYSICAL SCIENCE

1. G.K & Current Affairs	**-**	**10M**
2. Perspectives in Education	**–**	**05M**
3. Classroom implications of Educational Psychology	**–**	**05M**
4. **Content**	**-**	**40M**
5. Methodology	**-**	**20M**
Total	**-**	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - I

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National

Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarship, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - B

IV. Content (Marks: 40) (Class VI To Intermediate level syllabus)

(6 – 10 Classes)

1. MEASUREMENT

Story of transport, Non- standard units of Measurements, Measuring the length of a Curved line, Measurement of length, area, volume and time. CGS and SI units of length, area, volume and time, Conversion of units from CGS to S.I and Vice versa.

2. MOTION

Describing Motion, Motion and Rest, Motion Along a Straight Line, Types of motion (Translatory, Rotatory and oscillatory), Scalars and vectors, Distance, Displacement, Speed, Velocity, Average speed, Average velocity, Acceleration, Graphical Representation of Motion, Distance-Time Graphs, Velocity-Time Graphs, Uniform Motion and Non-

Uniform Motion, Equations of Motion, Uniform Circular Motion, Laws of Motion, Balanced and Unbalance Forces, First Law of Motion, Inertia and Mass, Momentum, Second Law of Motion, Third law of motion.

3. FORCE, FRICTION AND PRESSURE

Force – A Push or a Pull, Exploring Forces, Effect of Force on Objects, Types of forces (field force and contact force), Net force, Types of friction (static, Sliding and Rolling), Factors effecting Friction, Friction: A Necessary Evil, Increasing and Reducing Friction, Fluid friction, Pressure, Pressure Exerted by Liquids and Gases, Pressure of liquids at different depths, Atmospheric Pressure.

4. GRAVITATION

Uniform circular motion, Universal law of gravitation, Free Fall, Acceleration due to Gravity, Motion of Objects Under the Influence of Gravitational Force of the Earth, Mass and Weight, Thrust and Pressure, Pressure in Fluids, Buoyancy, Floating and Sinking Objects, Archimedes' Principle.

5. WORK, ENERGY

Scientific Conception of Work, Work Done by a Constant Force, Energy, Forms of Energy, Kinetic Energy, Potential Energy, Mechanical Energy. Law of Conservation of Energy, Conversion of Energy from one form to another, Power and its units.

6. SOUND

Sound - a form of energy, Production of sound, Some musical instruments, Sound Needs a Medium for Propagation, Human ear, Hearing Impairment, Noise and Music, Propagation of Sound, Types of waves (longitudinal and transverse), Characteristics of sound waves (Wavelength, Frequency, Time period, Speed of the wave), Relation between frequency and time period, Pitch, Loudness and Quality, Intensity of Sound, Speed Of Sound in Different Media, Reflection of Sound, Echo, Reverberation, Uses of Multiple Reflection of Sound, Range of Hearing, Infrasonic and Ultrasonics, Applications of Ultrasound, Sound pollution.

7. HEAT

Heat and temperature, Transfer of Heat (Conduction, convection, radiation), Kinds of clothes we wear in summer and winter, Units of temperature (centigrade, Fahrenheit and Kelvin; Conversions), Expansion of liquids due to heat, Types of thermometers, Thermal equilibrium, Temperature and Kinetic energy, Specific Heat, Applications of Specific heat capacity, Principle of method of mixtures, Determination of Specific heat of a solid, Evaporation, Condensation, Humidity, Dew and Fog, Boiling, Latent heat of vapourisation, Melting, Latent heat of fusion, Freezing, Temperature- time graph.

8. LIGHT

Light, Transparent, Opaque and Translucent Objects, Shadows and Images, Rectilinear Propagation of Light, A Pinhole Camera, Regular and Diffused Reflection, Reflection of light by plane surfaces (laws of reflection, periscope, multiple images, kaleidoscope, Characteristics of image formed by plane mirrors), Spherical Mirrors and Images, Spectrum, Wave nature of light, Fermat principle, Sign convention, Refraction, Refraction

of Light at Plane Surfaces, Refractive index, Absolute refractive index, Relative refractive index, Snell's law, Critical angle, Total Internal Reflection, Applications of total internal reflection, Mirages, Optical fibres, Refraction Through a Glass Slab, Lateral shift, Vertical shift, Refraction of Light at Curved Surfaces, Lenses, Terminology used in the case of lenses -Focal length, Focus, Optic Centre, Principal axis, Radius of curvature, Centre of curvature, Focal plane, Behaviour of certain light rays when they are incident on a lens, Images formed by lenses for various distances of objects, UV method, Lens formula, Lens maker's formula, Human Eye, Least distance of distinct vision, Angle of vision, Myopia, Hypermetropia, Presbyopia, Care of the Eyes, Braille System, Visually Impaired Persons, Power of lens, Refractive index of a Prism, Dispersion of light through prism, Sunlight-Dispersion, Rainbow, Scattering of light.

9. ELECTRICITY

Simple Electric circuit and its components, Conductors, Insulators, Type of cells (Dry and liquid), Electric symbols and uses, Series and parallel connection of cells and bulbs, Heating effects of Electricity, Understanding of CFL, Fuse and MCBs, Chemical Effects Of Electric Current, Good/Poor Conducting Liquids, Electroplating, Magnetic Effects of Electric Current, Electromagnet, Electric bell, Electric current, Drude and Lorentz theory, Potential difference and EMF, Drift velocity and working of a cell, Ohm's law, Electric shock, Factors affecting the resistance, Series connection of resistors, Parallel Connection of resistors, Multi-meter, Kirchhoff's laws, Sign convention in a circuit, Electric power, Power consumption, Electric energy, Overload.

10. MAGNETISM AND ELECTROMAGNETISM

How Magnets were discovered, Magnetic and Non-Magnetic Materials, Types of Magnets, Poles of Magnet, Properties of Magnets, Storing magnets safely, Magnetic compass, Earth as a Magnet, Magnetic Induction, Oersted's experiment, Magnetic Field, Magnetic flux – Magnetic flux density, Magnetic field due to straight wire /circular coil/solenoid carrying current, Magnetic Force, Electric Motor, Electromagnetic induction, Faraday's Law, Lenz Law, Applications of Faraday's law of electromagnetic induction, Induced current, Induced EMF, Electric generator, DC and AC currents, rms values.

11. PRINCIPLES OF METALLURGY

Metallurgy, Occurrence of the metals in nature, Ores and Minerals, Extraction of metals, Activity series, Concentration or Dressing of the ore, Hand picking, Washing, Froth flotation, Magnetic Separation, Extraction of crude metal from the ore, Reduction of purified ore to the metal, Purification of the crude metal, Distillation, Polling, Liquation, Electrolytic refining, Corrosion, Prevention of corrosion, Thermite process, Smelting, Roasting, Calcination, Flux, Gangue, Blast furnace, Reverberatory furnace.

12. CARBON AND ITS COMPOUNDS

Allotropes of Carbon, Amorphous forms, Crystalline forms, Diamond, Graphite, Buckminsterfullerene, Nanotubes, Versatile nature of Carbon, Catenation, Tetravalency, Hydrocarbons, Saturated and unsaturated hydrocarbons, Homologous series, Isomerism, Functional groups, Nomenclature of Aliphatic Hydrocarbons, IUPAC names, Chemical properties of carbon compounds- Combustion, Oxidation reactions, Addition reactions,

Substitution reactions, Ethanol, Ethanoic acid, Esters, Esterification Reactions, Soaps – Saponification and Micelles, Cleansing action of soap, Detergents.

13. SOME NATURAL PHENOMENON

The Story of Lightning, charging by Rubbing, Electric charge and properties of electric charge, Types of charges and their interactions, Transfer of charge, lightning, lightning safety, lightning conductors, Earthquake, Tsunami, Causes and effects, Protective measures.

14. STARS AND SOLAR SYSTEM

The Moon, The Moon's Surface, Phases of Moon, Eclipses (Solar and lunar eclipses), The Stars, Movement of Stars (Constellation, pole star), Movement of the sun, Solar System, Planets and Some Other Members of the Solar System, Artificial Satellites.

15. CHANGES AROUND US

Slow/fast changes, Temporary/permanent changes, Natural/man made changes, Physical/ chemical changes, Rusting of iron, Crystallisation, Galvanization, Corrosion, Rancidity, Oxidation / reduction

16. MATTER

Objects Around Us, Properties of Materials, Physical Nature of Matter, Characteristics of Particles of Matter, States of matter, Properties of solids, liquids and gases, Change of state of Matter –effect of change of temperature and pressure, Evaporation, Factors Affecting Evaporation, Sublimation, Deposition, Boiling, Latent heat of vaporisation, Latent heat of fusion, Mixture, Types of Mixtures, Solutions., Properties of a Solution, Types of Solutions, Concentration of solution, Expressing Concentration of Solutions, Suspension, Properties of a Suspension, Colloidal Solution, Properties of a Colloid, Common examples of colloids, Mixtures, Methods of separation–handpicking, Threshing, Winnowing, Sedimentation, Decantation, Sieving, Filtration, Sublimation, Chromatography, Distillation and fractional distillation, Evaporation, Condensation, Use of more than one method of separation, Saturated and unsaturated solutions, Separation of immiscible liquids, Types of Pure Substances – Elements and Compounds.

17. ATOMS AND MOLECULES

Laws of Chemical Combination - Law of Conservation Of Mass, Law of Constant Proportions, Atom, Symbols of Atoms of Different Elements, Atomic Mass, Atomicity, Valency, Molecule, Molecules Of Elements, Molecules Of Compounds, Ion – Cation & Anion, Polyatomic ions, Names and symbols of ions, Formation of ions, Writing Chemical Formulae, Molecular Mass, Molar mass, Formula Unit Mass, Structure of The Atom, Subatomic particles, Charged Particles in Matter, Thomson's Model of an Atom, Rutherford's Model of an Atom, Bohr's Model of an Atom, Bohr-Sommerfeld model of an atom, Neutrons, Distribution of electrons into different Orbits, Atomic Number and Mass Number, Isotopes, Isobars, Atomic line spectra, Planck's quantum theory, Quantum numbers, Shapes of orbitals, Electronic Configuration, Pauli Exclusion Principle, Aufbau principle, Hund's Rule.

18. CLASSIFICATION OF ELEMENTS-THE PERIODIC TABLE

Dobereiner's law of Triads, Newlands' law of Octaves, Mendeleev's Periodic Table, Modern Periodic Table, Periodic properties of the elements and their gradation in the modern periodic table.

19. CHEMICAL BONDING

Lewis dot structures, Covalency, Electronic theory of valence by Lewis and Kossel, Octet rule, Ionic and Covalent bonds, Ionic and Covalent compounds, Bond lengths and Bond energies of covalent bonds, Valence shell electron pair repulsion theory, Valence bond theory, Hybridisation.

20. METALS AND NON METALS

Physical Properties of Metals and Non-metals, Chemical Properties of Metals and Non-metals, Uses of Metals and Non-metals, Examples of metals and non-metals, Reactivity order of metals.

21. SYNTHETIC FIBRES AND PLASTICS

Natural and Synthetic fibres, Preparation and uses, Types of Synthetic Fibres, Characteristics of Synthetic Fibres, Plastics as Materials of Choice, Types of plastics, Plastics and environment, Biodegradable – Non biodegradable materials.

22. COAL AND PETROLEUM

Exhaustible and inexhaustible Resources, Fuels – Types, Coal, Story of Coal, Uses of Coal and Coal products, Refining of petroleum, Petrochemical products in various sectors, Various Constituents of Petroleum and their Uses, Formation of coal and petroleum, Natural Gas, Misuse of Energy resources and Consequences.

23. COMBUSTION FUELS AND FLAME

Combustion, Types of Combustion, Ignition temperature, Inflammable substances, Flame, Fuel Efficiency, Burning of Fuels Leads to Harmful Products, Fire control, Structure of flame – colors zones – Intensities.

24. AIR

Atmosphere, Components of air, Availability of oxygen to plants and animals, Replacement of Oxygen in the Atmosphere.

25. ACIDS, BASES AND SALTS

Natural acid-base indicators, Synthetic acid-base Indicators, Olfactory indicators, Universal Indicator, Chemical properties of Acids and Bases, Reaction of Acids and bases with Metals, Reaction of Acids with carbonates and metal hydrogen Carbonates, Neutralization reaction, Reaction of Acids with metal oxides, Reaction of base with non-metal oxide, Production of H^+ ions and OH- ions, Electrical conductivity of Acids and Bases, Properties of Bases, Dilution, Strength of acid or base, pH scale, Importance of pH in everyday life, Self defense by animals and plants through chemical warfare, Family of salts, pH of Salts, Chemicals from common salt, Important product from chlor-alkali process and their uses, Water of crystallization, Common salt, Bleaching Powder, Baking soda, Washing soda, Plaster of paris, Gypsum, and their uses.

Intermediate:

PHYSICS

- Physical World
- Units and Measurements
- Motion in a Straight Line
- Motion in a Plane
- Laws of Motion
- Work, Energy and Power
- System of Particles and Rotational Motion
- Oscillations
- Gravitation
- Mechanical Properties of Solids
- Mechanical Properties of Fluids
- Thermal Properties of Matter
- Thermodynamics
- Kinetic Theory
- Waves
- Ray Optics and Optical Instruments
- Wave Optics
- Electric Charges and Fields
- Electrostatic Potential and Capacitance
- Current Electricity
- Moving Charges and Magnetism
- Magnetism and Matter
- Electromagnetic Induction
- Alternating Current
- Electromagnetic Waves
- Dual Nature Of Radiation And Matter
- Atoms

CHEMISTRY

- Atomic Structure
- Classification of Elements & Periodicity in Properties
- Chemical Bonding & Molecular Structure
- States of Matter: Gases and Liquids
- Stoichiometry
- Thermodynamics
- Chemical Equilibrium & Acids-Bases
- Hydrogen & it's compounds
- s-Block elements (Alkali & Alkaline Earth Metals)
- p-Block Elements Group 13 (Boron family)
- p-Block Elements Group 14 (Carbon family)

- Environmental Chemistry
- Organic Chemistry-Some Basic Principles & Techniques & Hydrocarbons
- Solid State
- Solutions
- Electrochemistry & Chemical Kinetics
- Surface Chemistry
- General Principles of Metalillurgy
- p-Block elements (Group-15,16,17,18 Elements)
- d & f Block Elements & Coordination Compoounds
- Polymers
- Biomolecules
- Chemistry in Everyday life
- Halo Alkanes & Haloarenes
- Organic Compounds containing C, H & O (Alcohols, Phenols, Ethers, Aldehydes, Ketones & Carboxylic acids)
- Organic Compounds Containing Nitrogen

V. Methodology (Marks: 20)

1. The Nature of Science: Nature and scope of science, Science, ideology and Society, Structure of Science (a) Substantive structure - Empirical knowledge, Theoretical Knowledge - (Facts, Concepts, hypothesis, theory, Principle Law), (b)Syntactic Structure of Science - Scientific inquiry, Processes of Science, Attitudes of inquiry
2. The History and Development of Science: A brief introduction to oriental and western science, Contribution of the following Scientists in the Development of Science: Aryabhatta, BhaskaraCharya, Aristotle, Copernicus, Newton, Einstein, C.V.Raman, Various organizations working for the development of science in India
3. Aims and Values of teaching Physical Sciences: Aims of teaching Physical Sciences, Values of teaching Physical Science, Correlation of Physics and Chemistry with other subjects
4. Objectives of teaching Physical Sciences: Meaning and importance of objectives, Bloom's Taxonomy of Educational objectives, Specific / Behavioral objectives / (Instructional objectives), Critique on Bloom's Taxonomy
5. Approaches and Methods of teaching Physical Sciences: Inductive and Deductive Approaches, Micro Teaching, Team Teaching, Lecture Method, Lecture cum Demonstration Method, Historical Method, Heuristic Method, Project Method, Laboratory method, Problem Solving Method, Scientific Method, Multimedia Approach in Teaching Learning process, Programmed Learning, CAI and CAL
6. Planning for effective instruction in Science: Year Plan, Unit Plan, Lesson Plan, Learning experience, characteristics, classification, source and relevance.
7. Teaching Learning Material (TLM): Characteristics and Importance of TLM, Classification and Types of TLM, Hardware and Software in TLM, TLM-Principles to be followed, Edgar Dale's cone of learning experience.

8. Science laboratories: Importance of Practical work in science, Planning of Science laboratories, Procurement, care and maintenance of laboratory equipment, Registers, Management of safety and science kits, Development of improvised Apparatus.
9. Physical Science Curriculum: Principles of Curriculum Construction, Defects in the existing school science curriculum, Qualities of a good Science Text Book.
10. Non-formal Science Education: Science Clubs, Science Fairs - purposes, levels, organization, advantages, Science Library, Role of NGOs and State in popularizing Science
11. Evaluation: Concept and Process of Evaluation, Tools of Evaluation, Preparation of Scholastic Achievement Test (SAT), Analysis and interpretation of Scores.

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024

DSC - SCHOOL ASSISTANT SYLLABUS – BIOLOGICAL SCIENCE

1. G.K & Current Affairs	**-**	**10M**
2. Perspectives in Education	**–**	**05M**
3. Classroom implications of Educational Psychology	**–**	**05M**
4. **Content**	**-**	**40M**
5. Methodology	**-**	**20M**
Total	**-**	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National

Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. Content (Marks: 40) (Class VI To Intermediate level syllabus)

6 – 10 Classes:

1. **Life Process:** Our food, Components of food, Balanced diet, Malnutrition, Deficiency diseases, Plants – Types, Plant parts – functions, Types of nutrition, Nutrition in plants – Autotrophic, Parasitic, saprophytic, Insectivorous; Nutrition in animals - Different ways of taking food, Digestion in humans, Digestion in grass eating animals, feeding and digestion in amoeba; Cellular respiration, Types of respiration, Respiration in plants, Respiration in animals, Respiration versus combustion, Photosynthesis versus Respiration, Circulatory system - Human Circulatory system, Evolution of the transport system in animals, Transportation in plants; Excretion - Excretion in Human Beings, Excretion in other organisms, Excretion and release of substances in plants, Excretion Vs Secretion; Coordination in animals- Nervous and Endocrine systems, Control mechanism in plants – Plant hormones, tropic and nastic movements, Modes of

reproduction – sexual, asexual and vegetative; Sexual reproduction in plants, Seed dispersal, Sexual and Asexual Reproduction in Animals, Metamorphosis, Reproduction in a placental mammal – Man, Reproductive health, Birth control methods, Fighting against social ills, Adolescence and puberty – changes, role of hormones, Reproductive phase, Variations, Mendel's experiments on inheritance, Sex determination in human beings, Evolution – Lamarckism, Darwinism, Evidences of evolution, Human evolution

2. **Living World:** Living and Nonliving things, Characteristics of living organisms, Different types of habitat and adaptation, Skeletal parts – Bones, Joints, Cartilage; muscles, Movements in animals, Cell – The basic unit of life, Types of cells, Cell structure and function, Cell division, Animal Tissues, Plant tissues, Introduction to microorganisms, Useful Microorganisms, Harmful microorganism, Food preservation, Agricultural Practices, Improvement in crop yields, Storage of food, Food from Animals - Animal Husbandry
3. **Our Environment – Ecology:** Our Environment - Food chain, Food web, Ecological pyramids, Effects of human activities on ecosystems, Steps towards prevention; Natural resources - Renewable and non-renewable resources, conservation; Bio diversity - Forests, Flora, fauna, interrelation of organisms, Advantages of forests, Deforestation - effects, Conservation of forest and wildlife – Protecting areas, endangered and endemic species; Air & water pollutions -Cusses, effects and prevention, Water, Sewage, Treatment of polluted water, Better housekeeping practices, Sanitation and Disease, Alternative arrangement for sewage disposal; Global Environmental Issues - Green house effect, Global warming, Acid rains; Nitrogen cycle.

Intermediate:

BOTANY

- Diversity in the Living World:
- The living world – Biological – Classification – Science of plants – Botany – Plant King dom
- Structural Organisation in Plants - Morphology,
- Representation in Plants
- Plants Systematics,
- Cell: Structure and Functions,
- Internal Organizations of Plants
- Plant Ecology
- Plant Physiology
- Microbiology
- Genetics
- Molecular Biology
- Biotechnology

- Plants
- Microbes and Human Welfare.

ZOOLOGY

- Diversity of Living World
- Structural organization in Animals
- Animal Diversity-I
- Animal Diversity-II (Phylum: Chordata)
- Locomotion & Reproduction in Protozoa
- Biology in Human Welfare
- Type study of Periplaneta Americana
- Ecology & Environment.
- Human Anatomy and Physiology- I
- Human Anatomy and Physiology- II
- Human Anatomy and Physiology- III
- Human Anatomy and Physiology- IV
- Human Reproduction
- Generics
- Organic Evolution
- Applied Biology

V. Teaching Methodology (Marks: 20)

1. The Nature & Scope of Science: A brief introduction of Oriental and Western Science, Nature of Science, Scope of Science, Substantive and Syntactic Structure of Science.
2. Aims and Values of Teaching Biological Sciences: Aims of teaching Biological Sciences, Values of teaching Biological Sciences.
3. Objectives of Teaching Biological Sciences: Importance of Objectives of Teaching Biological Sciences, Bloom's Taxonomy of Educational Objectives and limitations, Writing Instructional Objectives and Specifications.
4. Academic Standards in Biological Science.
5. Approaches and Methods of Teaching Biological Sciences: Inductive Approach and Deductive Approach, Methods of Teaching 1. Lecture Method, 2. Lecture cum Demonstration Method, 3. Heuristic Method, 4. Project Method, 5. Experimental Method, 6. Laboratory Method.

6. Planning for effective Instruction: Year Plan, Unit Plan, Lesson Plan - Herbartian and Bloom's Approach, Criteria for Evaluation of Lesson Plan. Self Evaluation and Peer Evaluation, Learning experiences - Characteristics, Classification, Sources and Relevance, Teaching - Learning Material and Resources in Biological Sciences.

7. Science Laboratories: Importance of Practical work in Biological Sciences, Planning Science Laboratory, Procurement, Care and Maintenance of Laboratory Equipment, Maintenance of different Registers, Safety and First aid, Development of Improvised Apparatus

8. Science Curriculum: Principles of Curriculum Construction, Defects in the existing School Science Curriculum, Correlation of Biological Sciences with other School Subjects, Qualities of a good Biological Science Text-book.

9. Biological Science Teacher: Qualities of a good Biological Sciences Teacher, Roles and Responsibilities

10. Non-formal Science Education: Science club, Eco-club, Blue-club, Red ribbon club, Science fairs - Objectives, levels of organizations, importance, Science Laboratories, Role of NGOS and State in popularizing science.

11. Evaluation: Concept and process of Measurement and Evaluation, Continuous Comprehensive Evaluation, Tools of Evaluation, Preparation of Scholastic Achievement Test(SAT), Analysis and interpretation of scores.

Government of Andhra Pradesh
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DSC -2024

SCHOOL ASSISTANT SYLLABUS –SOCIAL STUDIES

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Classroom implications of Educational Psychology**	–	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education

- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika ShikshaAbhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
    - Right of Children to Free and Compulsory Education Act - 2009
    - Right to Information Act - 2005
    - Child Rights
    - Human Rights.

5. National Curriculum Framework - 2005: Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. Content: (40 Marks)(Class VI To Intermediate level syllabus)

a) Classes VI – X Syllabus:

Theme - I: Diversity on the Earth

Universe- origin, Galaxy, Celestial bodies, Constellations, The Solar System, Our Earth ; Globe, Axis, Latitudes, Longitudes, Movements of the Earth, Equinox, Eclipses, Components of the Environment, Maps- Types, Components, Conventional Symbols, uses; Forests -

Climatic regions, Types of forests, Uses, Forests in AP, Deforestation, Social Forestry and Conservation; Landforms - Major Landforms of AP, Podu Cultivation, Diversity in Lifestyles; Resources-Types, Conservation; Land, Soil, Water, Natural Vegetation and Wildlife Resources, Landslides, Factors of Soil formation, Degradation of soil and conservation measures, Water problems of water availability; India Size and Location, India's Neighbours, India Relief Features-Major Relief Divisions, Climate of India-Monsoon, Climographs, Climatic Controls, Drainage-The Himalayan Rivers and Peninsular rivers and river pollution, Indian Rivers and Water Resources.

Theme - II: Production Exchange and Livelihoods

Markets around us-Types of Markets, Consumer Protection; Road Safety-Traffic Signs, Road marking signs-using methods, Road safety measures, pedestrian safety, safe cycling, safety travelling; Mineral and Power Resources- Types of Minerals, Distribution, Conservation, Power Resources -Conventional, Non-Conventional; Agriculture- Types of farming, major crops; Industries-Classification, Distribution ; Human Resources-Population Density, Population size and distribution, Population Change Population growth, National population policy; Population composition; Weavers, Iron Smelters and Factory Owners- Indian Textiles and the World Market, The Sword of Tippu Sultan and Woods Steel; Public Facilities-Water as part of the Fundamental Right to life, Govt. role, The story of village Palampur, Ideas of Development-HDI, Production and Employment-GDP, organised, Unorganised Sectors, The People-Census, Changing Population Size, People as a Resource-Economic activities by men and women Quality of population, Unemployment, Poverty as a Challenge-Poverty line, Global poverty Scenario, anti-poverty measures, People and Settlement-Urbanisation, People and Migration-Rural, Urban and Seasonal, Temporary, International migrations, Rampur: A Village Economy, Globalisation-MNC,WTO, Food Security-Food Security in India, Access to Food, Nutritional status, MSP, PDS; Role of Cooperatives in Food Security, Sustainable Development with Equity.

Theme -III: Political Systems and Governance

Early life to Settled life - Belum Caves, Rock Paintings; Emergence of Kingdoms and Republics-Janapadas, Mahajanapadas; kingdoms and Empires- Mauryan, Gupta, Satavahana, Pallava, Chalukya; Delhi Sultanate; Kakatiya Kingdom, Vijayanagara Empire, Mughal Empire,How When and Where,From Trade to Territory- The company establishes Power - East India Company, The Battle of Plassey, Tipu sultan, The Doctrine of Lapse; Ruling the Countryside - The company becomes the Diwan, The need to improve Agriculture, Munro System, Crops for Europe, Why the demand for indian Indigo?, The Blue Rebellion and After; Tribals, Dikus and the Vision of a Golden Age-How did Tribal groups live?, How did colonial rule affect tribal lives?; Forest Loss and their Impact, Birsa Munda; When people rebel 1857 and after-Policies and the people, Through the Eyes of the people, A Mutiny becomes a popular Rebellion, The Company fights back; Civilizing the "Native" Educating the nation-How the British saw Education, The agenda for a National education of British; The making of the National Movement-1870's - 1947,The Emergence of Nationalism, The growth of mass Nationalists, Dandi March, Quit India and Later; India after Independence-A

new and Divided Nation, A Constitution is written, How were States to be formed, Planning for development, A Nation sixty years on; The French Revolution, Socialism in Europe and the Russian Revolution, Nazism and the rise of the Hilter, Forest society and Colonialism, Pastoralists in the Modern World, The World Between Wars Part-1,2, National Liberation Movement in the Colonies-China, Vietnam, Nigeria, National Movement in India and Partition and Independence:1939-1947, Independent India[The First 30 years-1947-77],Emerging Political Trends 1977-2000,Post-War World and India-UNO, Cold War, Military Alliances, India and its Neighbours.

Theme -IV: Social Organisation and Inequities

Towards Equality- Diversity, discrimination, Types, Constitutional Provisions; Women Change the World- Women's movement, Inspirational Women; Women, Caste and Reform-Working towards Change-Changing the lives of widows, Girls begin to going to School, Women write about Women, Caste and Social Reform-Gulamgiri who could enter, The Non Brahman movement; Indian Constitution - Introduction, Key features, Fundamental Rights and Duties ;Government- Types, Levels, Local self-Government, State Government-Legislative, Executive, Judiciary; Working of Institutions, Understanding Secularism; Why do we need Parliament, The role of the Parliament, Houses of Parliament, Who are the people in parliament?; Understanding Laws-How do new laws come out?, Unpopular and Controversial Laws, Judiciary-Independent Judiciary, Structure of Courts in India, Different Branches of the Legal System, Understanding Our Criminal Justice System-Role of the police, Public prosecutor, Judge, What is a Trial Crime?; Understanding Marginalisation-Who are Adivasis?, Adivasis and development, Minorities and Marginalisation; Confronting Marginalisation-Invoking Fundamental Rights, Laws for the Marginalised, Protecting the Rights of Dalits and Adivasis, Adivasi demands and 1989 Act; Law and Social Justice-Bhopal Gas tragedy, Enforcement of safety Laws, New Laws to protect the Environment, What is Democracy? why Democracy?, Constitutional Design-Democratic Constitution in South Africa, Struggle against Apartheid, Electoral politics, Democratic Rights, The Making of Independent India's Constitution, Social Movements in Our Times, Citizens and the Governments-RTI, Legal Service Authority.

Theme - V: Religion and Society

Religions-Hinduism, Jainism, Buddhism, Islam, Sikhism, Unity in Diversity; Bhakti Movement - Sufi Movement;

Theme -VI: Culture and Communication

Early Civilisations-Indus, Vedic period, Vedic Literature, Indian Culture, Languages.

b) Intermediate Syllabus:

Geography:

General Geography-Definition and scope of Geography – Branches of Geography-Geography as an integrating Discipline and as Spacial Science with physical, biological and social sciences.
Solar System-Origin and Evolution of solar system-Rotation and Revolution of the Earth and their effects-Latitudes and Longitudes-Standard Time and International Date line.
The Earth - Interior of the Earth-Wegner's theory of continental drift -Major Rock types and their characteristics.
Geomorphology -Major landforms: Mountains, Plateaus and Plains-Geomorphic Process: Weathering - Physical and Chemical Weathering-Landforms associated with wind and river – Erosional and depositional.
Climatology -Climate: Elements of weather and climate-Atmosphere: Composition and structure of atmosphere -Insolation: Insolation and Heat Budget of the Planet Earth-Temperature: Factors influencing Temperature, Vertical and horizontal distribution of temperature Pressure- Global pressure belts WindsPlanetary winds, Seasonal and Local winds-Precipitation: Forms and types of rain fall (Convectional, Orographic and Cyclonic rain fall).
Bio geography -Biomes of the world- Equatorial, Tropical and Temperate zones -Biodiversity and Conservation -Concept of Ecosystem and Ecological Balance- Oceanography, Hydrology and Natural hazards
Oceanography-Divisions of the Ocean floor- Continental shelf, Continental slope, Deep Sea plains and Ocean deeps-Ocean Temperatures- Vertical and horizontal distribution-Ocean Salinity Definition, vertical and horizontal distribution-Oceanic Movements: Waves, Tides and Currents, (Currents of Atlantic, Pacific and Indian Ocean)
Hydrology-Elements of Hydrological cycle: Precipitation, evaporation, evaporation-transpiration, run off, infiltration and recharge -Hydrological Cycle.
Natural Hazards-Causes and Spatial distribution of floods, droughts, cyclones, Tsunamis, Earthquakes and landslidesGlobal Warming and its consequences-Disaster Management in India-Human Geography : Definition, Content and scope- Man and Environment: Definition, Content, Classification of environment-Environmental impact World Population : Growth, Factors influencing, density and distribution
Human activities - Primary, Secondary and tertiary activities-Resources - Definition, Classification and Conservation-Agriculture -Definition, Types, food crops (Rice and wheat) Nonfood crops (Cotton, Sugarcane) and Plantation crops-(Rubber, tea and coffee) their Significance, Conditions - for cultivation, production and distribution.
Definition and Classification (Metallic - Iron), nonMetallic – bauxite and (fuel minerals - coal andpetroleum) Industries - Location factors, types of industries -Agro – based (Cotton textiles) Forest based (Paper mills) -Mineral based (Iron and steel) - Chemical based (Fertilizers)- Transportation -Road ways, Railways, Water ways and Air ways - Rail ways-Intensive net work rail way, Regional rail-ways and Trans continental railways - Water ways-Major sea ports: London, San Francisco-Reo De Janeiro, Cape Town, Kolkata and Sydney-Major Air ports- Tokyo, Paris, Chicago, Bogota and -Wellington
Physical features of India - Major features - Northern mountains, Indo – Gangetic-plains, Peninsular plateau of India and coastal plains- Major rivers of India - Perennial rivers- Indus, Ganges and Brahmaputra-Non Perennial rivers- Narmada, Tapati, Mahanadi, -Godavari, Krishna, Pennar and Cauvery - Climate of India - Cold weather season: Temperature Rainfall &Pressure distribution Hot weather season- Temperature, Rainfall &Pressure distribution South west monsoon season- Temperature, Rainfall &Pressure distributionNorth east

monsoon season: Temperature, Rainfall &Pressure distribution-Natural vegetation of India-Types of vegetation based on rainfall and their-distribution. Evergreen forest, deciduous forest, scrub -forest,& Thorny forest -Soils - Definition, factors for formation, types and -their distribution.
Population- Growth trends from 1901 to 2001, Distribution based-on density, problems of high population- Irrigation-Types of irrigation: canals, wells and tanks. Major -multipurpose projects. Bakranangal, Hirakud, -Damodarvalley corporation and Nagarjuna Sagar-Agriculture: Cropped area, production and distribution of -selected crops: Rice, Wheat, Millets, Coffee, Tea,Sugarcane, Cotton, Jute and tobacco; Problems ofIndian agriculture.
Minerals- Production and distribution of coal, petroleum, iron,mica and manganese, bauxite.
Industries- Location factors growth and distribution of iron andsteel, cotton textile and ship building industries- Transportation-Means of Transport – Road ways, Rail ways, Water -ways and Air ways; Major ports of India – Mumbai, -Cochin, Kandla, Kolkata, Visakhapatnam and Chennai.
Geography of Andhra Pradesh: Location, Physiography and Climate, Population.

History:

What is History: Definition - Scope – Sources – Historiography – Relationship with other Social Sciences – Impact of Geography on history - Relevance of History.
Ancient Civilizations and Culture : Pre Harappan Cultures - Harappan Civilization – Script, town planning, society, economy and culture - Vedic age and Post Vedic Culture.
Early States, Empires and Economy: Early States – 16 Mahajanapadas - Rise of Magadha – Economy and Agriculture – urbanization.
Early Societies, and religious movements: Early Societies – Social differences – Religious movements – Jainism – Buddhism and other sects Ajjivikas and Lokayats.
Polity, Economy, Society and Culture between 3rd to 7th Century A.D. :Mauryas - Kushanas – Guptas – Pushyabhuties – Origin of feudalism – Polity, Society, Economy and Culture.
Deccan and South India up to 8th A.D: Sangam age – Satavahanas – Pallavas – Chalukyas – Rastrakutas – Cholas – Polity, Society, Economy and culture.
Age of Delhi Sultanate: Sources/Travellers Accounts - Arab Invasions – Turkish invasions – Delhi Sultanate – Polity, Economy, Society and Culture.
Age of Mughals: Chronicles/Sources – Mughal rule – Babur, Humayun, Shershah, Akbar, Jahangir, ShahJahan and Aurangazeb - Polity, Economy, Society and culture - Disintegration - Maratas, Sikhs.
Bhakti and Sufi Traditions 8 A.D. 16 Century A.D: Prevailing Religious Traditions and beliefs in the Society – Bhakti Saints and their Preachings – Sufism – Main features and their impact.
Deccan and South India 8th A.D – 16 the A.D : Sources - Kakatiyas – Vijyanagara – Bahamanis – Qutbshahis and Asafjahis – a brief survey.
India under the Colonial Rule : Sources - Portuguese – Dutch – French – English East India Company – Era of Governor Generals and their Polices – Reforms of Viceroys – 1857 Mutiny.
Indian National Movement: Background to National Movement, Socio-religious movement – rise of Nationalism – Vandemataram movement – Home rule movement – Emergence of Mahatma Gandhi and leadership – Revolutionary movement, Subhash Chandra Bose – Poona Pact Quit India movement – Partition of India – Emergence of Independent India.
The Modern World- Beginning of Modern Age, Renaissance, Development in Science, The Reformation Movement, Rise of Nation States, Struggle against Absolute Monarchies -Capitalism and Industrial Revolution -The Revolutionary Movements -The Glorious Revolution, The American war of Independence, The French Revolution of 1789 -

.Nationalist Movements: Rise and fall of Napoleon, French Revolution of 1830 and the 1848 Revolt, Unification of Germany and Italy, Socialist Movements – Rise of Working class, Paris Commune of 1871

Imperialism: Factors in the rise of Imperialism, Forms and Methods of Imperialism, Scramble for Africa and Asia

Contemporary World: The First World war, League of Nations, The Russian Revolution of 1905 and 1917 -The World upto World War II: Rise of Fascism and Nazism, Militarism in Japan, U.S.A. and U.S.S.R. after World War I, Turkey after World War I, Failure of League of Nations, Spanish Civil war, World war II, The Nationalist Movements in Asia and Africa, Emergence of Latin America

The World after World War II: Formation of Military Blocks, Role of independent Nations of Asia and Africa in the World Affairs, Non-Alignment Movement, Role of UNO in preserving World Peace, Problems of Disarmament and Nuclear Weapons, Prominent Personalities of the World.

Civics:

Scope and Significance of political Science - Introduction to Civics and Political Science, Origin and Evolution, Meaning, Definitions, What do we study? Why do we study?

State - State – Meaning, Definitions, Elements, Relation of state with other Institutions – Society, Association, Government.

Nationalism - Nation, Nationality, Nationalism, Factors contributing for Nationality, Is India a Nation? Meaning, Forms (Traditional and modern)

law -Meaning, Definitions, Classification, Law and morality, Rule of Law. Liberty and Equality – Meaning, Definitions, Types, Safeguards, Liberty – Equality.

Rights and Responsibilities– Meaning, Definitions, functions Forms, Relationship between Rights and Responsibilities, Human Rights

Justice - Justice – Meaning, Forms of Justice, Social Justice.

Citizenship - Meaning, Definitions, Methods of Acquiring, Citizen – Alien , Loss of Citizenship, Hindrances to Good Citizenship, Universal Citizenship

Democracy- Meaning, Definitions, features, types, merits, devices, future

Secularism -Meaning, Secular State, Western Model, Indian Model, Why India was made a Secular State? Criticism of Indian Secularism

Constitution– Meaning, Definitions, features, Classification

Government - Unitary, Federal, Parliamentary, Presidential, Theory of Separation of Powers, Organs of Government

Indian Constitution: Indian National Movement- Government of India Acts – 1909, 1919 & 1935-

Salient features of Indian Constitution

Fundamental Rights &Directive Principles of State Policy- Fundamental Rights- Directive Principles of state Policy- Fundamental Duties

Union Government- Union Executive – President of India - Vice – President of India - Prime Minister & Council of Ministers

Indian Parliament - LokSabha-Composition – Powers and functions- Rajya Sabha: Composition – Powers and functions

Parliamentary Committees- Public Accounts Committee – Estimates -Committee – Committee on Public Undertakings

Union Judiciary - Supreme Court of India – Composition- Powers and Functions of Supreme Court -of India - Judicial Review

State Government- State Executive – Governor- Powers and Functions-Chief Minister - Powers and Functions- Council of Ministers

State Legislature-Legislative Assembly- Composition – Powers and Functions- Legislative Council-Composition – Powers and Functions - Legislative Committees: Public Accounts Committee – Estimates-Committee and Ethics Committee

State Judiciary-High Court – Composition- Powers and Functions of High Court- District Courts: Composition – Powers and Functions.

Union – State Relations - Legislative Relations-Administrative Relations- Financial Relations

Local Government-Rural Local Government - Panchayati Raj Institutions – 73rd Constitution Amendment Act- Urban Local Government: Municipalities - Municipal Corporation – 74th Constitution Amendment Act- District Collector : Role in Local Governments

India's Foreign Policy - Determinants of Foreign Policy- Basic features of India's Foreign Policy-

South Asian Association for Regional Cooperation (SAARC)

United Nation Organization (UNO)-Origin of UNO-Principal Organs of UNO- Achievements and failures of UNO

Contemporary Trends and Issues- Globalization- Terrorism-Corruption.

Economics:

Origin and meaning of Economics - Definitions of Economics; Adam Smith, Alfred Marshall, Lionel Robbins, Paul Samuelson, &Jocob Viner- Concept of Economics – Micro & Macro Economics Deductive and Inductive Method, Static and Dynamic Analysis, Positive and Normative Economics. Goods: (Free, Economic, Consumer, Producer, and Intermediary), Wealth, Income, Utility, Value, Price, wants and welfare.

Theory of Consumption - Cardinal and Ordinal Utility, the law of Diminishing Marginal Utility – Limitations – Importance; law of Equi-Marginal Utility Limitations and – Importance of the Law, Indifference Curve Analysis – Properties and Consumer's Equilibrium.

Theory of Demand - Meaning – Demand Function – Determinants of Demand, Demand Schedule – Demand Curve, Law of Demand, Exceptions to Law of Demand - Causes for the downward slope of the demand curve, Types of Demand – Price Demand, Income Demand, and Cross Demand- Elasticity of Demand – Meaning and Types – Price Elasticity, and Income Elasticity and Cross Elasticity – Price Elasticity-Types; Measurement of Price Elasticity of Demand- Point Method. Arc Method, Total Outlay Method. Determinants of Elasticity of Demand; Importance of Elasticity of Demand.

Theory of Production - Meaning - Production Function – Factors of Production; Short-run and Long-run Production Function; Law of variable proportions - Law of returns to scale; Economies of Scale - Internal and External- Supply – Supply Function - Determinants of Supply — Law of Supply- Cost Analysis – Basic Concepts of Costs- (Money, Real, Opportunity, Fixed and Variable, Total, Average and Marginal costs)- Revenue Analysis – Revenue under perfect and imperfect competition.

Theory of Value - Meaning and Classification of Markets – Perfect competition – features – price determination- Short-run and Long-run equilibrium of a firm and Industry- Imperfect Competition – Monopoly – Price Determination – Price-Discrimination-Monopolistic Competition- Features- Meaning of Oligopoly – Duopoly.

Theory of Distribution - Determination of Factor Prices – Marginal Productivity Theory - Rent – Ricardian theory of Rent – Modern theory - Quasi Rent – Transfer earnings - Wages – Meaning and types of wages – Money and Real wages - Interest- Meaning – Gross and Net interests - Profits – Meaning – Gross and Net profits.

National Income : Definitions of National Income and Concepts- Measurement of National Income – Census of Product Method – Census of Income Method – Census of Expenditure Method- Methods of Measuring National Income in India; Problems and importance

Macro Economic Aspects - Classical theory of Employment –J.B. Say Law of Markets-Limitations – J.M. Keynes Effective Demand- Public Economics - Public Revenue – Public Expenditure – Public debt – Components of Budget.

Money, Banking and Inflation - Money – Definitions and Functions of money – Types of Money - Banking – Commercial Banks – Functions; Central Bank – Functions – Reserve Bank of India – Net Banking- Inflation – Definitions – Types – Causes and Effects of inflation – Remedial Measures.

Statistics for Economics - Meaning, Scope and Importance of Statistics in Economics with Diagrams (Bar diagrams and Pie diagrams)-Measures of central tendency – Mean, Median, Mode.

Economic Growth And Development - Differences Between Economic Growth and Development classification of the world countries - Indicators of Economic development - Determinants of Economic Development - Characteristic features of Developed Countries - Characteristic features of Developing countries with special reference to India

Population and Human Resources Development - Theory of Demographic Transition - World Population - Causes of rapid Growth of population in India - Occupational distribution of population of India - Meaning of Human Resources Development - Role of Education and Health in Economic Development- Human Development Index (HDI)

National Income - Trends in the growth of India's National Income - Trends in distribution of national income by industry Origin - Share of Public Sector and Private Sector in Gross Domestic Product - Share of Organised and Un-organised Sector in Net Domestic Product - Income Inequalities - Causes of Income Inequalities - Measures to control income inequalities -Unemployment in India – Poverty - Micro Finace-Eradication of Poverty

Agriculture Sector-Importance of agriculture in India - Features of Indian agriculture - Agriculture Labour in India - Land utilization pattern in India - Cropping pattern in India - Organic Farming -Irrigation facilities in India - Productivity of agriculture - Land holdings in India - Land reforms in India - Green Revolution in India - Rural credit in India - Rural Indebtedness in India - Agricultural

Marketing - Industrial Sector - Significance of the Indian Industrial Sector in Post –Reform Period -Industrial Policy Resolution 1948 - Industrial Policy Resolution 1956 - Industrial Policy Resolution 1991 - National Manufacturing Policy- Disinvestment - National Investment Fund (NIF) -Foreign Direct Investment -Special Economic Zones (SEZs) - Causes of industrial backwardness in India -Small Scale Enterprises (MSMEs) - Industrial Estates - Industrial Finance in India - The Industrial Development under the Five Year Plans in India.

Tertiary Sector - Importance of Services Sector -India's Services Sector - State-Wise Comparison of Services - Infrastructure Development - Tourism - Banking and Insurance - Communication -Science and Technology - Software Industry in India

Planning And Economic Reforms - Meaning of Planning -NITI Ayog -Five Year Plans in India - XII Five Year Plan - Regional Imbalances - Role of Trade in Economic Development - Economic Reforms in India - GATT – WTO

Environment and Sustainable Economic Development - Environment - Economic Development -Environment and Economic Linkages. - Harmony between Environment & Economy

Economy Of Andhra Pradesh - History of Andhra Pradesh - Characteristic features of A.P. Economy -Demographic features - Occupational distribution of labour - Health Sector - Education -Environment - Agricultural sector - Industrial sector - Service and Infrastructure

sector - Information and Technology - Tourism -Andhra Pradesh and Welfare Programmes/ Schemes
Economic Statistics - Measures of Dispersion - Definitions of Dispersion - Importance of Measuring Variation -Properties of a good measure of variation -Methods of Studying Variation - Measures of Dispersion for average - Lorenz Curve - Correlation -Index Numbers - Weighted Aggregation Method.

V. Methodology (Marks: 20)

1. **Aims and objectives of learning Social Sciences**

   - values through Social Sciences - learning objectives and illustrations - learning objectives in constructivist approach - Academic Standards

2. **School curriculum and resources in Social Sciences**

   - NCF-2005, RTE-2009, SCF-2011 - syllabus – Learning Resources.

3. **Social Sciences as on integrating area of study: Context and concerns**

   - Distinguishing between Natural and Social Sciences - Social Studies and various Social Sciences -contributions of some eminent Social Scientists

4. **Approaches and strategies for learning Social Sciences**

   - Teaching methods- collaborative learning approach - 5E learning model - problem solving approach -concept mapping– planning: Lesson plan, Year Plan- Teaching Learning Material .

5. **Community Resources and Social Sciences Laboratory**

6. **Tools and techniques of assessment for learning: Social Sciences**

7. Understanding concept of Evaluation - CCE - assessment framework - assessment learning of students with special need

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TELUGU Syllabus

1.	**G.K & Current Affairs**	–	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Educational Psychology**	–	**05M**
4.	**Category of disability specialization**	–	**30M**
5.	**Content**	–	**20M**
6.	**Methodology**	–	**10M**
	Total	–	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 10)

II. Perspectives in Special Education and Inclusive Education (Marks: 05)
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Philosophical Foundations of Education
2. Understanding Diversity
3. Contemporary Issues and Concerns
4. Education Commissions and Policy (School Education)
5. Issues and Trends in Education

III. Psychology with reference to CWSN – 05Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Approaches to Human Development
2. Theoretical Approaches to Development
3. The Early Years (Birth to Eight Years)
4. Early Adolescence (From nine years to eighteen years)
5. Transitions into Adulthood
6. Human Learning and Intelligence
7. Learning Process and Motivation
8. Teaching Learning Process

PART – II

I. Category of disability specialization – 30Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

i. HI-Hearing Impairment

Introduction to Inclusive Education, Polices & Frameworks Facilitating Inclusive Education, Adaptations Accommodations and Modifications, Inclusive Academic Instructions, Supports and Collaborations for Inclusive Education, Early Identification of Hearing Loss: Need and Strategies, Audiological Assessment, Assessment of Language & Communication, Assessment of Speech, Educational Assessment and Identification of Needs. Curriculum and Its' Designing, Developing Literacy Skills: Reading, Developing Literacy Skills, Curricular Adaptation, Curricular Evaluation. Need & Strategies for Early Intervention of Hearing Loss, Auditory Learning (AVT & Auditory Training) & Speech Reading , Speech Intervention Strategies, Communication and Language Teaching Strategies, Educational Intervention Strategies Listening Devices and Classroom Acoustics, Technology for Management for Speech, Technology Facilitating Language & Communication, Technology Facilitating Education, Resource Mobilisation for Technology Psychosocial Aspects and Disability, Family Needs, Family Empowerment.

(OR)

ii. VI-Visual Impairment

Introduction to Inclusive Education, Polices & Frameworks Facilitating Inclusive Education, Adaptations Accommodations and Modifications, Inclusive Academic Instructions, Supports and Collaborations for Inclusive Education, Anatomy and Physiology of Human Eye, Types of Visual Impairment and Common Eye Disorders, Implications of Visual Impairment and Needs of Visually Impaired, Identification and Assessment of Visual Impairment, Assessment of Learning Needs of Children with VIMD Concept and Types of Curriculum, Teaching Functional Academics Skills, Teaching of Independent Living Skills, Curricular Adaptation, Curricular Activities Theoretical Perspectives, Mathematics, Science, Social Science, Teaching of Children with Low Vision Introducing Educational and Information Communication Technology Adaptive Technologies, Access to Print for the Visually Impaired, Assistive Technologies for the Visually Impaired with Reference to School Subjects and Low Vision, Computer-Aided Learning Family of a Child with Visual Impairment, Parental Issues and Concerns, Rehabilitation of Children with Visual Impairment, Meeting the Challenges of Children with Visual Impairment.

II. Content (20 Marks) (Class VI to X level syllabus)

1) తెలుగు సాహిత్య చరిత్ర:

- కవులు, కాలం, రచనా విశేషాలు, బిరుదులు, ఇతివృత్తం, పాత్రలు, విశేషాంశాలు, వివిధ ప్రక్రియలు
- ఆధునిక కవిత్వ ధోరణులు, లక్షణాలు

2) తెలుగు భాషా చరిత్ర:

- మాండలిక భాష – స్వభావం, ఉత్పత్తి, భేదాలు
- గ్రాంథిక భాష, వ్యావహారిక భాష – ఆధునిక ప్రామాణిక భాష
- అర్థ విపరిణామం
- ధ్వని – ధ్వన్యుత్పత్తి స్థానాలు

3) సాహిత్య విమర్శ:

- కావ్యం – నిర్వచనం – కావ్య ప్రయోజనం – కవిత్వ హేతువులు – శైలి – సంస్కృత, పాశ్చాత్య లాక్షణికుల సిద్ధాంతాలు

4) బాల వ్యాకరణం:

- సంజ్ఞ, సంధి, తత్సమ, ఆచ్చిక, సమాస, పరిచ్ఛేదములు.

1) 6వ తరగతి నుండి 10వ తరగతి వరకు గల ఆంధ్రప్రదేశ్ ప్రభుత్వ తెలుగు వాచకాలలోని అంశాలు: (ఉపవాచకాలతో సహా)

కవికాలాదులు, నేపథ్యాలు, ఉద్దేశాలు, మూల గ్రంథాలు, విశేషాంశాలు, ఇతివృత్తాలు,

పాఠ్యాంశ విషయాలు మొ॥వి; విద్యాప్రమాణాలు.

2) పదజాలం:

అర్థాలు, పర్యాయపదాలు, నానార్థాలు, వ్యుత్పత్త్యర్థాలు, ప్రకృతి – వికృతులు, జాతీయాలు,

సామెతలు మొ॥వి.

3) భాషాంశాలు:

సంధులు, సమాసాలు, ఛందస్సు, అలంకారాలు, పారిభాషికపదాలు క్రియలు, వాక్యాలు మొ॥వి.

4) ఛందస్సు: (వృత్తాలు, జాతులు, ఉపజాతులు)

యతులు, ప్రాసల రకాలు – ఛందో దర్పణం

III.తెలుగు బోధన పద్ధతులు : 10 మార్కులు

బి.ఎడ్ తెలుగు బోధన పద్ధతులు. (తెలుగు అకాడమీ ప్రచురణ)

1. భాష – వివిధ భావనలు
2. భాషానైపుణ్యాలు
3. ప్రణాళిక రచన – పాఠ్యగ్రంథాలు
4. విద్యా సాంకేతిక శాస్త్రం – సహపాఠ్య కార్యక్రమాలు
5. సాహిత్య ప్రక్రియలు – బోధన పద్ధతులు
6. మూల్యాంకనం – పరీక్షలు

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State Council of Educational Research & Training
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HINDI Syllabus

1.	**G.K & Current Affairs**	–	**10M**
2.	**Perspectives in Education**	–	**05M**
3.	**Educational Psychology**	–	**05M**
4.	**Category of disability specialization**	–	**30M**
5.	**Content**	–	**20M**
6.	**Methodology**	–	**10M**
	Total	–	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 10)

II. Perspectives in Special Education and Inclusive Education (Marks: 05)
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Philosophical Foundations of Education
2. Understanding Diversity
3. Contemporary Issues and Concerns
4. Education Commissions and Policy (School Education)
5. Issues and Trends in Education

III. Psychology with reference to CWSN – 05Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Approaches to Human Development
2. Theoretical Approaches to Development
3. The Early Years (Birth to Eight Years)
4. Early Adolescence (From nine years to eighteen years)
5. Transitions into Adulthood
6. Human Learning and Intelligence
7. Learning Process and Motivation
8. Teaching Learning Process

PART – II

I. Category of disability specialization – 30Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

i. HI-Hearing Impairment

Introduction to Inclusive Education, Polices & Frameworks Facilitating Inclusive Education, Adaptations Accommodations and Modifications, Inclusive Academic Instructions, Supports and Collaborations for Inclusive Education, Early Identification of Hearing Loss: Need and Strategies, Audiological Assessment, Assessment of Language & Communication, Assessment of Speech, Educational Assessment and Identification of Needs. Curriculum and Its' Designing, Developing Literacy Skills: Reading, Developing Literacy Skills, Curricular Adaptation, Curricular Evaluation. Need & Strategies for Early Intervention of Hearing Loss, Auditory Learning (AVT & Auditory Training) & Speech Reading , Speech Intervention Strategies, Communication and Language Teaching Strategies, Educational Intervention Strategies Listening Devices and Classroom Acoustics, Technology for Management for Speech, Technology Facilitating Language & Communication, Technology Facilitating Education, Resource Mobilisation for Technology Psychosocial Aspects and Disability, Family Needs, Family Empowerment.

(OR)

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II. Content (20 Marks) (Class VI to X level syllabus)

- **हिंदी साहित्य का इतिहास : काल विभाजन - विभिन्न विद्वानों के विचार**

  आदिकाल, भक्तिकाल, रीतिकालI
- **आधुनिक साहित्य: छायावाद, प्रगतिवाद,प्रयोगवाद, रहस्यवाद**

- **हिंदी भाषा का इतिहास: उद्भव और विकास, हिंदी राष्ट्रभाषा राज्य भाषा,देवनागरी लिपिl**
- **हिंदी भाषा का क्षेत्र, उपभाषा एवं और बोलियाँ**

  भाषा तत्व और व्याकरण :(स्वर,व्यंजन भेद वर्णन का उच्चारण स्थान) विकारी, अविकारी शब्द, उपसर्ग, प्रत्यय, लिंग,वचन, कारक,काल,मुहावरे, विराम चिह्न,वाच्य

III. Methodology (Marks: 10)

1. **इकाई-1 हिन्दी भाषाकी प्रकृति, प्रयोज्यता और संवर्धन**
2. **इकाई-2 भाषा अधिगम की प्रकृति और पाट नियोजन**
3. **इकाई-3 हिन्दी की विविध विधाओं के शिक्षण की विधियों का परिचय और उपयोग।**
4. **इकाई-4 भाषा अधिगम-शिक्षण में सहाचक सामग्रियों का प्रयोग**
5. **इकाई-5 भाषा अधिगम के आंकलन व मूल्यांकन की प्रविधि**

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MATHAMETICS Syllabus

1.	**G.K & Current Affairs**	**–**	**10M**
2.	**Perspectives in Education**	**–**	**05M**
3.	**Educational Psychology**	**–**	**05M**
4.	**Category of disability specialization**	**–**	**30M**
5.	**Content**	**–**	**20M**
6.	**Methodology**	**–**	**10M**
	Total	**–**	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 10)

II. Perspectives in Special Education and Inclusive Education (Marks: 05)
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Philosophical Foundations of Education
2. Understanding Diversity
3. Contemporary Issues and Concerns
4. Education Commissions and Policy (School Education)
5. Issues and Trends in Education

III. Psychology with reference to CWSN – 05Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Approaches to Human Development
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8. Teaching Learning Process

PART – II

I. Category of disability specialization – 30Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

i. HI-Hearing Impairment

Introduction to Inclusive Education, Polices & Frameworks Facilitating Inclusive Education, Adaptations Accommodations and Modifications, Inclusive Academic Instructions, Supports and Collaborations for Inclusive Education, Early Identification of Hearing Loss: Need and Strategies, Audiological Assessment, Assessment of Language & Communication, Assessment of Speech, Educational Assessment and Identification of Needs. Curriculum and Its' Designing, Developing Literacy Skills: Reading, Developing Literacy Skills, Curricular Adaptation, Curricular Evaluation. Need & Strategies for Early Intervention of Hearing Loss, Auditory Learning (AVT & Auditory Training) & Speech Reading , Speech Intervention Strategies, Communication and Language Teaching Strategies, Educational Intervention Strategies Listening Devices and Classroom Acoustics, Technology for Management for Speech, Technology Facilitating Language & Communication, Technology Facilitating Education, Resource Mobilisation for Technology Psychosocial Aspects and Disability, Family Needs, Family Empowerment.

(OR)

ii. VI-Visual Impairment

Introduction to Inclusive Education, Polices & Frameworks Facilitating Inclusive Education, Adaptations Accommodations and Modifications, Inclusive Academic Instructions, Supports and Collaborations for Inclusive Education, Anatomy and Physiology of Human Eye, Types of Visual Impairment and Common Eye Disorders, Implications of Visual Impairment and Needs of Visually Impaired, Identification and Assessment of Visual Impairment, Assessment of Learning Needs of Children with VIMD Concept and Types of Curriculum, Teaching Functional Academics Skills, Teaching of Independent Living Skills, Curricular Adaptation, Curricular Activities Theoretical Perspectives, Mathematics, Science, Social Science, Teaching of Children with Low Vision Introducing Educational and Information Communication Technology Adaptive Technologies, Access to Print for the Visually Impaired, Assistive Technologies for the Visually Impaired with Reference to School Subjects and Low Vision, Computer-Aided Learning Family of a Child with Visual Impairment, Parental Issues and Concerns, Rehabilitation of Children with Visual Impairment, Meeting the Challenges of Children with Visual Impairment.

II. Maths –Content (20 Marks) (Class VI to X level syllabus)

1. Arithmetic

BODMAS rule - Ratios and Proportions (Direct, Inverse) - comparing quantities using ratios, proportion, percentage and their applications - Profit and Loss - Discount - Sales

Tax/Value Added Tax/Goods and Services Tax - Simple, Compound Interest and their applications.

2. Number System

Numbers - Four fundamental operations (Addition, Subtraction, Multiplication, Division) - Knowing about Numbers - Hindu-Arabic system of numeration (Indian system of numeration) - International system of numeration (British system of numeration) - Place value and Face values of a digit in a number - Comparing and Ordering of Numbers - Whole Numbers - Factors and Multiples - Prime and Composite numbers - Even and Odd numbers - Tests for Divisibility of Numbers - Common Factors and Common Multiples - Prime factorisation - Highest Common Factor (G.C.D) - Lowest Common Multiple - Integers - properties and fundamental operations - Fractions and decimals - Types of fractions - comparison - Applications of fractions in daily life - four fundamental operations on fractions and decimals - Euclid's Division Lemma and its application - Rational Numbers - Properties of Rational Numbers - Representation of Rational Numbers on the Number line - Rational Numbers between two rational numbers - Four fundamental Operations on Rational Numbers – Rational numbers and their decimal expansions - Non-terminating, recurring decimals in rational numbers - Product of reciprocals - Squares - Square roots (Numbers and Decimals) - Properties of Square Numbers - Cubes - Cube roots of Numbers - Playing with Numbers - Games with Numbers - Letters for Digits - Irrational numbers - Real Numbers and their Decimal Expansions - Operations on Real Numbers - Laws of Exponents for Real Numbers – Properties & Laws of logarithms.

Sets and their representation (Roster form and Set builder form) – Classification of sets (Empty, Universal, subset, Finite & Infinite, disjoint sets) - difference of sets - Equal sets - Using diagrams to represent sets - Venn diagrams and cardinality of sets - Basic operations on sets (Union, Intersection).

3. Geometry

Basic geometrical concepts (Point, Line, Line segment, Ray, Curves, Polygons, Angles) - Measuring of Lines - Pairs of Lines - Intersecting Lines and Non-intersecting Lines – Lines parallel to the same line - Elements of Angles - Measuring of Angles - Types of Angles – Pairs of Angles - Naming of the given 2D figures of Triangles, Square and Rectangle - The Triangle - Types of Triangles and its Properties – Congruence and some properties of Triangles - Some more criteria for Congruence of Triangles – Criteria for similarity of triangles – Areas of similar triangles – Pythagoras theorem - Classification of Polygons - Angle sum property - Kinds of Quadrilaterals (Trapezium, Kite, Parallelogram) - Some special parallelograms (Rhombus, Rectangle, Square) - Constructing different types of Quadrilaterals - Views of 3D-Shapes - Identification of Edges, Vertices and Faces of 3D figures (Euler’s Rule) - Nets for building 3D shapes – Introduction to Euclid’s geometry – Euclid’s definitions, axioms and postulates - Angle Subtended by a Chord at a Point - Perpendicular from the Centre to a Chord - Equal Chords and Their Distances from the Centre - Angle Subtended by an Arc of a Circle - Cyclic Quadrilaterals – Tangents of a circle – Number of Tangent to a Circle from any point – Segment of a circle formed by a Secant.

4. Mensuration

Measuring Length, Weight, Capacity, Time-Seasons, Calendar, Money, Area - Symmetry (Line and Rotational) - Perimeter of Triangle, Square, Rectangle, Rhombus, Trapezium, Parallelogram, Circle and Polygon, Properties of a Parallelogram - The Mid-point Theorem - Area of a Quadrilateral, Surface Area and Volume of Cube, Cuboid and Cylinder -Volume and capacity - Surface Area and volume of a Sphere - Volume of a Right Circular Cone – Surface area of the combination of Solids – Volume of combination of solids – Conversion of solid from one shape to another

5. Algebra

Patterns - making rules - The idea of variables - formation of algebraic expressions - Terms, Factors and Coefficients - Linear equations in one variable – Linear equations in two variables - Solutions of Pair of Linear Equations in Two Variables – Algebraic methods of finding the solutions for a pair of linear equations -Equations reducible to a pair of linear equations in two variables -Solution of a quadratic equation by factorisation & by completing the square – Nature of roots - terms and types of algebraic expressions - finding the value of an expression - Addition, Subtraction and Multiplication of Algebraic Expressions - Multiplying a Monomial by a Monomial and polynomial - Multiplying a Polynomial by a Polynomial - Standard Identities and their applications - Applications of simple equations to practical situations - Exponents and Powers - Negative exponents - Laws of exponents - Expressing large numbers in the standard form - Factorisation - Division of Algebraic Expressions Continued (Polynomial ÷ Polynomial) - Linear Graphs – Polynomials in one variable – Degree, Value, zeroes of a polynomial - Geometrical meaning of the Zeroes of a Polynomial - Graphical representation of linear, Quadratic and Cubic Polynomials - Factorisation of Polynomials - Algebraic Identities - Working with Polynomials – Division algorithm for polynomials - Arithmetic progressions – Parameters of Arithmetic progressions – n^{th} term of an Arithmetic progression – Sum of first n terms in Arithmetic progression – Geometric progressions – n^{th} term of a GP.

6. Statistics

DATA HANDLING -Frequency Distribution Tables and Graphs- Grouped data-ungrouped data – Measures of Central Tendency -Mean, median & mode of grouped and ungrouped data – Ogive curves.

7. Probability

Probability - Linking chances to probability - Chance and probability related to real life - Probability - a theoretical approach - Mutually exclusive events - Finding probability - Complementary events and probability - Impossible and certain events - Deck of Cards and Probability – Use and Applications of probability.

8. Coordinate Geometry

Cartesian System – Distance between two points – distance between two points on a line parallel to the co-ordinate axis – Distance between any two points on a line in the x-y plane – Section formula – centroid of a triangle – Tri-sectional points of a line – Area of the

triangle – Heron's formula- Collinearity – Straight lines – Slope of the straight line – slope of a line joining two points.

9. Trigonometry

Trigonometry – Naming the sides in a Right triangle – Trigonometric Ratios – Defining Trigonometric Ratios – Trigonometric ratios of some specific and complementary angles – Trigonometric identities – Applications of Trigonometry – Drawing figures to solve problems – solutions for two triangles.

III. PEDAGOGY OF TEACHING MATHEMATICS (10 Marks)

1. Nature of Mathematics
2. Objectives and Instructional Planning in Mathematics
3. Strategies for Learning and Teaching Mathematics
4. Teaching-Learning Resources in Mathematics for Students with Disabilities
5. Assessment and Evaluation for Mathematics Learning

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Physical Science Syllabus

1. G.K & Current Affairs	**–**	**10M**
2. Perspectives in Education	**–**	**05M**
3. Educational Psychology	**–**	**05M**
4. Category of disability specialization	**–**	**30M**
5. Content	**–**	**20M**
6. Methodology	**–**	**10M**
Total	**–**	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 10)

II. Perspectives in Special Education and Inclusive Education (Marks: 05)
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Philosophical Foundations of Education
2. Understanding Diversity
3. Contemporary Issues and Concerns
4. Education Commissions and Policy (School Education)
5. Issues and Trends in Education

III. Psychology with reference to CWSN – 05Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Approaches to Human Development
2. Theoretical Approaches to Development
3. The Early Years (Birth to Eight Years)
4. Early Adolescence (From nine years to eighteen years)
5. Transitions into Adulthood
6. Human Learning and Intelligence
7. Learning Process and Motivation
8. Teaching Learning Process

PART – II

I. Category of disability specialization – 30Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

i. HI-Hearing Impairment

Introduction to Inclusive Education, Polices & Frameworks Facilitating Inclusive Education, Adaptations Accommodations and Modifications, Inclusive Academic Instructions, Supports and Collaborations for Inclusive Education, Early Identification of Hearing Loss: Need and Strategies, Audiological Assessment, Assessment of Language & Communication, Assessment of Speech, Educational Assessment and Identification of Needs. Curriculum and Its' Designing, Developing Literacy Skills: Reading, Developing Literacy Skills, Curricular Adaptation, Curricular Evaluation. Need & Strategies for Early Intervention of Hearing Loss, Auditory Learning (AVT & Auditory Training) & Speech Reading , Speech Intervention Strategies, Communication and Language Teaching Strategies, Educational Intervention Strategies Listening Devices and Classroom Acoustics, Technology for Management for Speech, Technology Facilitating Language & Communication, Technology Facilitating Education, Resource Mobilisation for Technology Psychosocial Aspects and Disability, Family Needs, Family Empowerment.

(OR)

ii. VI-Visual Impairment

Introduction to Inclusive Education, Polices & Frameworks Facilitating Inclusive Education, Adaptations Accommodations and Modifications, Inclusive Academic Instructions, Supports and Collaborations for Inclusive Education, Anatomy and Physiology of Human Eye, Types of Visual Impairment and Common Eye Disorders, Implications of Visual Impairment and Needs of Visually Impaired, Identification and Assessment of Visual Impairment, Assessment of Learning Needs of Children with VIMD Concept and Types of Curriculum, Teaching Functional Academics Skills, Teaching of Independent Living Skills, Curricular Adaptation, Curricular Activities Theoretical Perspectives, Mathematics, Science, Social Science, Teaching of Children with Low Vision Introducing Educational and Information Communication Technology Adaptive Technologies, Access to Print for the Visually Impaired, Assistive Technologies for the Visually Impaired with Reference to School Subjects and Low Vision, Computer-Aided Learning Family of a Child with Visual Impairment, Parental Issues and Concerns, Rehabilitation of Children with Visual Impairment, Meeting the Challenges of Children with Visual Impairment.

II. Content (Marks: 20) (Class VI To X level syllabus)

1. MEASUREMENT

Story of transport, Non- standard units of Measurements, Measuring the length of a Curved line, Measurement of length, area, volume and time. CGS and SI units of length, area, volume and time, Conversion of units from CGS to S.I and Vice versa.

2. MOTION

Describing Motion, Motion and Rest, Motion Along a Straight Line, Types of motion (Translatory, Rotatory and oscillatory), Scalars and vectors, Distance, Displacement, Speed, Velocity, Average speed, Average velocity, Acceleration, Graphical Representation of Motion, Distance-Time Graphs, Velocity-Time Graphs, Uniform Motion and Non-Uniform Motion, Equations of Motion, Uniform Circular Motion, Laws of Motion, Balanced and Unbalance Forces, First Law of Motion, Inertia and Mass, Momentum, Second Law of Motion, Third law of motion.

3. FORCE, FRICTION AND PRESSURE

Force – A Push or a Pull, Exploring Forces, Effect of Force on Objects, Types of forces (field force and contact force), Net force, Types of friction (static, Sliding and Rolling), Factors effecting Friction, Friction: A Necessary Evil, Increasing and Reducing Friction, Fluid friction, Pressure, Pressure Exerted by Liquids and Gases, Pressure of liquids at different depths, Atmospheric Pressure.

4. GRAVITATION

Uniform circular motion, Universal law of gravitation, Free Fall, Acceleration due to Gravity, Motion of Objects Under the Influence of Gravitational Force of the Earth, Mass and Weight, Thrust and Pressure, Pressure in Fluids, Buoyancy, Floating and Sinking Objects, Archimedes' Principle.

5. WORK, ENERGY

Scientific Conception of Work, Work Done by a Constant Force, Energy, Forms of Energy, Kinetic Energy, Potential Energy, Mechanical Energy. Law of Conservation of Energy, Conversion of Energy from one form to another, Power and its units.

6. SOUND

Sound - a form of energy, Production of sound, Some musical instruments, Sound Needs a Medium for Propagation, Human ear, Hearing Impairment, Noise and Music, Propagation of Sound, Types of waves (longitudinal and transverse), Characteristics of sound waves (Wavelength, Frequency, Time period, Speed of the wave), Relation between frequency and time period, Pitch, Loudness and Quality, Intensity of Sound, Speed Of Sound in Different Media, Reflection of Sound, Echo, Reverberation, Uses of Multiple Reflection of Sound, Range of Hearing, Infrasonic and Ultrasonics, Applications of Ultrasound, Sound pollution.

7. HEAT

Heat and temperature, Transfer of Heat (Conduction, convection, radiation), Kinds of clothes we wear in summer and winter, Units of temperature (centigrade, Fahrenheit and Kelvin; Conversions), Expansion of liquids due to heat, Types of thermometers, Thermal equilibrium, Temperature and Kinetic energy, Specific Heat, Applications of Specific heat capacity, Principle of method of mixtures, Determination of Specific heat of a solid, Evaporation, Condensation, Humidity, Dew and Fog, Boiling, Latent heat of vapourisation, Melting, Latent heat of fusion, Freezing, Temperature- time graph.

8. LIGHT

Light, Transparent, Opaque and Translucent Objects, Shadows and Images, Rectilinear Propagation of Light, A Pinhole Camera, Regular and Diffused Reflection, Reflection of light by plane surfaces (laws of reflection, periscope, multiple images, kaleidoscope, Characteristics of image formed by plane mirrors), Spherical Mirrors and Images, Spectrum, Wave nature of light, Fermat principle, Sign convention, Refraction, Refraction of Light at Plane Surfaces, Refractive index, Absolute refractive index, Relative refractive index, Snell's law, Critical angle, Total Internal Reflection, Applications of total internal reflection, Mirages, Optical fibres, Refraction Through a Glass Slab, Lateral shift, Vertical shift, Refraction of Light at Curved Surfaces, Lenses, Terminology used in the case of lenses -Focal length, Focus, Optic Centre, Principal axis, Radius of curvature, Centre of curvature, Focal plane, Behaviour of certain light rays when they are incident on a lens, Images formed by lenses for various distances of objects, UV method, Lens formula, Lens maker's formula, Human Eye, Least distance of distinct vision, Angle of vision, Myopia, Hypermetropia, Presbyopia, Care of the Eyes, Braille System, Visually Impaired Persons, Power of lens, Refractive index of a Prism, Dispersion of light through prism, Sunlight-Dispersion, Rainbow, Scattering of light.

9. ELECTRICITY

Simple Electric circuit and its components, Conductors, Insulators, Type of cells (Dry and liquid), Electric symbols and uses, Series and parallel connection of cells and bulbs, Heating effects of Electricity, Understanding of CFL, Fuse and MCBs, Chemical Effects Of Electric Current, Good/Poor Conducting Liquids, Electroplating, Magnetic Effects of Electric Current, Electromagnet, Electric bell, Electric current, Drude and Lorentz theory, Potential difference and EMF, Drift velocity and working of a cell, Ohm's law, Electric shock, Factors affecting the resistance, Series connection of resistors, Parallel Connection of resistors, Multi-meter, Kirchhoff's laws, Sign convention in a circuit, Electric power, Power consumption, Electric energy, Overload.

10. MAGNETISM AND ELECTROMAGNETISM

How Magnets were discovered, Magnetic and Non-Magnetic Materials, Types of Magnets, Poles of Magnet, Properties of Magnets, Storing magnets safely, Magnetic compass, Earth as a Magnet, Magnetic Induction, Oersted's experiment, Magnetic Field, Magnetic flux – Magnetic flux density, Magnetic field due to straight wire /circular coil/solenoid carrying current, Magnetic Force, Electric Motor, Electromagnetic induction, Faraday's Law, Lenz Law, Applications of Faraday's law of electromagnetic induction, Induced current, Induced EMF, Electric generator, DC and AC currents, rms values.

11. PRINCIPLES OF METALLURGY

Metallurgy, Occurrence of the metals in nature, Ores and Minerals, Extraction of metals, Activity series, Concentration or Dressing of the ore, Hand picking, Washing, Froth flotation, Magnetic Separation, Extraction of crude metal from the ore, Reduction of purified ore to the metal, Purification of the crude metal, Distillation, Poling, Liquation, Electrolytic refining, Corrosion, Prevention of corrosion, Thermite process, Smelting, Roasting, Calcination, Flux, Gangue, Blast furnace, Reverberatory furnace.

12. CARBON AND ITS COMPOUNDS

Allotropes of Carbon, Amorphous forms, Crystalline forms, Diamond, Graphite, Buckminsterfullerene, Nanotubes, Versatile nature of Carbon, Catenation, Tetravalency, Hydrocarbons, Saturated and unsaturated hydrocarbons, Homologous series, Isomerism, Functional groups, Nomenclature of Aliphatic Hydrocarbons, IUPAC names, Chemical properties of carbon compounds- Combustion, Oxidation reactions, Addition reactions, Substitution reactions, Ethanol, Ethanoic acid, Esters, Esterification Reactions, Soaps – Saponification and Micelles, Cleansing action of soap, Detergents.

13. SOME NATURAL PHENOMENON

The Story of Lightning, charging by Rubbing, Electric charge and properties of electric charge, Types of charges and their interactions, Transfer of charge, lightning, lightning safety, lightning conductors, Earthquake, Tsunami, Causes and effects, Protective measures.

14. STARS AND SOLAR SYSTEM

The Moon, The Moon's Surface, Phases of Moon, Eclipses (Solar and lunar eclipses), The Stars, Movement of Stars (Constellation, pole star), Movement of the sun, Solar System, Planets and Some Other Members of the Solar System, Artificial Satellites.

15. CHANGES AROUND US

Slow/fast changes, Temporary/permanent changes, Natural/man made changes, Physical/ chemical changes, Rusting of iron, Crystallisation, Galvanization, Corrosion, Rancidity, Oxidation / reduction

16. MATTER

Objects Around Us, Properties of Materials, Physical Nature of Matter, Characteristics of Particles of Matter, States of matter, Properties of solids, liquids and gases, Change of state of Matter –effect of change of temperature and pressure, Evaporation, Factors Affecting Evaporation, Sublimation, Deposition, Boiling, Latent heat of vaporisation, Latent heat of fusion, Mixture, Types of Mixtures, Solutions., Properties of a Solution, Types of Solutions, Concentration of solution, Expressing Concentration of Solutions, Suspension, Properties of a Suspension, Colloidal Solution, Properties of a Colloid, Common examples of colloids, Mixtures, Methods of separation–handpicking, Threshing, Winnowing, Sedimentation, Decantation, Sieving, Filtration, Sublimation, Chromatography, Distillation and fractional distillation, Evaporation, Condensation, Use of more than one method of separation, Saturated and unsaturated solutions, Separation of immiscible liquids, Types of Pure Substances – Elements and Compounds.

17. ATOMS AND MOLECULES

Laws of Chemical Combination - Law of Conservation Of Mass, Law of Constant Proportions, Atom, Symbols of Atoms of Different Elements, Atomic Mass, Atomicity, Valency, Molecule, Molecules Of Elements, Molecules Of Compounds, Ion – Cation & Anion, Polyatomic ions, Names and symbols of ions, Formation of ions, Writing Chemical Formulae, Molecular Mass, Molar mass, Formula Unit Mass, Structure of The Atom, Subatomic particles, Charged Particles in Matter, Thomson's Model of an Atom, Rutherford's Model of an Atom, Bohr's Model of an Atom, Bohr-Sommerfeld model

of an atom, Neutrons, Distribution of electrons into different Orbits, Atomic Number and Mass Number, Isotopes, Isobars, Atomic line spectra, Planck's quantum theory, Quantum numbers, Shapes of orbitals, Electronic Configuration, Pauli Exclusion Principle, Aufbau principle, Hund's Rule.

18. CLASSIFICATION OF ELEMENTS-THE PERIODIC TABLE

Dobereiner's law of Triads, Newlands' law of Octaves, Mendeleev's Periodic Table, Modern Periodic Table, Periodic properties of the elements and their gradation in the modern periodic table.

19. CHEMICAL BONDING

Lewis dot structures, Covalency, Electronic theory of valence by Lewis and Kossel, Octet rule, Ionic and Covalent bonds, Ionic and Covalent compounds, Bond lengths and Bond energies of covalent bonds, Valence shell electron pair repulsion theory, Valence bond theory, Hybridisation.

20. METALS AND NON METALS

Physical Properties of Metals and Non-metals, Chemical Properties of Metals and Non-metals, Uses of Metals and Non-metals, Examples of metals and non-metals, Reactivity order of metals.

21. SYNTHETIC FIBRES AND PLASTICS

Natural and Synthetic fibres, Preparation and uses, Types of Synthetic Fibres, Characteristics of Synthetic Fibres, Plastics as Materials of Choice, Types of plastics, Plastics and environment, Biodegradable – Non biodegradable materials.

22. COAL AND PETROLEUM

Exhaustible and inexhaustible Resources, Fuels – Types, Coal, Story of Coal, Uses of Coal and Coal products, Refining of petroleum, Petrochemical products in various sectors, Various Constituents of Petroleum and their Uses, Formation of coal and petroleum, Natural Gas, Misuse of Energy resources and Consequences.

23. COMBUSTION FUELS AND FLAME

Combustion, Types of Combustion, Ignition temperature, Inflammable substances, Flame, Fuel Efficiency, Burning of Fuels Leads to Harmful Products, Fire control, Structure of flame – colors zones – Intensities.

24. AIR

Atmosphere, Components of air, Availability of oxygen to plants and animals, Replacement of Oxygen in the Atmosphere.

25. ACIDS, BASES AND SALTS

Natural acid-base indicators, Synthetic acid-base Indicators, Olfactory indicators, Universal Indicator, Chemical properties of Acids and Bases, Reaction of Acids and bases with Metals, Reaction of Acids with carbonates and metal hydrogen Carbonates, Neutralization reaction, Reaction of Acids with metal oxides, Reaction of base with non-metal oxide, Production of H^+ions and OH- ions, Electrical conductivity of Acids and

Bases, Properties of Bases, Dilution, Strength of acid or base, pH scale, Importance of pH in everyday life, Self defense by animals and plants through chemical warfare, Family of salts, pH of Salts, Chemicals from common salt, Important product from chlor-alkali process and their uses, Water of crystallization, Common salt, Bleaching Powder, Baking soda, Washing soda, Plaster of paris, Gypsum, and their uses.

III. PEDAGOGY OF TEACHING SCIENCE (Marks: 10)

1. Nature and Significance of Science
2. Planning for Instruction
3. Approaches and Methods of Teaching Sciences
4. Learning Resources with reference to Children with Disabilities for Teaching Science
5. Evaluation

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Department of School Education
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DSC - 2024
Category of Post: TGT _ Special Education

Biological Science Syllabus

1. G.K & Current Affairs	**–**	**10M**
2. Perspectives in Education	**–**	**05M**
3. Educational Psychology	**–**	**05M**
4. Category of disability specialization	**–**	**30M**
5. Content	**–**	**20M**
6. Methodology	**–**	**10M**
Total	**–**	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 10)

II. Perspectives in Special Education and Inclusive Education (Marks: 05)
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Philosophical Foundations of Education
2. Understanding Diversity
3. Contemporary Issues and Concerns
4. Education Commissions and Policy (School Education)
5. Issues and Trends in Education

III. Psychology with reference to CWSN – 05Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

1. Approaches to Human Development
2. Theoretical Approaches to Development
3. The Early Years (Birth to Eight Years)
4. Early Adolescence (From nine years to eighteen years)
5. Transitions into Adulthood
6. Human Learning and Intelligence
7. Learning Process and Motivation
8. Teaching Learning Process

PART – II

I. Category of disability specialization – 30Marks
(As per Rehabilitation Council of India, B.Ed. Spl.Ed Curriculum)

i. HI-Hearing Impairment

Introduction to Inclusive Education, Polices & Frameworks Facilitating Inclusive Education, Adaptations Accommodations and Modifications, Inclusive Academic Instructions, Supports and Collaborations for Inclusive Education, Early Identification of Hearing Loss: Need and Strategies, Audiological Assessment, Assessment of Language & Communication, Assessment of Speech, Educational Assessment and Identification of Needs. Curriculum and Its' Designing, Developing Literacy Skills: Reading, Developing Literacy Skills, Curricular Adaptation, Curricular Evaluation. Need & Strategies for Early Intervention of Hearing Loss, Auditory Learning (AVT & Auditory Training) & Speech Reading , Speech Intervention Strategies, Communication and Language Teaching Strategies, Educational Intervention Strategies Listening Devices and Classroom Acoustics, Technology for Management for Speech, Technology Facilitating Language & Communication, Technology Facilitating Education, Resource Mobilisation for Technology Psychosocial Aspects and Disability, Family Needs, Family Empowerment.

(OR)

ii. VI-Visual Impairment

Introduction to Inclusive Education, Polices & Frameworks Facilitating Inclusive Education, Adaptations Accommodations and Modifications, Inclusive Academic Instructions, Supports and Collaborations for Inclusive Education, Anatomy and Physiology of Human Eye, Types of Visual Impairment and Common Eye Disorders, Implications of Visual Impairment and Needs of Visually Impaired, Identification and Assessment of Visual Impairment, Assessment of Learning Needs of Children with VIMD Concept and Types of Curriculum, Teaching Functional Academics Skills, Teaching of Independent Living Skills, Curricular Adaptation, Curricular Activities Theoretical Perspectives, Mathematics, Science, Social Science, Teaching of Children with Low Vision Introducing Educational and Information Communication Technology Adaptive Technologies, Access to Print for the Visually Impaired, Assistive Technologies for the Visually Impaired with Reference to School Subjects and Low Vision, Computer-Aided Learning Family of a Child with Visual Impairment, Parental Issues and Concerns, Rehabilitation of Children with Visual Impairment, Meeting the Challenges of Children with Visual Impairment.

II. Content (Marks: 20) (Class VI to X level syllabus)

1. LIFE PROCESS:

NUTRITION: Types of nutrition– Autotrophic, Parasitic, saprophytic, holozoic, symbiotic; Nutrition in Plants – Photosynthesis, requirements, mechanism, contribution of different scientists in understanding photosynthesis, Insectivorous plants; Nutrition in animals - Different ways of taking food, Nutrition in unicellular organisms, Digestion

in grass eating animals, Digestion in humans - Digestive system, glands - enzymes-functions, Types of teeth – their role.

RESPIRATION: Cellular respiration, Types of respiration – aerobic and anerobic respirations, activities to understand respiration, Contribution of different scientists in understanding the respiration and respiratory gases, Respiration in plants – in leaf, stem, root, Respiration in human beings – steps in respiration, respiratory system, structure, mechanism, transport of gases in the body, Evolution in gases exchange system-pulmonary respiration, tracheal respiration, aquatic respiration, cutaneous respiration, Comparison of Respiration with combustion, Comparison of Respiration with Photosynthesis.

TRANSPORTATION: Circulatory system - Human Circulatory system – Heart, Blood, Blood vessels, Functioning of heart – the cardiac cycle, heartbeat, pulse, Lymphatic system, Blood pressure, coagulation of blood, Contribution of different scientists in understanding of our circulatory system, Evolution of the transport system in animals – different animals their circulatory systems, open and closed type of circulatory systems, single and double circuit circulations, Transportation in plants-transport of water by xylem, its mechanism, Transport of mineral salts, Transport of food by phloem.

EXCRETION: Excretion- excretory products, need of excretion, Excretion in Human Beings – Structure of excretory system, Structure of nephrons, Mechanism of urine formation, Composition of urine, Dialysis, Kidney transplantation, other pathways of excretion – accessory excretory organs, Excretion in other organisms, Excretion and release of substances in plants – Secondary metabolites - alkaloids, tannins, resin, gums, latex Excretion Vs Secretion;

COORDINATION: Coordination in animals - Nervous coordination – Nervous system – Nerve cell structure and function, synapse, nerve pathways, Types of neurons, Central nervous system – Brain parts and functions, Spinal cord, reflex arc, Peripheral nervous system – Cranial and spinal nerves, Autonomous nervous system – Sympathetic, parasympathetic nervous systems, Endocrine system – Glands, Hormones and functions, Feedback mechanism, Coordination in plants – Plant hormones, tropic and nastic movements, Contribution of different scientists in understanding the coordination process in organisms, Coordination between life process,

REPRODUCTION: Modes of reproduction – sexual, asexual and vegetative; Sexual reproduction in plants – Structure of flower, unisexual and bisexual flowers, pollination, Fertilization, Seed dispersal, Sexual and Asexual Reproduction in Animals, oviparous and viviparous animals, fertilization – types, Metamorphosis, Reproduction in a placental mammal – Man, Male and female reproductive systems, Mansuration, Pregnancy, development of embryo, Embryonic membranes, child birth, Reproductive health, Birth control methods, Fighting against social ills, Adolescence and puberty – changes, role of hormones.

HERIDITY: Variations, Mendel's experiments on inheritance, Mono hybrid cross, dihybrid cross, Sex determination in human beings, Evolution – Lamarckism, Darwinism, Evidences of evolution, Human evolution

2. LIVING WORLD:

LIVING AND NONLIVING THINGS: Characteristics of living organisms, Different types of habitat and adaptation.

PLANTS: Types - Herbs, shrubs, trees; Plant parts – leaf, structure, venation, function, transpiration, roots, tap root system, fibrous root system, relation with venation, function of roots, stem - functions, flower- parts, functions.

ANIMALS: Skeletal parts – Bones, Joints, Cartilage; muscles, Movements in animals – Earth worm, snail, cockroach, birds, fish, snakes

MICROORGANISMS: Microorganisms - types, Useful Microorganisms – Food - Fermentation, Making curd, and bread, Commercial use – Alcohol, Medicinal use – antibiotics, Vaccines, Soil fertility – Bio degradation, cleaning the environment, nitrogen fixation, nitrogen cycle, Harmful microorganism – Pathogens, their transmission, common diseases caused by microbes in humans, animals, plants, their transmission, prevention. Food preservation methods including pasteurization. Contribution of different scientists in microbiology.

CELL AND TISSUES: Cell-The basic unit of life, Cell structure and function, Types of cells – Plant cell, animal cell, prokaryotic – eukaryotic cells, Cell organelles and their functions, Cell theory, Cell divisions – mitosis, meiosis, Cell cycle, Contribution of different scientists in understanding the cell structure and cell division, Animal Tissues – Epithelial tissues, Connective tissues, Muscular tissues, Nervous tissue, Plant tissues- temporary tissues- Meristematic tissue, Permeant tissues – parenchyma, Collenchyma, Sclerenchyma, xylem and phloem.

OUR FOOD: Components of food, Source of food, Tests for starch, proteins and fats, Balanced diet, Malnutrition - types, causes, Deficiency diseases – Kwashiorkor, Marasmus, Obesity, Vitamin deficiency diseases.

FOOD FROM PLANTS: Agriculture - Kharif and rabi crops, Agricultural Practices, implements, Manure, fertilizers, crop management, patterns, irrigation methods, crop protection. Improvement in crop yields, Storage of food,

FOOD FROM ANIMALS: Animal Husbandry – cattle forming, poultry forming, Fisheries, Bee- keeping.

3. OUR ENVIRONMENT-ECOLOGY:

OUR ENVIRONMENT: Food chain, Food web, Ecological pyramids – pyramid of number, pyramid of biomass, pyramid of energy, Effects of human activities on ecosystems, Bio accumulation, bio-magnification, Steps towards prevention

NATURAL RESOURCES: Renewable and non-renewable resources, Water, Soil, Forest, petroleum, Minerals conservation, 4Rs;

BIO DIVERSITY: Forests, Flora, fauna, interrelation of organisms, Advantages of forests, Deforestation - effects, Conservation of forest and wildlife – Protecting areas, endangered and endemic species;

AIR & WATER POLLUTIONS: Cusses, effects and prevention, Water, Sewage, Treatment of polluted water, Better housekeeping practices, Sanitation and Disease, Alternative arrangement for sewage disposal;

GLOBAL ENVIRONMENTAL ISSUES: Greenhouse effect, Global warming, Acid rains; Causes, effects, preventive measures.

III. PEDAGOGY OF TEACHING SCIENCE (Marks: 10)

1. Nature and Significance of Science
2. Planning for Instruction
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5. Evaluation

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Department of School Education
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Category of Post: TGT
ENGLISH Syllabus

1.	**G.K & Current Affairs -**	-	**10M**
2.	**Perspectives in Education**	-	**05M**
3.	**Classroom implications of Educational Psychology**	-	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. History of Education :

- The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
- Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
- Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992

2. Teacher Empowerment:

- Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.

3. Educational Concerns in Contemporary India:

- Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
- Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
- Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
- Adolescence Education
- Value Education – Moral Value and Professional Ethics in Education.

- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National education Policy -2020**

PART - III

III. Classroom Implications of Educational Psychology – 05m

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART – IV

IV. Content (40 Marks)

Literature Detailed Study

LITERATURE		LEVEL OR AREA OF TESTING
Background of English Literature		Poetical Types, Stanza forms, Schools and Movements, Dramatic Types, The Essay, The Novel, The Short Story
Literary Terms		*Parallelism, Prologue, epilogue, setting, the character, metre, diction, imagery, prosody, point of view, epic, mock epic, choreography, narration, classic, chorus, comedy, tragedy, conflict, plot, criticism, discourse, empathy, sympathy, style, theatre, feminism, soliloquy, folklore, structure; *Figures of Speech - Simile, Metaphor, Apostrophe, Personification, Metonymy, Synecdoche, irony and alliteration; *Rhyme Scheme
Poetry (Detailed Study)		1. Where the Mind Is without Fear (Rabindranath Tagore) 2. The cloud (P.B.Shelly) 3. The Nation's Strength (R.W.Emerson) 4. Palanquin Bearers (Sarojini Naidu) 5. The Road Not Taken (Robert Frost) 6. A Slumber did my spirit seal (William Wordsworth) 7. Telephone Conversation (Wole Soyinka) 8. The Night of the Scorpion (Nissim Ezekiel)
Prose / Essay (Detailed Study)		1. Of studies (Francis Bacon) 2. Self-reliance (R.W.Emerson) 3. On Shaking Hands (A.G.Gardiner) 4. What Makes a Nation (C. Rajagopalachari)
Novels (Detailed Study)		1. Animal Farm (George Orwell) 2. Swami and Friends (R.K.Narayan)
Drama (Detailed Study)		1. Twelfth Night (William Shakespeare) 2.The Importance of Being Earnest (Oscar Wilde)
Short Story (Detailed Study)		1. The Bet (Anton Chekhov) 2. Engine Trouble (R. K. Narayan) 3. After Twenty Years (O' Henry) 4. The Thief (Ruskin Bond)

(Class VI to Intermediate level syllabus)

VOCABULARY		LEVEL OF TESTING
Synonyms		Identification of Shades of Meaning
Antonyms		Identifying Antonyms in a Context
Homophones		Identification & Usage
Homonyms		Identification & Usage
Hypernyms & Hyponyms		Identification & Usage
Spelling		Spelling
One-word Substitutes		Referring to Persons / Professions, Places, Collections
Phrasal Verbs		Identification of Meaning and usage
Idiomatic Expressions		Identification, Usage
Proverbs		Proverbs
Word Formation		Suffixes, Prefixes and other forms
Short Forms - Full Forms		Common Short Forms - Full Forms
Abbreviations - Full Forms		Common Abbreviations - Full Forms
Word Collocations		Word Collocations
Foreign Phrases Used in English		Standard and common Foreign Phrases Used in English
GRAMMAR		**LEVEL OF TESTING**
Helping Verbs		Form, Function & Contractions
Modal Auxiliaries		Form, Function & Contractions
Ordinary Verbs		Form, Function & Contractions
Articles		Use of Articles Including Omissions
Prepositions		Simple, Compound Prepositions Including Prepositions following Certain Words and Prepositional Phrases
Clauses		Main Clauses, sub-ordinate Clauses, Adjectival Clauses, Noun Clauses, Adverbial Clauses, Relative Clauses, Finite and Non-finite Clauses
Sentence Structures		Sentence Structures
Degrees of Comparison		Form, Function, Construction, Transformation

Language Functions		Language Functions with social norms (formal and informal)
Question Tags		Imperatives and Statements with semi negatives and indefinites subjects
Types of Sentences		Types of Sentences
Sentence Improvement		Sentence Improvement
Direct Speech & Indirect Speech		Statements, Questions, Imperatives and Exclamatory Sentences
Active Voice & Passive Voice		Active Voice & Passive Voice
Tenses		Use of tenses and framing including 'IF' conditionals Type 1, 2 &3
Agreement between subject & Verb		Agreement between subject & Verb
Word Order		Word Order In a phrase or a sentence
Parts of Speech		Nouns, Pronouns, Adjectives, Adverbs, Conjunctions, Interjections - Types and functions
Linkers		Linkers
Transformation of Sentences		Simple, Compound and Complex Sentences
Common Errors		Based on all Vocabulary and Grammar Topics
MECHANICS OF WRITING		**LEVEL OF TESTING**
Punctuation and Capitalization		Use of capital letters, comma, full stop, question mark, exclamation mark and inverted commas
COMPOSITION		**LEVEL OF TESTING**
Writing of Discourses		Letter Writing, News Report, Diary Entry, Conversation, Description, Diary Entry, Biographical Sketch, Story, Script for a speech
DICTIONARY SKILLS		**LEVEL OF TESTING**
DICTIONARY SKILLS		DICTIONARY SKILLS

PRONUNCIATION		**LEVEL OF TESTING**
Phonetics, Stress & Intonation		Phonetic Transcription and stress marking including intonation in context
READING COMPREHENSION		LEVEL OF TESTING
Prose		Prose (GENERAL)

V. Methodology (20 Marks)

1. Aspects of language (English Language History, Nature, Importance, Principles of English as Second language and problems of Teaching / learning English)
2. Objectives of Teaching English
3. Development of language Skills (Listening, Speaking, Reading and Writing; Communicative Skills and Imparting values through Communication
4. Approaches, Methods and Techniques of Teaching English (Introduction, Definition, Types of Approaches, Methods and Techniques of Teaching including Remedial Teaching)
5. Teaching of Structures, Vocabulary and Grammar
6. Teaching Learning Materials in English
7. Lesson Planning
8. Curriculum and Textbooks - Importance and need
9. Evaluation in English Language
10. Pronunciation, Phonetics and Phonetic Transcription

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
Category of Post: TGT
TELUGU Syllabus

1.	**G.K & Current Affairs -**	-	**10M**
2.	**Perspectives in Education**	-	**05M**
3.	**Classroom implications of Educational Psychology**	-	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya

Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
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PART – IV

I. Content (40 Marks)

1) తెలుగు సాహిత్య చరిత్ర:

- కవులు, కాలం, రచనా విశేషాలు, బిరుదులు, ఇతివృత్తం, పాత్రలు, విశేషాంశాలు, వివిధ ప్రక్రియలు
- ఆధునిక కవిత్వ ధోరణులు, లక్షణాలు

2) తెలుగు భాషా చరిత్ర:

- మాండలిక భాష – స్వభావం, ఉత్పత్తి, భేదాలు
- గ్రాంథిక భాష, వ్యావహారిక భాష – ఆధునిక ప్రామాణిక భాష
- అర్థ విపరిణామం
- ధ్వని – ధ్వన్యుత్పత్తి స్థానాలు

3) సాహిత్య విమర్శ:

- కావ్యం – నిర్వచనం – కావ్య ప్రయోజనం – కవిత్వ హేతువులు – శైలి – సంస్కృత, పాశ్చాత్య లాక్షణికుల సిద్ధాంతాలు

4) బాల వ్యాకరణం:

- సంజ్ఞ, సంధి, తత్సమ, ఆచ్చిక, సమాస, పరిచ్ఛేదములు.

6వ తరగతి నుండి ఇంటర్మీడియట్ వరకు గల ఆంధ్రప్రదేశ్ ప్రభుత్వ పాఠ్యపుస్తకాలు

1) తెలుగు వాచకాలలోని అంశాలు: (ఉపవాచకాలతో సహా)

కవికాలాదులు, నేపథ్యాలు, ఉద్దేశాలు, మూల గ్రంథాలు, విశేషాంశాలు, ఇతివృత్తాలు, పాఠ్యాంశ విషయాలు మొ॥వి; విద్యాప్రమాణాలు.

2) పదజాలం:

అర్థాలు, పర్యాయపదాలు, నానార్థాలు, వ్యుత్పత్త్యర్థాలు, ప్రకృతి – వికృతులు, జాతీయాలు, సామెతలు మొ॥వి.

3) భాషాంశాలు:

సంధులు, సమాసాలు, ఛందస్సు, అలంకారాలు, పారిభాషికపదాలు క్రియలు, వాక్యాలు మొ॥వి.

4) ఛందస్సు: (వృత్తాలు, జాతులు, ఉపజాతులు)

యతులు, ప్రాసల రకాలు – ఛందో దర్పణం

II. తెలుగు బోధన పద్ధతులు : 20 మార్కులు

బి.ఎడ్ తెలుగు బోధన పద్ధతులు. (తెలుగు అకాడమీ ప్రచురణ)

1. భాష – వివిధ భావనలు
2. భాషానైపుణ్యాలు
3. ప్రణాళిక రచన – పాఠ్యగ్రంథాలు
4. విద్యా సాంకేతిక శాస్త్రం – సహపాఠ్య కార్యక్రమాలు
5. సాహిత్య ప్రక్రియలు – బోధన పద్ధతులు
6. మూల్యాంకనం – పరీక్షలు

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
Category of Post: TGT
HINDI Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**05M**
3.	**Classroom implications of Educational Psychology**	-	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. History of Education :

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- Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.

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- Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
- Adolescence Education
- Value Education – Moral Value and Professional Ethics in Education.
- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National

Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

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PART - IV

IV. Content (Marks: 40)) (Class VI to Intermediate level syllabus)

1. **हिंदी साहित्य का इतिहास**: काल विभाजन - विभिन्न विद्वानों के विचार आदिकाल, भक्ति काल, रीति काल और आधुनिक काल
2. **आधुनिक साहित्य**: विभिन्न प्रवृत्तियाँ और प्रमुखवाद (छायावाद, प्रगतिवाद,प्रयोगवाद, रहस्यवाद आदि) साहित्यक विधाएँ (कविता, कहानी, उपन्यास, नाटक आदि)
3. **हिंदी भाषा का इतिहास**: उद्भव और विकास: हिंदी राष्ट्र भाषा, राजभाषा और विश्व भाषा के रुप में हिंदी देवनागरी लिपि का विकास, देश की एकता और हिंदी।
4. **हिंदी भाषा का क्षेत्र**: उपभाषाएँ और बोलियाँ

5. **भारतीय काव्यशास्त्रः** अर्थ, परिभाषा, प्रयोजन और लक्षण, रस, छंद, अलंकार
6. **भाषा तत्व और व्याकरणः** वर्णमाला : (स्वर, व्यंजन भेद वर्णों का उच्चारण स्थान) **शब्दभेदः** (रूप परिवर्तन के अधार पर विकारी अविकारी शब्द व्युत्पत्ति के आधार पर शब्द भेद रूढी,यौगिक, योग रूढ) उपसर्ग, प्रत्यय, लिंग वचन, कारक - काल - संधि - समास। पर्यायावाची शब्द, विलोम शब्द, शब्द परिचय तत्सम, तद्भव, देशी, विदेशी, क्रिया - सकर्मक, अकर्मक प्रेरणार्थक क्रियाएँ - मुहावरे, लोकोक्ति, कहावत, विराम चिह्न। वाक्य भेद, वाक्य और प्रयोग, वाक्य संरचना, भेद वाच्य कर्तृ वाच्य, कर्म वाच्य और भाव वाच्य पद-परिचय
7. हिंदी पाठ्य पुस्तकें (द्वितीय भाषा) छठवीं कक्षा से दसवीं कक्षा सहित (उपवाचक और पठनहेतु साहित)

V. Methodology (Marks: 20)

1. भाषा-अर्थ, परिभाषा, महत्व, प्रकृति और स्वरूप, ध्वनि विज्ञान, शब्द विज्ञान, व ाक्य विज्ञान, विवध स्तरों पर हिंदी शिक्षण के लक्ष्य और उद्देश्य, प्रथम भाषा के रूप में हिंदी द्वितीय भाषा के रूप में हिंदी, त्रिभाषा सूत्र, भारतीय संविधान में ि हंदी का स्थान।
2. हिंदी भाषा शिक्षण प्राथमिक, माध्यमिक और उच्च माध्यमिक स्तर पर
   (1) हिंदी भाषा - शिक्षण के उद्धेश्य
   (2) अच्छे शिक्षण और अच्छे शिक्षण की विशेषताएँ।
   (3) हिंदी अध्यापक और शिक्षण की विशेषताएँ
   (4) भाषा - शिक्षण के सामान्य सिद्धांत
   (5) भाषा शिक्षण प्रणालियाँ
   (6) भाषा शिक्षण की पद्धतियाँ (प्रत्यक्ष, परोक्ष, खेल माँन्तेसरी, निर्देशित, डाल्टन, आगमन, सूक्ष्म शिक्षण आदि)
   (7) शिक्षण सूत्र
3. **शिक्षण में भाषा - कौशलों का महत्व**
   सुनना - ध्वनि की उत्पत्ति - ध्वनि और श्रवण का पारस्परिक संबंध
   बोलना - शब्दोच्चारण, वाक्यंत्र, शुदुधोच्चारण का अभ्यास, मौखिक अभिव्यक्ति, पाठशाला में वार्तालाप का अभ्यास।
   पढनाः वाचन की विशेषताएँ, प्रकार दोष और उपचार
   लिखनाः महत्व, नियम विधियाँ, प्रकार, अक्षर-विन्यास
4. **पाठ्यक्रम और सहगामी क्रियाएँ**
   पाठ्यक्रम-पाठ्य पुस्तक, पुस्तकालय - दृश्य - श्रव्य उपकरण (शिक्षण उपकरण) पाठ सहागामी क्रियाएँ, भाषा प्रयोगशाला।
5. **शिक्षण योजनाः**
   (1) पाठ-योजना (गद्य, पद्य, व्याकरण, पत्र लेखन और रचना)
   (2) इकाई पाठ योजना
   (3) सूक्ष्म शिक्षण पाठ योजना

6. **मूल्यांकन**
   मूल्यांकन की धारणा, निरंतर समग्र मूल्यांकन, उत्तम परीक्षा की विशेषताएँ, प्रश्न पत्र का निर्माण, उपलब्धि परीक्षा, निदानात्मक एंव उपचारात्मक शिक्षण, अभिलेख।
7. आंध्रप्रदेश में हिंदी शिक्षण में आनेवाली समस्याएँ व उनका निराकरण।
8. ध्वनि, वर्ण, शब्द, वाक्य रचना व शुद्धाशुद्ध वर्तनी व वाक्य ज्ञान।

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC - 2024
Category of Post: TGT
SANSKRIT Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**05M**
3.	**Classroom implications of Educational Psychology**	-	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya

Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy - 2020**

PART - III

III. Classroom Implications of Educational Psychology – 05marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. Sanskrit Content (Marks: 40)) (Class VI to Intermediate level syllabus)

Note: 6 कक्ष्यातः 12 कक्ष्यापर्यन्तं प्राच्य / संयुक्त पाठशालासंस्कृतपाठ्यपुस्तेकषु विद्यमानांशाः पाठ्येतरांशाः च ।

कवयः - काव्यम् - रचयितारः - रचनाः स्तोत्राणि शास्त्रग्रन्थाः - कर्तारः (आलङ्कारिक - न्याय व्याकरणेत्यादि ग्रन्थाः।) इत्यादयः।

रचनाप्रक्रियाः इतिहास - पुराण - काव्य - नाटक - कथा - आत्मकथा - गीतम् - इत्यादि प्रक्रियानां स्वरूपविवरणम् - ।

वेदवाङ्मयम् - वेदाः - वेदाङ्गानि - उपनिषदः।

भाषास्वरूपम् - भाषोत्पत्ति विषयकवादाः - भाषाकुटुंबम् - वैदिकलौकिक संस्कृतयोः साम्यं वैषम्यं च।

साहित्यविमर्शः - काव्यप्रयोजनं - काव्यलक्षण - काव्यभेदाः - शैली -

	अलङ्काररससंप्रदायाः - रसवादाः च।
संस्कृतव्याकरणम् -	संज्ञाप्रकरणम्
	संधिप्रकरणम्
	समासप्रकरणम्
	स्त्रीप्रत्ययप्रकरणम्
	विभक्त्यर्थप्रकरणम्
भाषांशाः	समानार्थकाः
	विरुद्धार्थकाः
	छन्दः
	अलङ्कारः
	प्रत्ययाः
	विभक्तिः
	क्रियापदानि
	व्युत्पत्यर्थाः
	संख्यावाचकाः
	प्रयोगविपरिणामः इत्यादयः
पठनावगमनम्	परिचित/अपरिचत पद्य/गद्यांशाः - तदाधारितप्रश्नाः।

V. Methodology (20 Marks)

पाठ्यक्रमे संस्कृतस्य महत्वम् - स्थानम्।
संस्कृतशिक्षणस्य उद्देश्यानि - सामान्यसिद्धान्ताः - शिक्षणापद्धतीः।
पाठ्यक्रमयोजना - पाठ्यग्रन्थः।
विद्यासांकेतिक - सहपाठ्यकार्यक्रमाः।
विद्यालयव्यवस्था।
साहित्यप्रक्रियाः बोधनापद्धतीः।
शिक्षणाकौशलानि।
मूल्याङ्कनम् - परीक्षा च।

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
Category of Post: TGT, PGT & Principals
Paper I – ENGLISH LANGUAGE PROFICIENCY (For Non Languages)
Syllabus

English: (Content) (Marks: 100) (Intermediate level)

Area		Level Of Testing
Parts of Speech		Nouns, Pronouns, Adjectives, Adverbs, Conjunctions, Interjections - Types and functions
Synonyms		Identification of Shades of Meaning
Antonyms		Identifying Antonyms in a Context
Homophones		Identification & Usage
Homonyms		Identification & Usage
Hypernyms& Hyponyms		Identification & Usage
Spelling		Spelling
One-word Substitutes		Referring to Persons / Professions, Places, Collections
Phrasal Verbs		Identification of Meaning and usage
Idiomatic Expressions		Identification, Usage
Proverbs		Proverbs
Word Formation		Suffixes, Prefixes and other forms
Short Forms - Full Forms		Common Short Forms - Full Forms
Abbreviations - Full Forms		Common Abbreviations - Full Forms
Word Collocations		Word Collocations
Foreign Phrases Used in English		Standard and common Foreign Phrases Used in English
Helping Verbs		Form, Function & Contractions
Modal Auxiliaries		Form, Function & Contractions
Ordinary Verbs		Form, Function & Contractions
Articles		Use of Articles Including Omissions
Prepositions		Simple, Compound Prepositions Including Prepositions following Certain Words and Prepositional Phrases

Clauses		Main Clauses, sub-ordinate Clauses, Adjectival Clauses, Noun Clauses, Adverbial Clauses, Relative Clauses, Finite and Non-finite Clauses
Sentence Structures		Sentence Structures
Degrees of Comparison		Form, Function, Construction, Transformation
Language Functions		Language Functions with social norms (formal and informal)
Question Tags		Imperatives and Statements with semi negatives and indefinites subjects
Types of Sentences		Types of Sentences
Sentence Improvement		Sentence Improvement
Direct Speech & Indirect Speech		Statements, Questions, Imperatives and Exclamatory Sentences
Active Voice & Passive Voice		Active Voice & Passive Voice
Tenses		Use of tenses and framing including 'IF' conditionals Type 1, 2 &3
Agreement between subject & Verb		Agreement between subject & Verb
Word Order		Word Order In a phrase or a sentence
Linkers		Linkers
Transformation of Sentences		Simple. Compound and Complex Sentences
Common Errors		Based on all Vocabulary and Grammar Topics
Punctuation and Capitalization		Use of capital letters, comma, full stop, question mark, exclamation mark and inverted commas
Writing of Discourses		Letter Writing, News Report, Diary Entry, Conversation, Description, Diary Entry, Biographical Sketch, Story, Script for a speech
Dictionary Skills		Dictionary Skills
Reading comprehension		Prose (GENERAL)

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
Category of Post: TGT
Paper II – MATHAMETICS Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**05M**
3.	**Classroom implications of Educational Psychology**	-	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
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   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education

- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
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4. **Acts / Rights:**
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   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. Maths –Content (40 Marks)) (Class VI to Intermediate level syllabus)

1. Arithmetic

BODMAS rule - Ratios and Proportions (Direct, Inverse) - comparing quantities using ratios, proportion, percentage and their applications - Profit and Loss - Discount - Sales Tax/Value Added Tax/Goods and Services Tax - Simple, Compound Interest and their applications.

2. Number System

Numbers - Four fundamental operations (Addition, Subtraction, Multiplication, Division) - Knowing about Numbers - Hindu-Arabic system of numeration (Indian system of numeration) - International system of numeration (British system of numeration) - Place value and Face values of a digit in a number - Comparing and Ordering of Numbers - Whole Numbers - Factors and Multiples - Prime and Composite numbers - Even and Odd numbers - Tests for Divisibility of Numbers - Common Factors and Common Multiples - Prime factorisation - Highest Common Factor (G.C.D) - Lowest Common Multiple - Integers - properties and fundamental operations - Fractions and decimals - Types of fractions - comparison - Applications of fractions in daily life - four fundamental operations on fractions and decimals - Euclid's Division Lemma and its application - Rational Numbers - Properties of Rational Numbers - Representation of Rational Numbers on the Number line - Rational Numbers between two rational numbers - Four fundamental Operations on Rational Numbers – Rational numbers and their decimal expansions - Non-terminating, recurring decimals in rational numbers - Product of reciprocals - Squares - Square roots (Numbers and Decimals) - Properties of Square Numbers - Cubes - Cube roots of Numbers - Playing with Numbers - Games with Numbers - Letters for Digits - Irrational numbers - Real Numbers and their Decimal Expansions - Operations on Real Numbers - Laws of Exponents for Real Numbers – Properties & Laws of logarithms.

Sets and their representation (Roster form and Set builder form) – Classification of sets (Empty, Universal, subset, Finite & Infinite, disjoint sets) - difference of sets - Equal sets - Using diagrams to represent sets - Venn diagrams and cardinality of sets - Basic operations on sets (Union, Intersection).

3. Geometry

Basic geometrical concepts (Point, Line, Line segment, Ray, Curves, Polygons, Angles) - Measuring of Lines - Pairs of Lines - Intersecting Lines and Non-intersecting Lines – Lines parallel to the same line - Elements of Angles - Measuring of Angles - Types of Angles – Pairs of Angles - Naming of the given 2D figures of Triangles, Square and Rectangle - The Triangle - Types of Triangles and its Properties – Congruence and some properties of Triangles - Some more criteria for Congruence of Triangles – Criteria for similarity of triangles – Areas of similar triangles – Pythagoras theorem - Classification of Polygons - Angle sum property - Kinds of Quadrilaterals (Trapezium, Kite, Parallelogram) - Some special parallelograms (Rhombus, Rectangle, Square) - Constructing different types of Quadrilaterals - Views of 3D-Shapes - Identification of Edges, Vertices and Faces of 3D figures (Euler’s Rule) - Nets for building 3D shapes – Introduction to Euclid’s geometry – Euclid’s definitions, axioms and postulates - Angle Subtended by a Chord at a Point - Perpendicular from the Centre to a Chord - Equal Chords and Their Distances from the Centre - Angle Subtended by an Arc of a Circle - Cyclic Quadrilaterals – Tangents of a circle – Number of Tangent to a Circle from any point – Segment of a circle formed by a Secant.

4. Mensuration

Measuring Length, Weight, Capacity, Time-Seasons, Calendar, Money, Area - Symmetry (Line and Rotational) - Perimeter of Triangle, Square, Rectangle, Rhombus, Trapezium, Parallelogram, Circle and Polygon, Properties of a Parallelogram - The Mid-point Theorem - Area of a Quadrilateral, Surface Area and Volume of Cube, Cuboid and Cylinder -Volume and capacity - Surface Area and volume of a Sphere - Volume of a Right Circular Cone – Surface area of the combination of Solids – Volume of combination of solids – Conversion of solid from one shape to another

5. Algebra

Patterns - making rules - The idea of variables - formation of algebraic expressions - Terms, Factors and Coefficients - Linear equations in one variable – Linear equations in two variables - Solutions of Pair of Linear Equations in Two Variables – Algebraic methods of finding the solutions for a pair of linear equations -Equations reducible to a pair of linear equations in two variables -Solution of a quadratic equation by factorisation & by completing the square – Nature of roots - terms and types of algebraic expressions - finding the value of an expression - Addition, Subtraction and Multiplication of Algebraic Expressions - Multiplying a Monomial by a Monomial and polynomial - Multiplying a Polynomial by a Polynomial - Standard Identities and their applications - Applications of simple equations to practical situations - Exponents and Powers - Negative exponents - Laws of exponents - Expressing large numbers in the standard form - Factorisation - Division of Algebraic Expressions Continued (Polynomial ÷ Polynomial) - Linear Graphs – Polynomials in one variable – Degree, Value, zeroes of a polynomial - Geometrical meaning of the Zeroes of a Polynomial - Graphical representation of linear, Quadratic and Cubic Polynomials - Factorisation of Polynomials - Algebraic Identities - Working with Polynomials – Division algorithm for polynomials - Arithmetic progressions – Parameters of Arithmetic progressions – n^{th} term of an Arithmetic progression – Sum of first n terms in Arithmetic progression – Geometric progressions – n^{th} term of a GP.

Functions :

- Ordered pair- Cartesian product of sets – Relation - Function & its types - image & pre-image – Definitions.
- Inverse functions and Theorems.
- Domain, Range, Inverse of real valued functions.

Mathematical Induction

- Principle of Mathematical Induction & Theorems.
- Applications of Mathematical Induction.
- Problems on divisibility.

Matrices:

- Types of matrices
- Scalar multiple of a matrix and multiplication of matrices
- Transpose of a matrix
- Determinants
- Adjoint and Inverse of a matrix
- Consistency and inconsistency of Equations- Rank of a matrix
- Solution of simultaneous linear equations

Complex Numbers:

- Complex number as an ordered pair of real numbers- fundamental operations
- Representation of complex numbers in the form a+ib.
- Modulus and amplitude of complex numbers –Illustrations.
- Geometrical and Polar Representation of complex numbers in Argand plane- Argand diagram.

De Moivre's Theorem:

- De Moivre's theorem- Integral and Rational indices.
- n^{th} roots of unity- Geometrical Interpretations – Illustrations.

Quadratic Expressions:

- Quadratic expressions, equations in one variable
- Sign of quadratic expressions – Change in signs – Maximum and minimum values
- Quadratic in-equations

Theory of Equations:

- The relation between the roots and coefficients in an equation
- Solving the equations when two or more roots of it are connected by certain relation
- Equation with real coefficients, occurrence of complex roots in conjugate pairs and its consequences
- Transformation of equations – Reciprocal Equations.

Permutations and Combinations:

- Fundamental Principle of counting – linear and circular permutations
- Permutations of 'n' dissimilar things taken 'r' at a time
- Permutations when repetitions allowed
- Circular permutations

- Permutations with constraint repetitions.
- Combinations-definitions and certain theorems

Binomial Theorem:

- Binomial theorem for positive integral index
- Binomial theorem for rational Index (without proof).
- Approximations using Binomial theorem

Partial fractions:

- Partial fractions of f(x)/g(x) when g(x) contains non –repeated linear factors.
- Partial fractions of f(x)/g(x) when g(x) contains repeated and/or non-repeated linear factors.
- Partial fractions of f(x)/g(x) when g(x) contains irreducible factors.

6. Statistics

DATA HANDLING -Frequency Distribution Tables and Graphs- Grouped data-ungrouped data – Measures of Central Tendency -Mean, median & mode of grouped and ungrouped data – Ogive curves.

MEASURES OF DISPERSION

- Range
- Mean deviation
- Variance and standard deviation of ungrouped/grouped data.
- Coefficient of variation and analysis of frequency distribution with equal means but different variances.

7. Probability

Probability - Linking chances to probability - Chance and probability related to real life - Probability - a theoretical approach - Mutually exclusive events - Finding probability - Complementary events and probability - Impossible and certain events - Deck of Cards and Probability – Use and Applications of probability.

- Random experiments and events
- Classical definition of probability, Axiomatic approach and addition theorem of probability.
- Independent and dependent events conditional probability- multiplication theorem and Bayee's theorem.

Random Variables and Probability Distributions:

- Random Variables

- Theoretical discrete distributions – Binomial and Poisson Distributions

8. Coordinate Geometry

Cartesian System – Distance between two points – distance between two points on a line parallel to the co-ordinate axis – Distance between any two points on a line in the x-y plane – Section formula – centroid of a triangle – Tri-sectional points of a line – Area of the triangle – Heron's formula- Collinearity – Straight lines – Slope of the straight line – slope of a line joining two points.

Locus :

- Definition of locus – Illustrations.
- To find equations of locus - Problems connected to it.

Transformation of Axes :

- Transformation of axes - Rules, Derivations and Illustrations.
- Rotation of axes - Derivations – Illustrations.

The Straight Line :

- Revision of fundamental results.
- Straight line - Normal form – Illustrations.
- Straight line - Symmetric form.
- Straight line - Reduction into various forms.
- Intersection of two Straight Lines.
- Family of straight lines - Concurrent lines.
- Condition for Concurrent lines.
- Angle between two lines.
- Length of perpendicular from a point to a Line.
- Distance between two parallel lines.
- Concurrent lines - properties related to a triangle.

Pair of Straight lines:

- Equations of pair of lines passing through origin, angle between a pair of lines.
- Condition for perpendicular and coincident lines, bisectors of angles.
- Pair of bisectors of angles.
- Pair of lines - second degree general equation.
- Conditions for parallel lines - distance between them, Point of intersection of pair of lines.

- Homogenizing a second degree equation with a first degree equation in X and Y.

Circle :

- Equation of circle -standard form-centre and radius of a circle with a given line segment as diameter & equation of circle through three non collinear points - parametric equations of a circle.
- Position of a point in the plane of a circle – power of a point-definition of tangent-length of tangent
- Position of a straight line in the plane of circle-conditions for a line to be tangent – chord joining two points on a circle – equation of the tangent at a point on the circle-point of contact-equation of normal.
- Chord of contact - pole and polar-conjugate points and conjugate lines - equation of chord with given middle point.
- Relative position of two circles- circles touching each other externally, internally common tangents-centres of similitude- equation of pair of tangents from an external point.

System of circles:

- Angle between two intersecting circles.
- Radical axis of two circles- properties- Common chord and common tangent of two circles – radical centre.
- Intersection of a line and a Circle.

Parabola:

- Conic sections –Parabola- equation of parabola in standard form-different forms of parabola- parametric equations.
- Equations of tangent and normal at a point on the parabola (Cartesian and parametric) - conditions for straight line to be a tangent.

Ellipse:

- Equation of ellipse in standard form- Parametric equations.
- Equation of tangent and normal at a point on the ellipse (Cartesian and parametric) - condition for a straight line to be a tangent.

Hyperbola:

- Equation of hyperbola in standard form- Parametric equations.
- Equations of tangent and normal at a point on the hyperbola (Cartesian and parametric) - conditions for a straight line to be a tangent- Asymptotes.

Three Dimensional Coordinates :

- Coordinates.
- Section formulas - Centroid of a triangle and tetrahedron.

Direction Cosines and Direction Ratios :

- Direction Cosines.
- Direction Ratios.

Plane :

- Cartesian equation of Plane - Simple Illustrations.

9. Trigonometry

Trigonometry – Naming the sides in a Right triangle – Trigonometric Ratios – Defining Trigonometric Ratios – Trigonometric ratios of some specific and complementary angles – Trigonometric identities – Applications of Trigonometry – Drawing figures to solve problems – solutions for two triangles.

Trigonometric Ratios up to Transformations:

- Graphs and Periodicity of Trigonometric functions.
- Trigonometric ratios and Compound angles.
- Trigonometric ratios of multiple and sub- multiple angles.
- Transformations - Sum and Product rules.

Trigonometric Equations:

- General Solution of Trigonometric Equations.
- Simple Trigonometric Equations – Solutions.

Inverse Trigonometric Functions:

- To reduce a Trigonometric Function into a bijection.
- Graphs of Inverse Trigonometric Functions.
- Properties of Inverse Trigonometric Functions.

Hyperbolic Functions:

- Definition of Hyperbolic Function – Graphs.
- Definition of Inverse Hyperbolic Functions – Graphs.
- Addition formulas of Hyperbolic Functions.

Properties of Triangles:

- Relation between sides and angles of a Triangle
- Sine, Cosine, Tangent and Projection rules.
- Half angle formulae and areas of a triangle
- In-circle and Ex-circle of a Triangle.

10. Vector Algebra

Addition of Vectors:

- Vectors as a triad of real numbers.
- Classification of vectors.
- Addition of vectors.
- Scalar multiplication.
- Angle between two non-zero vectors.
- Linear combination of vectors.
- Component of a vector in three dimensions.
- Vector equations of line and plane including their Cartesian equivalent forms.

Product of Vectors:

- Scalar Product - Geometrical Interpretations - orthogonal projections.
- Properties of dot product.
- Expression of dot product in i, j, k system – Angle between two vectors.
- Geometrical Vector methods.
- Vector equations of plane in normal form.
- Angle between two planes.
- Vector product of two vectors and properties.
- Vector product in i, j, k system.
- Vector Areas.
- Scalar Triple Product.
- Vector equations of plane in different forms, skew lines, shortest distance and their Cartesian equivalents. Plane through the line of intersection of two planes, condition for coplanarity of two lines, perpendicular distance of a point from a plane, Angle between line and a plane. Cartesian equivalents of all these results
- Vector Triple Product – Results

11. Calculus

Limits and Continuity:

- Intervals and neighbourhoods.
- Limits.
- Standard Limits.
- Continuity.

Differentiation:

- Derivative of a function.
- Elementary Properties.

- Trigonometric, Inverse Trigonometric, Hyperbolic, Inverse Hyperbolic Function - Derivatives.
- Methods of Differentiation.
- Second Order Derivatives.

Applications of Derivatives:

- Errors and approximations.
- Geometrical Interpretation of a derivative.
- Equations of tangents and normal's.
- Lengths of tangent, normal, sub tangent and sub normal.
- Angles between two curves and condition for orthogonality of curves.
- Derivative as Rate of change.
- Rolle's Theorem and Lagrange's Mean value theorem without proofs and their geometrical interpretation.
- Increasing and decreasing functions.
- Maxima and Minima.

Integration:

- Integration as the inverse process of differentiation- Standard forms –properties of integrals.
- Method of substitution- integration of Algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions. Integration by parts.
- Integration- Partial fractions method.
- Reduction formulae.

Definite Integrals:

- Definite Integral as the limit of sum
- Interpretation of Definite Integral as an area.
- Fundamental theorem of Integral Calculus.
- Properties.
- Reduction formulae.
- Application of Definite integral to areas.

Differential equations:

- Formation of differential equation-Degree and order of an ordinary differential equation.
- Solving differential equation by

a) Variables separable method.

b) Homogeneous differential equation.

c) Non - Homogeneous differential equation.

d) Linear differential equations.

V. Methodology (20 Marks)

1. Meaning and Nature of Mathematics, History of Mathematics.
2. Contributions of Great Mathematicians - Aryabhatta, Bhaskaracharya, Srinivasa Ramanujan, Euclid, Pythagoras, George cantor.
3. Aims and Values of teaching Mathematics, Instructional objectives (Blooms taxonomy)
4. Mathematics curriculum: Principles, approaches of curriculum construction, - Logical and Psychological, Topical and Concentric, Spiral approaches. Qualities of a good Mathematics text book.
5. Methods of teaching mathematics- Heuristic method, Laboratory method, Inductive and Deductive methods, Analytic and Synthetic methods, Project method and Problem Solving method.
6. Unit Plan, Year Plan, Lesson Planning in Mathematics.
7. Instructional materials, Edgar Dale's Cone of Experience.
8. Evolving strategies for the gifted students and slow learners,
9. Techniques of teaching mathematics like Oral work, written work, Drilling, Assignment, Project, Speed and Accuracy.
10. Mathematics club, Mathematics structure, Mathematics order and pattern sequence.
11. Evaluation - Types, Tools and Techniques of Evaluation, Preparation of Standard Assessment Tools,Analysis, Characteristics of a good test.

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC - 2024
Category of Post: TGT
Paper II – Genaral Science Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**05M**
3.	**Classroom implications of Educational Psychology**	-	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge and Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization
   - Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National

Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.

- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Educational Policy-2020**

PART - III

III. Classroom implications Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. Content Science (40Marks) (Class VI to Intermediate level syllabus)

Physical Science (Marks: 20)

1. MEASUREMENT

Story of transport, Non- standard units of Measurements, Measuring the length of a Curved line, Measurement of length, area, volume and time. CGS and SI units of length, area, volume and time, Conversion of units from CGS to S.I and Vice versa.

2. MOTION

Describing Motion, Motion and Rest, Motion Along a Straight Line, Types of motion (Translatory, Rotatory and oscillatory), Scalars and vectors, Distance, Displacement, Speed, Velocity, Average speed, Average velocity, Acceleration, Graphical Representation of Motion, Distance-Time Graphs, Velocity-Time Graphs, Uniform

Motion and Non- Uniform Motion, Equations of Motion, Uniform Circular Motion, Laws of Motion, Balanced and Unbalance Forces, First Law of Motion, Inertia and Mass, Momentum, Second Law of Motion, Third law of motion.

3. FORCE, FRICTION AND PRESSURE

Force – A Push or a Pull, Exploring Forces, Effect of Force on Objects, Types of forces (field force and contact force), Net force, Types of friction (static, Sliding and Rolling), Factors effecting Friction, Friction: A Necessary Evil, Increasing and Reducing Friction, Fluid friction, Pressure, Pressure Exerted by Liquids and Gases, Pressure of liquids at different depths, Atmospheric Pressure.

4. GRAVITATION

Uniform circular motion, Universal law of gravitation, Free Fall, Acceleration due to Gravity, Motion of Objects Under the Influence of Gravitational Force of the Earth, Mass and Weight, Thrust and Pressure, Pressure in Fluids, Buoyancy, Floating and Sinking Objects, Archimedes' Principle.

5. WORK, ENERGY

Scientific Conception of Work, Work Done by a Constant Force, Energy, Forms of Energy, Kinetic Energy, Potential Energy, Mechanical Energy. Law of Conservation of Energy, Conversion of Energy from one form to another, Power and its units.

6. SOUND

Sound - a form of energy, Production of sound, Some musical instruments, Sound Needs a Medium for Propagation, Human ear, Hearing Impairment, Noise and Music, Propagation of Sound, Types of waves (longitudinal and transverse), Characteristics of sound waves (Wavelength, Frequency, Time period, Speed of the wave), Relation between frequency and time period, Pitch, Loudness and Quality, Intensity of Sound, Speed Of Sound in Different Media, Reflection of Sound, Echo, Reverberation, Uses of Multiple Reflection of Sound, Range of Hearing, Infrasonic and Ultrasonics, Applications of Ultrasound, Sound pollution.

7. HEAT

Heat and temperature, Transfer of Heat (Conduction, convection, radiation), Kinds of clothes we wear in summer and winter, Units of temperature (centigrade, Fahrenheit and Kelvin; Conversions), Expansion of liquids due to heat, Types of thermometers, Thermal equilibrium, Temperature and Kinetic energy, Specific Heat, Applications of Specific heat capacity, Principle of method of mixtures, Determination of Specific heat of a solid, Evaporation, Condensation, Humidity, Dew and Fog, Boiling, Latent heat of vapourisation, Melting, Latent heat of fusion, Freezing, Temperature- time graph.

8. LIGHT

Light, Transparent, Opaque and Translucent Objects, Shadows and Images, Rectilinear Propagation of Light, A Pinhole Camera, Regular and Diffused Reflection, Reflection of light by plane surfaces (laws of reflection, periscope, multiple images, kaleidoscope, Characteristics of image formed by plane mirrors), Spherical Mirrors and Images, Spectrum, Wave nature of light, Fermat principle, Sign convention, Refraction,

Refraction of Light at Plane Surfaces, Refractive index, Absolute refractive index, Relative refractive index, Snell's law, Critical angle, Total Internal Reflection, Applications of total internal reflection, Mirages, Optical fibres, Refraction Through a Glass Slab, Lateral shift, Vertical shift, Refraction of Light at Curved Surfaces, Lenses, Terminology used in the case of lenses -Focal length, Focus, Optic Centre, Principal axis, Radius of curvature, Centre of curvature, Focal plane, Behaviour of certain light rays when they are incident on a lens, Images formed by lenses for various distances of objects, UV method, Lens formula, Lens maker's formula, Human Eye, Least distance of distinct vision, Angle of vision, Myopia, Hypermetropia, Presbyopia, Care of the Eyes, Braille System, Visually Impaired Persons, Power of lens, Refractive index of a Prism, Dispersion of light through prism, Sunlight-Dispersion, Rainbow, Scattering of light.

9. ELECTRICITY

Simple Electric circuit and its components, Conductors, Insulators, Type of cells (Dry and liquid), Electric symbols and uses, Series and parallel connection of cells and bulbs, Heating effects of Electricity, Understanding of CFL, Fuse and MCBs, Chemical Effects Of Electric Current, Good/Poor Conducting Liquids, Electroplating, Magnetic Effects of Electric Current, Electromagnet, Electric bell, Electric current, Drude and Lorentz theory, Potential difference and EMF, Drift velocity and working of a cell, Ohm's law, Electric shock, Factors affecting the resistance, Series connection of resistors, Parallel Connection of resistors, Multi-meter, Kirchhoff's laws, Sign convention in a circuit, Electric power, Power consumption, Electric energy, Overload.

10. MAGNETISM AND ELECTROMAGNETISM

How Magnets were discovered, Magnetic and Non-Magnetic Materials, Types of Magnets, Poles of Magnet, Properties of Magnets, Storing magnets safely, Magnetic compass, Earth as a Magnet, Magnetic Induction, Oersted's experiment, Magnetic Field, Magnetic flux – Magnetic flux density, Magnetic field due to straight wire /circular coil/solenoid carrying current, Magnetic Force, Electric Motor, Electromagnetic induction, Faraday's Law, Lenz Law, Applications of Faraday's law of electromagnetic induction, Induced current, Induced EMF, Electric generator, DC and AC currents, rms values.

11. PRINCIPLES OF METALLURGY

Metallurgy, Occurrence of the metals in nature, Ores and Minerals, Extraction of metals, Activity series, Concentration or Dressing of the ore, Hand picking, Washing, Froth flotation, Magnetic Separation, Extraction of crude metal from the ore, Reduction of purified ore to the metal, Purification of the crude metal, Distillation, Poling, Liquation, Electrolytic refining, Corrosion, Prevention of corrosion, Thermite process, Smelting, Roasting, Calcination, Flux, Gangue, Blast furnace, Reverberatory furnace.

12. CARBON AND ITS COMPOUNDS

Allotropes of Carbon, Amorphous forms, Crystalline forms, Diamond, Graphite, Buckminsterfullerene, Nanotubes, Versatile nature of Carbon, Catenation, Tetravalency, Hydrocarbons, Saturated and unsaturated hydrocarbons, Homologous series, Isomerism, Functional groups, Nomenclature of Aliphatic Hydrocarbons,

IUPAC names, Chemical properties of carbon compounds- Combustion, Oxidation reactions, Addition reactions, Substitution reactions, Ethanol, Ethanoic acid, Esters, Esterification Reactions, Soaps – Saponification and Micelles, Cleansing action of soap, Detergents.

13. SOME NATURAL PHENOMENON

The Story of Lightning, charging by Rubbing, Electric charge and properties of electric charge, Types of charges and their interactions, Transfer of charge, lightning, lightning safety, lightning conductors, Earthquake, Tsunami, Causes and effects, Protective measures.

14. STARS AND SOLAR SYSTEM

The Moon, The Moon's Surface, Phases of Moon, Eclipses (Solar and lunar eclipses), The Stars, Movement of Stars (Constellation, pole star), Movement of the sun, Solar System, Planets and Some Other Members of the Solar System, Artificial Satellites.

15. CHANGES AROUND US

Slow/fast changes, Temporary/permanent changes, Natural/man made changes, Physical/ chemical changes, Rusting of iron, Crystallisation, Galvanization, Corrosion, Rancidity, Oxidation / reduction

16. MATTER

Objects Around Us, Properties of Materials, Physical Nature of Matter, Characteristics of Particles of Matter, States of matter, Properties of solids, liquids and gases, Change of state of Matter –effect of change of temperature and pressure, Evaporation, Factors Affecting Evaporation, Sublimation, Deposition, Boiling, Latent heat of vaporisation, Latent heat of fusion, Mixture, Types of Mixtures, Solutions., Properties of a Solution, Types of Solutions, Concentration of solution, Expressing Concentration of Solutions, Suspension, Properties of a Suspension, Colloidal Solution, Properties of a Colloid, Common examples of colloids, Mixtures, Methods of separation–handpicking, Threshing, Winnowing, Sedimentation, Decantation, Sieving, Filtration, Sublimation, Chromatography, Distillation and fractional distillation, Evaporation, Condensation, Use of more than one method of separation, Saturated and unsaturated solutions, Separation of immiscible liquids, Types of Pure Substances – Elements and Compounds.

17. ATOMS AND MOLECULES

Laws of Chemical Combination - Law of Conservation Of Mass, Law of Constant Proportions, Atom, Symbols of Atoms of Different Elements, Atomic Mass, Atomicity, Valency, Molecule, Molecules Of Elements, Molecules Of Compounds, Ion – Cation & Anion, Polyatomic ions, Names and symbols of ions, Formation of ions, Writing Chemical Formulae, Molecular Mass, Molar mass, Formula Unit Mass, Structure of The Atom, Subatomic particles, Charged Particles in Matter, Thomson's Model of an Atom, Rutherford's Model of an Atom, Bohr's Model of an Atom, Bohr-Sommerfeld model of an atom, Neutrons, Distribution of electrons into different Orbits, Atomic Number and Mass Number, Isotopes, Isobars, Atomic line spectra,

Planck's quantum theory, Quantum numbers, Shapes of orbitals, Electronic Configuration, Pauli Exclusion Principle, Aufbau principle, Hund's Rule.

18. CLASSIFICATION OF ELEMENTS-THE PERIODIC TABLE

Dobereiner's law of Triads, Newlands' law of Octaves, Mendeleev's Periodic Table, Modern Periodic Table, Periodic properties of the elements and their gradation in the modern periodic table.

19. CHEMICAL BONDING

Lewis dot structures, Covalency, Electronic theory of valence by Lewis and Kossel, Octet rule, Ionic and Covalent bonds, Ionic and Covalent compounds, Bond lengths and Bond energies of covalent bonds, Valence shell electron pair repulsion theory, Valence bond theory, Hybridisation.

20. METALS AND NON METALS

Physical Properties of Metals and Non-metals, Chemical Properties of Metals and Non-metals, Uses of Metals and Non-metals, Examples of metals and non-metals, Reactivity order of metals.

21. SYNTHETIC FIBRES AND PLASTICS

Natural and Synthetic fibres, Preparation and uses, Types of Synthetic Fibres, Characteristics of Synthetic Fibres, Plastics as Materials of Choice, Types of plastics, Plastics and environment, Biodegradable – Non biodegradable materials.

22. COAL AND PETROLEUM

Exhaustible and inexhaustible Resources, Fuels – Types, Coal, Story of Coal, Uses of Coal and Coal products, Refining of petroleum, Petrochemical products in various sectors, Various Constituents of Petroleum and their Uses, Formation of coal and petroleum, Natural Gas, Misuse of Energy resources and Consequences.

23. COMBUSTION FUELS AND FLAME

Combustion, Types of Combustion, Ignition temperature, Inflammable substances, Flame, Fuel Efficiency, Burning of Fuels Leads to Harmful Products, Fire control, Structure of flame – colors zones – Intensities.

24. AIR

Atmosphere, Components of air, Availability of oxygen to plants and animals, Replacement of Oxygen in the Atmosphere.

25. ACIDS, BASES AND SALTS

Natural acid-base indicators, Synthetic acid-base Indicators, Olfactory indicators, Universal Indicator, Chemical properties of Acids and Bases, Reaction of Acids and bases with Metals, Reaction of Acids with carbonates and metal hydrogen Carbonates, Neutralization reaction, Reaction of Acids with metal oxides, Reaction of base with non-metal oxide, Production of H^+ ions and OH- ions, Electrical conductivity of Acids and Bases, Properties of Bases, Dilution, Strength of acid or base, pH scale,

Importance of pH in everyday life, Self defense by animals and plants through chemical warfare, Family of salts, pH of Salts, Chemicals from common salt, Important product from chlor-alkali process and their uses, Water of crystallization, Common salt, Bleaching Powder, Baking soda, Washing soda, Plaster of paris, Gypsum, and their uses.

Intermediate:

PHYSICS

- Physical World
- Units and Measurements
- Motion in a Straight Line
- Motion in a Plane
- Laws of Motion
- Work, Energy and Power
- System of Particles and Rotational Motion
- Oscillations
- Gravitation
- Mechanical Properties of Solids
- Mechanical Properties of Fluids
- Thermal Properties of Matter
- Thermodynamics
- Kinetic Theory
- Waves
- Ray Optics and Optical Instruments
- Wave Optics
- Electric Charges and Fields
- Electrostatic Potential and Capacitance
- Current Electricity
- Moving Charges and Magnetism
- Magnetism and Matter
- Electromagnetic Induction
- Alternating Current
- Electromagnetic Waves
- Dual Nature Of Radiation And Matter
- Atoms

CHEMISTRY

- Atomic Structure
- Classification of Elements & Periodicity in Properties
- Chemical Bonding & Molecular Structure

- States of Matter: Gases and Liquids
- Stoichiometry
- Thermodynamics
- Chemical Equilibrium & Acids-Bases
- Hydrogen & it's compounds
- s-Block elements (Alkali & Alkaline Earth Metals)
- p-Block Elements Group 13 (Boron family)
- p-Block Elements Group 14 (Carbon family)
- Environmental Chemistry
- Organic Chemistry-Some Basic Principles & Techniques & Hydrocarbons
- Solid State
- Solutions
- Electrochemistry & Chemical Kinetics
- Surface Chemistry
- General Principles of Metalillurgy
- p-Block elements (Group-15,16,17,18 Elements)
- d & f Block Elements & Coordination Compoounds
- Polymers
- Biomolecules
- Chemistry in Everyday life
- Halo Alkanes & Haloarenes
- Organic Compounds containing C, H & O (Alcohols, Phenols, Ethers, Aldehydes, Ketones & Carboxylic acids)
- Organic Compounds Containing Nitrogen

Biology Content (Marks: 20)

1. **Life Process:** Our food, Components of food, Balanced diet, Malnutrition, Deficiency diseases, Plants – Types, Plant parts – functions, Types of nutrition, Nutrition in plants – Autotrophic, Parasitic, saprophytic, Insectivorous; Nutrition in animals - Different ways of taking food, Digestion in humans, Digestion in grass eating animals, feeding and digestion in amoeba; Cellular respiration, Types of respiration, Respiration in plants, Respiration in animals, Respiration versus combustion, Photosynthesis versus Respiration, Circulatory system - Human Circulatory system, Evolution of the transport system in animals, Transportation in plants; Excretion - Excretion in Human Beings, Excretion in other organisms, Excretion and release of substances in plants, Excretion Vs Secretion; Coordination in animals- Nervous and Endocrine systems, Control mechanism in plants – Plant hormones, tropic and nastic movements, Modes of reproduction – sexual, asexual and vegetative; Sexual reproduction in plants, Seed dispersal, Sexual and Asexual Reproduction in Animals, Metamorphosis, Reproduction in a placental mammal – Man, Reproductive health, Birth control methods, Fighting against social ills, Adolescence and puberty – changes, role of hormones, Reproductive phase, Variations, Mendel's experiments on inheritance, Sex determination in human beings, Evolution – Lamarckism, Darwinism, Evidences of evolution, Human evolution
2. **Living World:** Living and Nonliving things, Characteristics of living organisms, Different types of habitat and adaptation, Skeletal parts – Bones, Joints, Cartilage; muscles, Movements in animals, Cell – The basic unit of life, Types of cells, Cell structure and function, Cell division, Animal Tissues, Plant tissues, Introduction to

microorganisms, Useful Microorganisms, Harmful microorganism, Food preservation, Agricultural Practices, Improvement in crop yields, Storage of food, Food from Animals - Animal Husbandry

3. **Our Environment – Ecology:** Our Environment - Food chain, Food web, Ecological pyramids, Effects of human activities on ecosystems, Steps towards prevention; Natural resources - Renewable and non-renewable resources, conservation; Bio diversity - Forests, Flora, fauna, interrelation of organisms, Advantages of forests, Deforestation - effects, Conservation of forest and wildlife – Protecting areas, endangered and endemic species; Air & water pollutions -Cusses, effects and prevention, Water, Sewage, Treatment of polluted water, Better housekeeping practices, Sanitation and Disease, Alternative arrangement for sewage disposal; Global Environmental Issues - Green house effect, Global warming, Acid rains; Nitrogen cycle.

Intermediate:

BOTANY

- Diversity in the Living World:
- The living world – Biological – Classification – Science of plants – Botany – Plant King dom
- Structural Organisation in Plants - Morphology,
- Representation in Plants
- Plants Systematics,
- Cell: Structure and Functions,
- Internal Organizations of Plants
- Plant Ecology
- Plant Physiology
- Microbiology
- Genetics
- Molecular Biology
- Biotechnology
- Plants
- Microbes and Human Welfare.

ZOOLOGY

- Diversity of Living World
- Structural organization in Animals
- Animal Diversity-I
- Animal Diversity-II (Phylum: Chordata)

- Locomotion & Reproduction in Protozoa
- Biology in Human Welfare
- Type study of Periplaneta Americana
- Ecology & Environment.
- Human Anatomy and Physiology- I
- Human Anatomy and Physiology- II
- Human Anatomy and Physiology- III
- Human Anatomy and Physiology- IV
- Human Reproduction
- Generics
- Organic Evolution
- Applied Biology

V. Methodology (Marks: 20)

1. The Nature of Science: Nature and scope of science, Science, ideology and Society, Structure of Science (a) Substantive structure - Empirical knowledge, Theoretical Knowledge - (Facts, Concepts, hypothesis, theory, Principle Law), (b)Syntactic Structure of Science - Scientific inquiry, Processes of Science, Attitudes of inquiry
2. The History and Development of Science: A brief introduction to oriental and western science, Contribution of the following Scientists in the Development of Science: Aryabhatta, Bhaskara Charya, Aristotle, Copernicus, Newton, Einstein, C.V.Raman, Various organizations working for the development of science in India
3. Aims and Values of teaching Sciences: Aims of teaching Sciences, Values of teaching Science, Correlation of Science with other subjects
4. Objectives of teaching Sciences: Meaning and importance of objectives, Bloom's Taxonomy of Educational objectives, Specific / Behavioral objectives / (Instructional objectives), Critique on Bloom's Taxonomy
5. Approaches and Methods of teaching Sciences: Inductive and Deductive Approaches, Micro Teaching, Team Teaching, Lecture Method, Lecture cum Demonstration Method, Historical Method, Heuristic Method, Project Method, Laboratory method, Problem Solving Method, Scientific Method, Multimedia Approach in Teaching Learning process, Programmed Learning, CAI and CAL
6. Planning for effective instruction in Science: Year Plan, Unit Plan, Lesson Plan, Learning experience, characteristics, classification, source and relevance.
7. Teaching Learning Material (TLM): Characteristics and Importance of TLM, Classification and Types of TLM, Hardware and Software in TLM, TLM-Principles to be followed, Edgar Dale's cone of learning experience.
8. Science laboratories: Importance of Practical work in science, Planning of Science laboratories, Procurement, care and maintenance of laboratory equipment, Registers, Management of safety and science kits, Development of improvised Apparatus.

9. Physical Science Curriculum: Principles of Curriculum Construction, Defects in the existing school science curriculum, Qualities of a good Science Text Book.
10. Non-formal Science Education: Science Clubs, Science Fairs - purposes, levels, organization, advantages, Science Library, Role of NGOs and State in popularizing Science
11. Evaluation: Concept and Process of Evaluation, Tools of Evaluation, Preparation of Scholastic Achievement Test (SAT), Analysis and interpretation of Scores.

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC – 2024

Category of Post: TGT

Paper II – Physical Science Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**05M**
3.	**Classroom implications of Educational Psychology**	-	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - I

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization

- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - B

IV. Content (Marks: 40) (Class VI To Intermediate level syllabus)

(6 – 10 Classes)

1. MEASUREMENT

Story of transport, Non- standard units of Measurements, Measuring the length of a Curved line, Measurement of length, area, volume and time. CGS and SI units of length, area, volume and time, Conversion of units from CGS to S.I and Vice versa.

2. MOTION

Describing Motion, Motion and Rest, Motion Along a Straight Line, Types of motion (Translatory, Rotatory and oscillatory), Scalars and vectors, Distance, Displacement, Speed, Velocity, Average speed, Average velocity, Acceleration, Graphical Representation of Motion, Distance-Time Graphs, Velocity-Time Graphs, Uniform Motion and Non-Uniform Motion, Equations of Motion, Uniform Circular Motion, Laws of Motion,

Balanced and Unbalance Forces, First Law of Motion, Inertia and Mass, Momentum, Second Law of Motion, Third law of motion.

3. FORCE, FRICTION AND PRESSURE

Force – A Push or a Pull, Exploring Forces, Effect of Force on Objects, Types of forces (field force and contact force), Net force, Types of friction (static, Sliding and Rolling), Factors effecting Friction, Friction: A Necessary Evil, Increasing and Reducing Friction, Fluid friction, Pressure, Pressure Exerted by Liquids and Gases, Pressure of liquids at different depths, Atmospheric Pressure.

4. GRAVITATION

Uniform circular motion, Universal law of gravitation, Free Fall, Acceleration due to Gravity, Motion of Objects Under the Influence of Gravitational Force of the Earth, Mass and Weight, Thrust and Pressure, Pressure in Fluids, Buoyancy, Floating and Sinking Objects, Archimedes' Principle.

5. WORK, ENERGY

Scientific Conception of Work, Work Done by a Constant Force, Energy, Forms of Energy, Kinetic Energy, Potential Energy, Mechanical Energy. Law of Conservation of Energy, Conversion of Energy from one form to another, Power and its units.

6. SOUND

Sound - a form of energy, Production of sound, Some musical instruments, Sound Needs a Medium for Propagation, Human ear, Hearing Impairment, Noise and Music, Propagation of Sound, Types of waves (longitudinal and transverse), Characteristics of sound waves (Wavelength, Frequency, Time period, Speed of the wave), Relation between frequency and time period, Pitch, Loudness and Quality, Intensity of Sound, Speed Of Sound in Different Media, Reflection of Sound, Echo, Reverberation, Uses of Multiple Reflection of Sound, Range of Hearing, Infrasonic and Ultrasonics, Applications of Ultrasound, Sound pollution.

7. HEAT

Heat and temperature, Transfer of Heat (Conduction, convection, radiation), Kinds of clothes we wear in summer and winter, Units of temperature (centigrade, Fahrenheit and Kelvin; Conversions), Expansion of liquids due to heat, Types of thermometers, Thermal equilibrium, Temperature and Kinetic energy, Specific Heat, Applications of Specific heat capacity, Principle of method of mixtures, Determination of Specific heat of a solid, Evaporation, Condensation, Humidity, Dew and Fog, Boiling, Latent heat of vapourisation, Melting, Latent heat of fusion, Freezing, Temperature- time graph.

8. LIGHT

Light, Transparent, Opaque and Translucent Objects, Shadows and Images, Rectilinear Propagation of Light, A Pinhole Camera, Regular and Diffused Reflection, Reflection of light by plane surfaces (laws of reflection, periscope, multiple images, kaleidoscope, Characteristics of image formed by plane mirrors), Spherical Mirrors and Images, Spectrum, Wave nature of light, Fermat principle, Sign convention, Refraction, Refraction of Light at Plane Surfaces, Refractive index, Absolute refractive index, Relative refractive

index, Snell's law, Critical angle, Total Internal Reflection, Applications of total internal reflection, Mirages, Optical fibres, Refraction Through a Glass Slab, Lateral shift, Vertical shift, Refraction of Light at Curved Surfaces, Lenses, Terminology used in the case of lenses -Focal length, Focus, Optic Centre, Principal axis, Radius of curvature, Centre of curvature, Focal plane, Behaviour of certain light rays when they are incident on a lens, Images formed by lenses for various distances of objects, UV method, Lens formula, Lens maker's formula, Human Eye, Least distance of distinct vision, Angle of vision, Myopia, Hypermetropia, Presbyopia, Care of the Eyes, Braille System, Visually Impaired Persons, Power of lens, Refractive index of a Prism, Dispersion of light through prism, Sunlight-Dispersion, Rainbow, Scattering of light.

9. ELECTRICITY

Simple Electric circuit and its components, Conductors, Insulators, Type of cells (Dry and liquid), Electric symbols and uses, Series and parallel connection of cells and bulbs, Heating effects of Electricity, Understanding of CFL, Fuse and MCBs, Chemical Effects Of Electric Current, Good/Poor Conducting Liquids, Electroplating, Magnetic Effects of Electric Current, Electromagnet, Electric bell, Electric current, Drude and Lorentz theory, Potential difference and EMF, Drift velocity and working of a cell, Ohm's law, Electric shock, Factors affecting the resistance, Series connection of resistors, Parallel Connection of resistors, Multi-meter, Kirchhoff's laws, Sign convention in a circuit, Electric power, Power consumption, Electric energy, Overload.

10. MAGNETISM AND ELECTROMAGNETISM

How Magnets were discovered, Magnetic and Non-Magnetic Materials, Types of Magnets, Poles of Magnet, Properties of Magnets, Storing magnets safely, Magnetic compass, Earth as a Magnet, Magnetic Induction, Oersted's experiment, Magnetic Field, Magnetic flux – Magnetic flux density, Magnetic field due to straight wire /circular coil/solenoid carrying current, Magnetic Force, Electric Motor, Electromagnetic induction, Faraday's Law, Lenz Law, Applications of Faraday's law of electromagnetic induction, Induced current, Induced EMF, Electric generator, DC and AC currents, rms values.

11. PRINCIPLES OF METALLURGY

Metallurgy, Occurrence of the metals in nature, Ores and Minerals, Extraction of metals, Activity series, Concentration or Dressing of the ore, Hand picking, Washing, Froth flotation, Magnetic Separation, Extraction of crude metal from the ore, Reduction of purified ore to the metal, Purification of the crude metal, Distillation, Poling, Liquation, Electrolytic refining, Corrosion, Prevention of corrosion, Thermite process, Smelting, Roasting, Calcination, Flux, Gangue, Blast furnace, Reverberatory furnace.

12. CARBON AND ITS COMPOUNDS

Allotropes of Carbon, Amorphous forms, Crystalline forms, Diamond, Graphite, Buckminsterfullerene, Nanotubes, Versatile nature of Carbon, Catenation, Tetravalency, Hydrocarbons, Saturated and unsaturated hydrocarbons, Homologous series, Isomerism, Functional groups, Nomenclature of Aliphatic Hydrocarbons, IUPAC names, Chemical properties of carbon compounds- Combustion, Oxidation reactions, Addition reactions, Substitution reactions, Ethanol, Ethanoic acid, Esters, Esterification Reactions, Soaps – Saponification and Micelles, Cleansing action of soap, Detergents.

13. SOME NATURAL PHENOMENON

The Story of Lightning, charging by Rubbing, Electric charge and properties of electric charge, Types of charges and their interactions, Transfer of charge, lightning, lightning safety, lightning conductors, Earthquake, Tsunami, Causes and effects, Protective measures.

14. STARS AND SOLAR SYSTEM

The Moon, The Moon's Surface, Phases of Moon, Eclipses (Solar and lunar eclipses), The Stars, Movement of Stars (Constellation, pole star), Movement of the sun, Solar System, Planets and Some Other Members of the Solar System, Artificial Satellites.

15. CHANGES AROUND US

Slow/fast changes, Temporary/permanent changes, Natural/man made changes, Physical/ chemical changes, Rusting of iron, Crystallisation, Galvanization, Corrosion, Rancidity, Oxidation / reduction

16. MATTER

Objects Around Us, Properties of Materials, Physical Nature of Matter, Characteristics of Particles of Matter, States of matter, Properties of solids, liquids and gases, Change of state of Matter –effect of change of temperature and pressure, Evaporation, Factors Affecting Evaporation, Sublimation, Deposition, Boiling, Latent heat of vaporisation, Latent heat of fusion, Mixture, Types of Mixtures, Solutions., Properties of a Solution, Types of Solutions, Concentration of solution, Expressing Concentration of Solutions, Suspension, Properties of a Suspension, Colloidal Solution, Properties of a Colloid, Common examples of colloids, Mixtures, Methods of separation–handpicking, Threshing, Winnowing, Sedimentation, Decantation, Sieving, Filtration, Sublimation, Chromatography, Distillation and fractional distillation, Evaporation, Condensation, Use of more than one method of separation, Saturated and unsaturated solutions, Separation of immiscible liquids, Types of Pure Substances – Elements and Compounds.

17. ATOMS AND MOLECULES

Laws of Chemical Combination - Law of Conservation Of Mass, Law of Constant Proportions, Atom, Symbols of Atoms of Different Elements, Atomic Mass, Atomicity, Valency, Molecule, Molecules Of Elements, Molecules Of Compounds, Ion – Cation & Anion, Polyatomic ions, Names and symbols of ions, Formation of ions, Writing Chemical Formulae, Molecular Mass, Molar mass, Formula Unit Mass, Structure of The Atom, Subatomic particles, Charged Particles in Matter, Thomson's Model of an Atom, Rutherford's Model of an Atom, Bohr's Model of an Atom, Bohr-Sommerfeld model of an atom, Neutrons, Distribution of electrons into different Orbits, Atomic Number and Mass Number, Isotopes, Isobars, Atomic line spectra, Planck's quantum theory, Quantum numbers, Shapes of orbitals, Electronic Configuration, Pauli Exclusion Principle, Aufbau principle, Hund's Rule.

18. CLASSIFICATION OF ELEMENTS-THE PERIODIC TABLE

Dobereiner's law of Triads, Newlands' law of Octaves, Mendeleev's Periodic Table, Modern Periodic Table, Periodic properties of the elements and their gradation in the modern periodic table.

19. CHEMICAL BONDING

Lewis dot structures, Covalency, Electronic theory of valence by Lewis and Kossel, Octet rule, Ionic and Covalent bonds, Ionic and Covalent compounds, Bond lengths and Bond energies of covalent bonds, Valence shell electron pair repulsion theory, Valence bond theory, Hybridisation.

20. METALS AND NON METALS

Physical Properties of Metals and Non-metals, Chemical Properties of Metals and Non-metals, Uses of Metals and Non-metals, Examples of metals and non-metals, Reactivity order of metals.

21. SYNTHETIC FIBRES AND PLASTICS

Natural and Synthetic fibres, Preparation and uses, Types of Synthetic Fibres, Characteristics of Synthetic Fibres, Plastics as Materials of Choice, Types of plastics, Plastics and environment, Biodegradable – Non biodegradable materials.

22. COAL AND PETROLEUM

Exhaustible and inexhaustible Resources, Fuels – Types, Coal, Story of Coal, Uses of Coal and Coal products, Refining of petroleum, Petrochemical products in various sectors, Various Constituents of Petroleum and their Uses, Formation of coal and petroleum, Natural Gas, Misuse of Energy resources and Consequences.

23. COMBUSTION FUELS AND FLAME

Combustion, Types of Combustion, Ignition temperature, Inflammable substances, Flame, Fuel Efficiency, Burning of Fuels Leads to Harmful Products, Fire control, Structure of flame – colors zones – Intensities.

24. AIR

Atmosphere, Components of air, Availability of oxygen to plants and animals, Replacement of Oxygen in the Atmosphere.

25. ACIDS, BASES AND SALTS

Natural acid-base indicators, Synthetic acid-base Indicators, Olfactory indicators, Universal Indicator, Chemical properties of Acids and Bases, Reaction of Acids and bases with Metals, Reaction of Acids with carbonates and metal hydrogen Carbonates, Neutralization reaction, Reaction of Acids with metal oxides, Reaction of base with non-metal oxide, Production of H^+ions and OH- ions, Electrical conductivity of Acids and Bases, Properties of Bases, Dilution, Strength of acid or base, pH scale, Importance of pH in everyday life, Self defense by animals and plants through chemical warfare, Family of salts, pH of Salts, Chemicals from common salt, Important product from chlor-alkali process and their uses, Water of crystallization, Common salt, Bleaching Powder, Baking soda, Washing soda, Plaster of paris, Gypsum, and their uses.

Intermediate:

PHYSICS

- Physical World
- Units and Measurements
- Motion in a Straight Line
- Motion in a Plane

- Laws of Motion
- Work, Energy and Power
- System of Particles and Rotational Motion
- Oscillations
- Gravitation
- Mechanical Properties of Solids
- Mechanical Properties of Fluids
- Thermal Properties of Matter
- Thermodynamics
- Kinetic Theory
- Waves
- Ray Optics and Optical Instruments
- Wave Optics
- Electric Charges and Fields
- Electrostatic Potential and Capacitance
- Current Electricity
- Moving Charges and Magnetism
- Magnetism and Matter
- Electromagnetic Induction
- Alternating Current
- Electromagnetic Waves
- Dual Nature Of Radiation And Matter
- Atoms

CHEMISTRY

- Atomic Structure
- Classification of Elements & Periodicity in Properties
- Chemical Bonding & Molecular Structure
- States of Matter: Gases and Liquids
- Stoichiometry
- Thermodynamics
- Chemical Equilibrium & Acids-Bases
- Hydrogen & it's compounds
- s-Block elements (Alkali & Alkaline Earth Metals)
- p-Block Elements Group 13 (Boron family)
- p-Block Elements Group 14 (Carbon family)
- Environmental Chemistry
- Organic Chemistry-Some Basic Principles & Techniques & Hydrocarbons
- Solid State
- Solutions
- Electrochemistry & Chemical Kinetics
- Surface Chemistry
- General Principles of Metalillurgy
- p-Block elements (Group-15,16,17,18 Elements)
- d & f Block Elements & Coordination Compoounds
- Polymers

- Biomolecules
- Chemistry in Everyday life
- Halo Alkanes & Haloarenes
- Organic Compounds containing C, H & O (Alcohols, Phenols, Ethers, Aldehydes, Ketones & Carboxylic acids)
- Organic Compounds Containing Nitrogen

V. Methodology (Marks: 20)

1. The Nature of Science: Nature and scope of science, Science, ideology and Society, Structure of Science (a) Substantive structure - Empirical knowledge, Theoretical Knowledge - (Facts, Concepts, hypothesis, theory, Principle Law), (b)Syntactic Structure of Science - Scientific inquiry, Processes of Science, Attitudes of inquiry
2. The History and Development of Science: A brief introduction to oriental and western science, Contribution of the following Scientists in the Development of Science: Aryabhatta, BhaskaraCharya, Aristotle, Copernicus, Newton, Einstein, C.V.Raman, Various organizations working for the development of science in India
3. Aims and Values of teaching Physical Sciences: Aims of teaching Physical Sciences, Values of teaching Physical Science, Correlation of Physics and Chemistry with other subjects
4. Objectives of teaching Physical Sciences: Meaning and importance of objectives, Bloom's Taxonomy of Educational objectives, Specific / Behavioral objectives / (Instructional objectives), Critique on Bloom's Taxonomy
5. Approaches and Methods of teaching Physical Sciences: Inductive and Deductive Approaches, Micro Teaching, Team Teaching, Lecture Method, Lecture cum Demonstration Method, Historical Method, Heuristic Method, Project Method, Laboratory method, Problem Solving Method, Scientific Method, Multimedia Approach in Teaching Learning process, Programmed Learning, CAI and CAL
6. Planning for effective instruction in Science: Year Plan, Unit Plan, Lesson Plan, Learning experience, characteristics, classification, source and relevance.
7. Teaching Learning Material (TLM): Characteristics and Importance of TLM, Classification and Types of TLM, Hardware and Software in TLM, TLM-Principles to be followed, Edgar Dale's cone of learning experience.
8. Science laboratories: Importance of Practical work in science, Planning of Science laboratories, Procurement, care and maintenance of laboratory equipment, Registers, Management of safety and science kits, Development of improvised Apparatus.
9. Physical Science Curriculum: Principles of Curriculum Construction, Defects in the existing school science curriculum, Qualities of a good Science Text Book.
10. Non-formal Science Education: Science Clubs, Science Fairs - purposes, levels, organization, advantages, Science Library, Role of NGOs and State in popularizing Science
11. Evaluation: Concept and Process of Evaluation, Tools of Evaluation, Preparation of Scholastic Achievement Test (SAT), Analysis and interpretation of Scores.

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Paper II – Biological Science Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**05M**
3.	**Classroom implications of Educational Psychology**	-	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization

- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. Content (Marks: 40) (Class VI To Intermediate level syllabus)

6 – 10 Classes:

1. **Life Process:** Our food, Components of food, Balanced diet, Malnutrition, Deficiency diseases, Plants – Types, Plant parts – functions, Types of nutrition, Nutrition in plants – Autotrophic, Parasitic, saprophytic, Insectivorous; Nutrition in animals - Different ways of taking food, Digestion in humans, Digestion in grass eating animals, feeding and digestion in amoeba; Cellular respiration, Types of respiration, Respiration in plants, Respiration in animals, Respiration versus combustion, Photosynthesis versus Respiration, Circulatory system - Human Circulatory system, Evolution of the transport system in animals, Transportation in plants; Excretion - Excretion in Human Beings, Excretion in other organisms, Excretion and release of substances in plants, Excretion

Vs Secretion; Coordination in animals- Nervous and Endocrine systems, Control mechanism in plants – Plant hormones, tropic and nastic movements, Modes of reproduction – sexual, asexual and vegetative; Sexual reproduction in plants, Seed dispersal, Sexual and Asexual Reproduction in Animals, Metamorphosis, Reproduction in a placental mammal – Man, Reproductive health, Birth control methods, Fighting against social ills, Adolescence and puberty – changes, role of hormones, Reproductive phase, Variations, Mendel's experiments on inheritance, Sex determination in human beings, Evolution – Lamarckism, Darwinism, Evidences of evolution, Human evolution

2. **Living World:** Living and Nonliving things, Characteristics of living organisms, Different types of habitat and adaptation, Skeletal parts – Bones, Joints, Cartilage; muscles, Movements in animals, Cell – The basic unit of life, Types of cells, Cell structure and function, Cell division, Animal Tissues, Plant tissues, Introduction to microorganisms, Useful Microorganisms, Harmful microorganism, Food preservation, Agricultural Practices, Improvement in crop yields, Storage of food, Food from Animals - Animal Husbandry
3. **Our Environment – Ecology:** Our Environment - Food chain, Food web, Ecological pyramids, Effects of human activities on ecosystems, Steps towards prevention; Natural resources - Renewable and non-renewable resources, conservation; Bio diversity - Forests, Flora, fauna, interrelation of organisms, Advantages of forests, Deforestation - effects, Conservation of forest and wildlife – Protecting areas, endangered and endemic species; Air & water pollutions -Cusses, effects and prevention, Water, Sewage, Treatment of polluted water, Better housekeeping practices, Sanitation and Disease, Alternative arrangement for sewage disposal; Global Environmental Issues - Green house effect, Global warming, Acid rains; Nitrogen cycle.

Intermediate:

BOTANY

- Diversity in the Living World:
- The living world – Biological – Classification – Science of plants – Botany – Plant King dom
- Structural Organisation in Plants - Morphology,
- Representation in Plants
- Plants Systematics,
- Cell: Structure and Functions,
- Internal Organizations of Plants
- Plant Ecology
- Plant Physiology
- Microbiology
- Genetics

- Molecular Biology
- Biotechnology
- Plants
- Microbes and Human Welfare.

ZOOLOGY

- Diversity of Living World
- Structural organization in Animals
- Animal Diversity-I
- Animal Diversity-II (Phylum: Chordata)
- Locomotion & Reproduction in Protozoa
- Biology in Human Welfare
- Type study of Periplaneta Americana
- Ecology & Environment.
- Human Anatomy and Physiology- I
- Human Anatomy and Physiology- II
- Human Anatomy and Physiology- III
- Human Anatomy and Physiology- IV
- Human Reproduction
- Generics
- Organic Evolution
- Applied Biology

V. Teaching Methodology (Marks: 20)

1. The Nature & Scope of Science: A brief introduction of Oriental and Western Science, Nature of Science, Scope of Science, Substantive and Syntactic Structure of Science.
2. Aims and Values of Teaching Biological Sciences: Aims of teaching Biological Sciences, Values of teaching Biological Sciences.
3. Objectives of Teaching Biological Sciences: Importance of Objectives of Teaching Biological Sciences, Bloom's Taxonomy of Educational Objectives and limitations, Writing Instructional Objectives and Specifications.
4. Academic Standards in Biological Science.
5. Approaches and Methods of Teaching Biological Sciences: Inductive Approach and Deductive Approach, Methods of Teaching 1. Lecture Method, 2. Lecture cum Demonstration Method, 3. Heuristic Method, 4. Project Method, 5. Experimental Method, 6. Laboratory Method.

6. Planning for effective Instruction: Year Plan, Unit Plan, Lesson Plan - Herbartian and Bloom's Approach, Criteria for Evaluation of Lesson Plan. Self Evaluation and Peer Evaluation, Learning experiences - Characteristics, Classification, Sources and Relevance, Teaching - Learning Material and Resources in Biological Sciences.
7. Science Laboratories: Importance of Practical work in Biological Sciences, Planning Science Laboratory, Procurement, Care and Maintenance of Laboratory Equipment, Maintenance of different Registers, Safety and First aid, Development of Improvised Apparatus
8. Science Curriculum: Principles of Curriculum Construction, Defects in the existing School Science Curriculum, Correlation of Biological Sciences with other School Subjects, Qualities of a good Biological Science Text-book.
9. Biological Science Teacher: Qualities of a good Biological Sciences Teacher, Roles and Responsibilities
10. Non-formal Science Education: Science club, Eco-club, Blue-club, Red ribbon club, Science fairs - Objectives, levels of organizations, importance, Science Laboratories, Role of NGOS and State in popularizing science.
11. Evaluation: Concept and process of Measurement and Evaluation, Continuous Comprehensive Evaluation, Tools of Evaluation, Preparation of Scholastic Achievement Test(SAT), Analysis and interpretation of scores.

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Paper II – SOCIAL STUDIES Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**05M**
3.	**Classroom implications of Educational Psychology**	-	**05M**
4.	**Content**	-	**40M**
5.	**Methodology**	-	**20M**
	Total	-	**80 M**

PART - I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 05)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education

- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
    - Right of Children to Free and Compulsory Education Act - 2009
    - Right to Information Act - 2005
    - Child Rights
    - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Classroom implications of Educational Psychology – 05Marks

1. **Individual differences:** Inter and intra individual differences, meaning, nature and theories of intelligence with special emphasis to multiple intelligence, IQ, assessment of intelligence, EQ, Creativity. Attitude, Aptitude, Interest, Habit and its Influence on Intelligence – Class room implementation.
2. **Learning:** Theories and approaches of learning, learning curves, Factors, Phases, Dimensions of learning, Types of learning, Transfer of learning. Memory, Forgetting, Learning and assessment– Class room implementation.
3. **Personality:** Nature, characteristics and theories of personality, factors of Personality, Assessment of Personality, Mental health, Adjustment, Stress – nature, Symptoms and management. Emotional intelligence, Management of emotions – Class room implementation.

PART - IV

IV. Content: (40 Marks) (Class VI to Intermediate level syllabus)
Classes VI – X Syllabus

Theme - I: Diversity on the Earth

Universe- origin, Galaxy, Celestial bodies, Constellations, The Solar System, Our Earth ; Globe, Axis, Latitudes, Longitudes, Movements of the Earth, Equinox, Eclipses, Components of the Environment, Maps- Types, Components, Conventional Symbols, uses; Forests - Climatic regions, Types of forests, Uses, Forests in AP, Deforestation, Social Forestry and

Conservation; Landforms - Major Landforms of AP, Podu Cultivation, Diversity in Lifestyles; Resources-Types, Conservation; Land, Soil, Water, Natural Vegetation and Wildlife Resources, Landslides, Factors of Soil formation, Degradation of soil and conservation measures, Water problems of water availability; India Size and Location, India's Neighbours, India Relief Features-Major Relief Divisions, Climate of India-Monsoon, Climogrphs, Climatic Controls, Drainage-The Himalayan Rivers and Peninsular rivers and river pollution, Indian Rivers and Water Resources.

Theme - II: Production Exchange and Livelihoods

Markets around us-Types of Markets, Consumer Protection; Road Safety-Traffic Signs, Road marking signs-using methods, Road safety measures, pedestrian safety, safe cycling, safety travelling; Mineral and Power Resources- Types of Minerals, Distribution, Conservation, Power Resources -Conventional, Non-Conventional; Agriculture- Types of farming, major crops; Industries-Classification, Distribution ; Human Resources-Population Density, Population size and distribution, Population Change Population growth, National population policy; Population composition; Weavers, Iron Smelters and Factory Owners- Indian Textiles and the World Market, The Sword of Tippu Sultan and Woods Steel; Public Facilities-Water as part of the Fundamental Right to life, Govt. role, The story of village Palampur, Ideas of Development-HDI, Production and Employment-GDP, organised, Unorganised Sectors, The People-Census, Changing Population Size, People as a Resource-Economic activities by men and women Quality of population, Unemployment, Poverty as a Challenge-Poverty line, Global poverty Scenario, anti-poverty measures, People and Settlement-Urbanisation, People and Migration-Rural, Urban and Seasonal, Temporary, International migrations, Rampur: A Village Economy, Globalisation-MNC,WTO, Food Security-Food Security in India, Access to Food, Nutritional status, MSP, PDS; Role of Cooperatives in Food Security, Sustainable Development with Equity.

Theme -III: Political Systems and Governance

Early life to Settled life - Belum Caves, Rock Paintings; Emergence of Kingdoms and Republics-Janapadas, Mahajanapadas; kingdoms and Empires- Mauryan, Gupta, Satavahana, Pallava, Chalukya; Delhi Sultanate; Kakatiya Kingdom, Vijayanagara Empire, Mughal Empire,How When and Where,From Trade to Territory- The company establishes Power - East India Company, The Battle of Plassey, Tipu sultan, The Doctrine of Lapse; Ruling the Countryside - The company becomes the Diwan, The need to improve Agriculture, Munro System, Crops for Europe, Why the demand for indian Indigo?, The Blue Rebellion and After; Tribals, Dikus and the Vision of a Golden Age-How did Tribal groups live?, How did colonial rule affect tribal lives?; Forest Loss and their Impact, Birsa Munda; When people rebel 1857 and after-Policies and the people, Through the Eyes of the people, A Mutiny becomes a popular Rebellion, The Company fights back; Civilizing the "Native" Educating the nation-How the British saw Education, The agenda for a National education of British; The making of the National Movement-1870's - 1947,The Emergence of Nationalism, The growth of mass Nationalists, Dandi March, Quit India and Later; India after Independence-A new and Divided Nation, A Constitution is written, How were States to be formed, Planning

for development, A Nation sixty years on; The French Revolution, Socialism in Europe and the Russian Revolution, Nazism and the rise of the Hilter, Forest society and Colonialism, Pastoralists in the Modern World, The World Between Wars Part-1,2, National Liberation Movement in the Colonies-China, Vietnam, Nigeria, National Movement in India and Partition and Independence:1939-1947, Independent India[The First 30 years-1947-77],Emerging Political Trends 1977-2000,Post-War World and India-UNO, Cold War, Military Alliances, India and its Neighbours.

Theme -IV: Social Organisation and Inequities

Towards Equality- Diversity, discrimination, Types, Constitutional Provisions; Women Change the World- Women's movement, Inspirational Women; Women, Caste and Reform-Working towards Change-Changing the lives of widows, Girls begin to going to School, Women write about Women, Caste and Social Reform-Gulamgiri who could enter, The Non Brahman movement; Indian Constitution - Introduction, Key features, Fundamental Rights and Duties ;Government- Types, Levels, Local self-Government, State Government-Legislative, Executive, Judiciary; Working of Institutions, Understanding Secularism; Why do we need Parliament, The role of the Parliament, Houses of Parliament, Who are the people in parliament?; Understanding Laws-How do new laws come out?, Unpopular and Controversial Laws, Judiciary-Independent Judiciary, Structure of Courts in India, Different Branches of the Legal System, Understanding Our Criminal Justice System-Role of the police, Public prosecutor, Judge, What is a Trial Crime?; Understanding Marginalisation-Who are Adivasis?, Adivasis and development, Minorities and Marginalisation; Confronting Marginalisation-Invoking Fundamental Rights, Laws for the Marginalised, Protecting the Rights of Dalits and Adivasis, Adivasi demands and 1989 Act; Law and Social Justice-Bhopal Gas tragedy, Enforcement of safety Laws, New Laws to protect the Environment, What is Democracy? why Democracy?, Constitutional Design-Democratic Constitution in South Africa, Struggle against Apartheid, Electoral politics, Democratic Rights, The Making of Independent India's Constitution, Social Movements in Our Times, Citizens and the Governments-RTI, Legal Service Authority.

Theme - V: Religion and Society

Religions-Hinduism, Jainism, Buddhism, Islam, Sikhism, Unity in Diversity; Bhakti Movement - Sufi Movement;

Theme -VI: Culture and Communication

Early Civilisations-Indus, Vedic period, Vedic Literature, Indian Culture, Languages.

Intermediate Syllabus:

Geography:

General Geography-Definition and scope of Geography – Branches of Geography-Geography as an integrating Discipline and as Spacial Science with physical, biological and social sciences.

Solar System-Origin and Evolution of solar system-Rotation and Revolution of the Earth and their effects-Latitudes and Longitudes-Standard Time and International Date line.
The Earth - Interior of the Earth-Wegner's theory of continental drift -Major Rock types and their characteristics.
Geomorphology -Major landforms: Mountains, Plateaus and Plains-Geomorphic Process: Weathering - Physical and Chemical Weathering-Landforms associated with wind and river – Erosional and depositional.
Climatology -Climate: Elements of weather and climate-Atmosphere: Composition and structure of atmosphere -Insolation: Insolation and Heat Budget of the Planet Earth-Temperature: Factors influencing Temperature, Vertical and horizontal distribution of temperature Pressure- Global pressure belts WindsPlanetary winds, Seasonal and Local winds-Precipitation: Forms and types of rain fall (Convectional, Orographic and Cyclonic rain fall).
Bio geography -Biomes of the world- Equatorial, Tropical and Temperate zones -Biodiversity and Conservation -Concept of Ecosystem and Ecological Balance- Oceanography, Hydrology and Natural hazards
Oceanography-Divisions of the Ocean floor- Continental shelf, Continental slope, Deep Sea plains and Ocean deeps-Ocean Temperatures- Vertical and horizontal distribution-Ocean Salinity Definition, vertical and horizontal distribution-Oceanic Movements: Waves, Tides and Currents, (Currents of Atlantic, Pacific and Indian Ocean)
Hydrology-Elements of Hydrological cycle: Precipitation, evaporation, evaporation-transpiration, run off, infiltration and recharge -Hydrological Cycle.
Natural Hazards-Causes and Spatial distribution of floods, droughts, cyclones, Tsunamis, Earthquakes and landslidesGlobal Warming and its consequences-Disaster Management in India-Human Geography : Definition, Content and scope- Man and Environment: Definition, Content, Classification of environment-Environmental impact World Population : Growth, Factors influencing, density and distribution
Human activities - Primary, Secondary and tertiary activities-Resources - Definition, Classification and Conservation-Agriculture -Definition, Types, food crops (Rice and wheat) Nonfood crops (Cotton, Sugarcane) and Plantation crops-(Rubber, tea and coffee) their Significance, Conditions - for cultivation, production and distribution.
Definition and Classification (Metallic - Iron), nonMetallic – bauxite and (fuel minerals - coal andpetroleum) Industries - Location factors, types of industries -Agro – based (Cotton textiles) Forest based (Paper mills) -Mineral based (Iron and steel) - Chemical based (Fertilizers)- Transportation -Road ways, Railways, Water ways and Air ways - Rail ways-Intensive net work rail way, Regional rail-ways and Trans continental railways - Water ways-Major sea ports: London, San Francisco-Reo De Janeiro, Cape Town, Kolkata and Sydney-Major Air ports- Tokyo, Paris, Chicago, Bogota and -Wellington
Physical features of India - Major features - Northern mountains, Indo – Gangetic-plains, Peninsular plateau of India and coastal plains- Major rivers of India - Perennial rivers- Indus, Ganges and Brahmaputra-Non Perennial rivers- Narmada, Tapati, Mahanadi, -Godavari, Krishna, Pennar and Cauvery - Climate of India - Cold weather season: Temperature Rainfall &Pressure distribution Hot weather season- Temperature, Rainfall &Pressure distribution South west monsoon season- Temperature, Rainfall &Pressure distributionNorth east monsoon season: Temperature, Rainfall &Pressure distribution-Natural vegetation of India-Types of vegetation based on rainfall and their-distribution. Evergreen forest, deciduous forest, scrub -forest,& Thorny forest -Soils - Definition, factors for formation, types and -their distribution.
Population- Growth trends from 1901 to 2001, Distribution based-on density, problems of high population- Irrigation-Types of irrigation: canals, wells and tanks. Major -multipurpose

projects. Bakranangal, Hirakud, -Damodarvalley corporation and Nagarjuna Sagar-Agriculture: Cropped area, production and distribution of -selected crops: Rice, Wheat, Millets, Coffee, Tea,Sugarcane, Cotton, Jute and tobacco; Problems ofIndian agriculture.
Minerals- Production and distribution of coal, petroleum, iron,mica and manganese, bauxite. Industries- Location factors growth and distribution of iron andsteel, cotton textile and ship building industries- Transportation-Means of Transport – Road ways, Rail ways, Water -ways and Air ways; Major ports of India – Mumbai, -Cochin, Kandla, Kolkata, Visakhapatnam and Chennai.
Geography of Andhra Pradesh: Location, Physiography and Climate, Population.

History:

What is History: Definition - Scope – Sources – Historiography – Relationship with other Social Sciences – Impact of Geography on history - Relevance of History.
Ancient Civilizations and Culture : Pre Harappan Cultures - Harappan Civilization – Script, town planning, society, economy and culture - Vedic age and Post Vedic Culture.
Early States, Empires and Economy: Early States – 16 Mahajanapadas - Rise of Magadha – Economy and Agriculture – urbanization.
Early Societies, and religious movements: Early Societies – Social differences – Religious movements – Jainism – Buddhism and other sects Ajjivikas and Lokayats.
Polity, Economy, Society and Culture between 3rd to 7th Century A.D. :Mauryas - Kushanas – Guptas – Pushyabhuties – Origin of feudalism – Polity, Society, Economy and Culture.
Deccan and South India up to 8th A.D: Sangam age – Satavahanas – Pallavas – Chalukyas – Rastrakutas – Cholas – Polity, Society, Economy and culture.
Age of Delhi Sultanate: Sources/Travellers Accounts - Arab Invasions – Turkish invasions – Delhi Sultanate – Polity, Economy, Society and Culture.
Age of Mughals: Chronicles/Sources – Mughal rule – Babur, Humayun, Shershah, Akbar, Jahangir, ShahJahan and Aurangazeb - Polity, Economy, Society and culture - Disintegration - Maratas, Sikhs.
Bhakti and Sufi Traditions 8 A.D. 16 Century A.D: Prevailing Religious Traditions and beliefs in the Society – Bhakti Saints and their Preachings – Sufism – Main features and their impact.
Deccan and South India 8th A.D – 16 the A.D : Sources - Kakatiyas – Vijyanagara – Bahamanis – Qutbshahis and Asafjahis – a brief survey.
India under the Colonial Rule : Sources - Portuguese – Dutch – French – English East India Company – Era of Governor Generals and their Polices – Reforms of Viceroys – 1857 Mutiny.
Indian National Movement: Background to National Movement, Socio-religious movement – rise of Nationalism – Vandemataram movement – Home rule movement – Emergence of Mahatma Gandhi and leadership – Revolutionary movement, Subhash Chandra Bose – Poona Pact Quit India movement – Partition of India – Emergence of Independent India.
The Modern World- Beginning of Modern Age, Renaissance, Development in Science, The Reformation Movement, Rise of Nation States, Struggle against Absolute Monarchies - Capitalism and Industrial Revolution -The Revolutionary Movements -The Glorious Revolution, The American war of Independence, The French Revolution of 1789 - .Nationalist Movements: Rise and fall of Napoleon, French Revolution of 1830 and the 1848 Revolt, Unification of Germany and Italy, Socialist Movements – Rise of Working class, Paris Commune of 1871
Imperialism: Factors in the rise of Imperialism, Forms and Methods of Imperialism, Scramble for Africa and Asia

Contemporary World: The First World war, League of Nations, The Russian Revolution of 1905 and 1917 -The World upto World War II: Rise of Fascism and Nazism, Militarism in Japan, U.S.A. and U.S.S.R. after World War I, Turkey after World War I, Failure of League of Nations, Spanish Civil war, World war II, The Nationalist Movements in Asia and Africa, Emergence of Latin America

The World after World War II: Formation of Military Blocks, Role of independent Nations of Asia and Africa in the World Affairs, Non-Alignment Movement, Role of UNO in preserving World Peace, Problems of Disarmament and Nuclear Weapons, Prominent Personalities of the World.

Civics:

Scope and Significance of political Science - Introduction to Civics and Political Science, Origin and Evolution, Meaning, Definitions, What do we study? Why do we study?

State - State – Meaning, Definitions, Elements, Relation of state with other Institutions – Society, Association, Government.

Nationalism - Nation, Nationality, Nationalism, Factors contributing for Nationality, Is India a Nation? Meaning, Forms (Traditional and modern)

law -Meaning, Definitions, Classification, Law and morality, Rule of Law. Liberty and Equality – Meaning, Definitions, Types, Safeguards, Liberty – Equality.

Rights and Responsibilities– Meaning, Definitions, functions Forms, Relationship between Rights and Responsibilities, Human Rights

Justice - Justice – Meaning, Forms of Justice, Social Justice.

Citizenship - Meaning, Definitions, Methods of Acquiring, Citizen – Alien , Loss of Citizenship, Hindrances to Good Citizenship, Universal Citizenship

Democracy- Meaning, Definitions, features, types, merits, devices, future

Secularism -Meaning, Secular State, Western Model, Indian Model, Why India was made a Secular State? Criticism of Indian Secularism

Constitution– Meaning, Definitions, features, Classification

Government - Unitary, Federal, Parliamentary, Presidential, Theory of Separation of Powers, Organs of Government

Indian Constitution: Indian National Movement- Government of India Acts – 1909, 1919 & 1935-

Salient features of Indian Constitution

Fundamental Rights &Directive Principles of State Policy- Fundamental Rights- Directive Principles of state Policy- Fundamental Duties

Union Government- Union Executive – President of India - Vice – President of India - Prime Minister & Council of Ministers

Indian Parliament - LokSabha-Composition – Powers and functions- Rajya Sabha: Composition – Powers and functions

Parliamentary Committees- Public Accounts Committee – Estimates -Committee – Committee on Public Undertakings

Union Judiciary - Supreme Court of India – Composition- Powers and Functions of Supreme Court -of India - Judicial Review

State Government- State Executive – Governor- Powers and Functions-Chief Minister - Powers and Functions- Council of Ministers

State Legislature-Legislative Assembly- Composition – Powers and Functions- Legislative Council-Composition – Powers and Functions - Legislative Committees: Public Accounts Committee – Estimates-Committee and Ethics Committee

State Judiciary-High Court – Composition- Powers and Functions of High Court- District Courts: Composition – Powers and Functions.

Union – State Relations - Legislative Relations-Administrative Relations- Financial Relations
Local Government-Rural Local Government - Panchayati Raj Institutions – 73rd Constitution Amendment Act- Urban Local Government: Municipalities - Municipal Corporation – 74th Constitution Amendment Act- District Collector : Role in Local Governments
India's Foreign Policy - Determinants of Foreign Policy- Basic features of India's Foreign Policy-
South Asian Association for Regional Cooperation (SAARC)
United Nation Organization (UNO)-Origin of UNO-Principal Organs of UNO- Achievements and failures of UNO
Contemporary Trends and Issues- Globalization- Terrorism-Corruption.

Economics:

Origin and meaning of Economics - Definitions of Economics; Adam Smith, Alfred Marshall, Lionel Robbins, Paul Samuelson, &Jocob Viner- Concept of Economics – Micro & Macro Economics Deductive and Inductive Method, Static and Dynamic Analysis, Positive and Normative Economics. Goods: (Free, Economic, Consumer, Producer, and Intermediary), Wealth, Income, Utility, Value, Price, wants and welfare.

Theory of Consumption - Cardinal and Ordinal Utility, the law of Diminishing Marginal Utility – Limitations – Importance; law of Equi-Marginal Utility Limitations and – Importance of the Law, Indifference Curve Analysis – Properties and Consumer's Equilibrium.

Theory of Demand - Meaning – Demand Function – Determinants of Demand, Demand Schedule – Demand Curve, Law of Demand, Exceptions to Law of Demand - Causes for the downward slope of the demand curve, Types of Demand – Price Demand, Income Demand, and Cross Demand- Elasticity of Demand – Meaning and Types – Price Elasticity, and Income Elasticity and Cross Elasticity – Price Elasticity-Types; Measurement of Price Elasticity of Demand- Point Method. Arc Method, Total Outlay Method. Determinants of Elasticity of Demand; Importance of Elasticity of Demand.

Theory of Production - Meaning - Production Function – Factors of Production; Short-run and Long-run Production Function; Law of variable proportions - Law of returns to scale; Economies of Scale - Internal and External- Supply – Supply Function - Determinants of Supply — Law of Supply- Cost Analysis – Basic Concepts of Costs- (Money, Real, Opportunity, Fixed and Variable, Total, Average and Marginal costs)- Revenue Analysis – Revenue under perfect and imperfect competition.

Theory of Value - Meaning and Classification of Markets – Perfect competition – features – price determination- Short-run and Long-run equilibrium of a firm and Industry- Imperfect Competition – Monopoly – Price Determination – Price-Discrimination-Monopolistic Competition- Features- Meaning of Oligopoly – Duopoly.

Theory of Distribution - Determination of Factor Prices – Marginal Productivity Theory - Rent – Ricardian theory of Rent – Modern theory - Quasi Rent – Transfer earnings - Wages – Meaning and types of wages – Money and Real wages - Interest- Meaning – Gross and Net interests - Profits – Meaning – Gross and Net profits.

National Income : Definitions of National Income and Concepts- Measurement of National Income – Census of Product Method – Census of Income Method – Census of Expenditure Method- Methods of Measuring National Income in India; Problems and importance

Macro Economic Aspects - Classical theory of Employment –J.B. Say Law of Markets-Limitations – J.M. Keynes Effective Demand- Public Economics - Public Revenue – Public Expenditure – Public debt – Components of Budget.

Money, Banking and Inflation - Money – Definitions and Functions of money – Types of Money - Banking – Commercial Banks – Functions; Central Bank – Functions – Reserve Bank of India – Net Banking- Inflation – Definitions – Types – Causes and Effects of inflation – Remedial Measures.

Statistics for Economics - Meaning, Scope and Importance of Statistics in Economics with Diagrams (Bar diagrams and Pie diagrams)-Measures of central tendency – Mean, Median, Mode.

Economic Growth And Development - Differences Between Economic Growth and Development classification of the world countries - Indicators of Economic development - Determinants of Economic Development - Characteristic features of Developed Countries - Characteristic features of Developing countries with special reference to India

Population and Human Resources Development - Theory of Demographic Transition - World Population - Causes of rapid Growth of population in India - Occupational distribution of population of India - Meaning of Human Resources Development - Role of Education and Health in Economic Development- Human Development Index (HDI)

National Income - Trends in the growth of India's National Income - Trends in distribution of national income by industry Origin - Share of Public Sector and Private Sector in Gross Domestic Product - Share of Organised and Un-organised Sector in Net Domestic Product - Income Inequalities - Causes of Income Inequalities - Measures to control income inequalities -Unemployment in India – Poverty - Micro Finace-Eradication of Poverty

Agriculture Sector-Importance of agriculture in India - Features of Indian agriculture - Agriculture Labour in India - Land utilization pattern in India - Cropping pattern in India - Organic Farming -Irrigation facilities in India - Productivity of agriculture - Land holdings in India - Land reforms in India - Green Revolution in India - Rural credit in India - Rural Indebtedness in India - Agricultural

Marketing - Industrial Sector - Significance of the Indian Industrial Sector in Post –Reform Period -Industrial Policy Resolution 1948 - Industrial Policy Resolution 1956 - Industrial Policy Resolution 1991 - National Manufacturing Policy- Disinvestment - National Investment Fund (NIF) -Foreign Direct Investment -Special Economic Zones (SEZs) - Causes of industrial backwardness in India -Small Scale Enterprises (MSMEs) - Industrial Estates - Industrial Finance in India - The Industrial Development under the Five Year Plans in India.

Tertiary Sector - Importance of Services Sector -India's Services Sector - State-Wise Comparison of Services - Infrastructure Development - Tourism - Banking and Insurance - Communication -Science and Technology - Software Industry in India

Planning And Economic Reforms - Meaning of Planning -NITI Ayog -Five Year Plans in India - XII Five Year Plan - Regional Imbalances - Role of Trade in Economic Development - Economic Reforms in India - GATT – WTO

Environment and Sustainable Economic Development - Environment - Economic Development -Environment and Economic Linkages. - Harmony between Environment & Economy

Economy Of Andhra Pradesh - History of Andhra Pradesh - Characteristic features of A.P. Economy -Demographic features - Occupational distribution of labour - Health Sector - Education -Environment - Agricultural sector - Industrial sector - Service and Infrastructure sector - Information and Technology - Tourism -Andhra Pradesh and Welfare Programmes/ Schemes

Economic Statistics - Measures of Dispersion - Definitions of Dispersion - Importance of Measuring Variation -Properties of a good measure of variation -Methods of Studying Variation - Measures of Dispersion for average - Lorenz Curve - Correlation -Index Numbers - Weighted Aggregation Method.

V. Methodology (Marks: 20)

1. **Aims and objectives of learning Social Sciences**

   - values through Social Sciences - learning objectives and illustrations - learning objectives in constructivist approach - Academic Standards

2. **School curriculum and resources in Social Sciences**

   - NCF-2005, RTE-2009, SCF-2011 - syllabus – Learning Resources.

3. **Social Sciences as on integrating area of study: Context and concerns**

   - Distinguishing between Natural and Social Sciences - Social Studies and various Social Sciences -contributions of some eminent Social Scientists

4. **Approaches and strategies for learning Social Sciences**

   - Teaching methods- collaborative learning approach - 5E learning model - problem solving approach -concept mapping– planning: Lesson plan, Year Plan- Teaching Learning Material .

5. **Community Resources and Social Sciences Laboratory**

6. **Tools and techniques of assessment for learning: Social Sciences**

7. Understanding concept of Evaluation - CCE - assessment framework - assessment learning of students with specialneed

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024

Category of Post: PGT
ENGLISH Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.

- Adolescence Education
- Value Education – Moral Value and Professional Ethics in Education.
- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**

- Right of Children to Free and Compulsory Education Act - 2009
- Right to Information Act - 2005
- Child Rights
- Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. Development of Child

- Development, Growth & Maturation - Concept & Nature
- Principles of development and their education implication
- Factors influencing Development - Biological, Psychological, Sociological,
  emotional.
- Dimensions of Development and their interrelationships - Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
- Understanding Development - Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
- Individual differences - Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.

- Development of Personality - Concept, Factors effecting development of personality, self-concept.
- Adjustment, Behavioural problems, Mental Health, Defense mechanism.
- Methods and Approaches of Child Development - Introspection, Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal
- Developmental tasks and Hazards

2. Understanding Learning

- Concept, Nature of Learning - input - process - outcome
- Factors of Learning - Personal and Environmental
- Approaches to Learning and their applicability-Behaviorism (Skinner, Pavlov, Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)
- Dimensions of Learning - Cognitive, Affective and Performance.
- Motivation and Sustenance -its role in learning.
- Memory & Forgetting
- Transfer of Learning

3. Pedagogical Concerns

- Teaching and its relationship with learning and learner.
- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts-Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods - Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups - Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity - Elements of Planning
- Phases of Teaching - Pre active, Interactive and Post active

- General and Subject related skills, competencies required in teaching and attributes of good facilitator.
- Learning resources - Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non-threatening learning environment, Managing behaviour problems, Guidance & Counselling, Punishment and its legal implications, Rights of a child, Time Management.
- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation: Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. **Reading Comprehension of an unseen prose text**
2. **Language and Communication**
   - Parts of Speech
   - Articles-Determiners
   - Conjunctions (Linkers/Connectors/ Cohesive devices).
   - Prepositions
   - Adverbs –Types and their order in sentenses.
   - Tense and Time
   - Adjectives including Degrees of Comparison
   - Modals
   - Word Order in Sentences
   - Clauses
   - Types of Sentences
   - Voice
   - Direct and Indirect Speech
   - Non-finites (Infinitives, Gerunds and Participles)
   - Complex and Compound Sentences
   - Phrasal Verbs/Idioms/Prepositional Phrases
   - Punctuation Marks
   - Phonetics -Sounds, Stress and Intonation, Minimal Pairs, Minimal Contrastive Pairs
   - Composition- Letter writing, Message writing, Notice writing, Report writing, Article writing, Paragraph writing and Precis

writing

3. Literature

A. Detailed study of English Literature from 1798 to 1900 with special reference to Wordsworth, S.T.Coleridge, John Keats , Shelley, Lord Byron, Charles Lamb, Charles Dickens, William Hazlitt, Alfred Lord Tennyson, Robert Browning, Mathew Arnold, George Eliot, Thomas Carlyle and John Ruskin.

B. Reading Comprehension of a literary Prose and Poem.

C. Poetry

Name of the Poet	Title
William Shakespeare	Let Me Not To The Marriage of True Minds(A sonnet)
John Milton	On Time On Shakespeare
William Wordsworth	The Solitary Reaper Education of Nature A Slumber Did My Spirit Seal The World Is Too Much With Us
William Blake	A Poison Tree The Divine Image The School Boy
John Keats	On The Grasshopper and The Cricket Ode to The Nightingale Ode to Autumn
John Donne	A Literature Upon the Shadow The Sunne Rising
W.B.Yeats	The Wild Swans of Coole Byzantium The Second Coming
S.T.Coleridge	The Rime of The Ancient Mariner
P.B.Shelly	The Cloud
Robert Frost	The Road Not Taken Dust of Snow Stopping By Woods on a Snowy Evening
Rabindranath Tagore	The Last Bargain Where The Mind is Without Fear From Lover's Gift
Sarojini Naidu	The Bangle Sellers

D. Prose (Essay/Short Story/Novel)

Name of the Essayist/Writer/Novelist	Title
Francis Bacon	Of Studies
Charles Lamb	Dream Children-A Reverie
Oscar Wilde	The Nightingale and The Rose
Stephen Leacock	How to Live to be 200 The Conjuror's Revenge
E.V.Lucas	The face on the Wall
O'Henry	After Twenty Years
Isaac Asimov	Robots and People
A.G.Gardiner	On Shaking Hands
R.K. Laxman	The Gold Frame
Ruskin Bond	How Far is the River
George Orwell	Animal Farm (Original version)
R.K.Narayan	Next Sunday The Guide
Jane Austen	Pride and Prejudice
Jawahar Lal Nehru	Chapter III (The Quest) of Discovery of India

E. Drama

Name of the Writer	Title
William Shakespeare	The Tempest Macbeth Julius Caesar Hamlet
Oscar Wilde	The Importance of Being Earnest
Fritz Karinthy	The Refund
Mahaswetha Devi	Mother of 1084

Note: The candidates are expected to have a thorough knowledge of the above mentioned poets, essayists, novelists and dramatists and their respective works mentioned at the level that is expected of a student of literature.

F. Literary Criticism

Mathew Arnold: The Study of Poetry
T. S. Eliot: Function of Criticism

V. Teaching Methodology (Marks: 20)

1. Aspects of English language- History, Nature and Importance of English.
2. Problems and Principles of Teaching English.
3. Objectives of Teaching English.
4. Approaches, Methods and Techniques of Teaching English.

5. Developing Language Skills-Listening, Speaking, Reading and Writing.
6. Teaching – Learning Material – development, preparation and use (including use of ICT).
7. Developing Study and Reference Skills.
8. Remedial Teaching.
9. Evaluation in teaching / learning process.
10. Planning - Lesson planning.
11. Curriculum and Textbooks- Development and Use.

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TELUGU Syllabus

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   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
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- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. Development Of Child

- Development, Growth & Maturation — Concept & Nature
- Principles of development and their education implication
- Factors influencing Development — Biological, Psychological, Sociological,
  emotional.
- Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
- Understanding Development — Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
- Individual differences — Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.
- Development of Personality — Concept, Factors effecting development of personality, self concept.
- Adjustment, Behavioural problems, Mental Health, Defense mechanism.
- Methods and Approaches of Child Development — Introspection, Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal
- Developmental tasks and Hazards

2. Understanding Learning

- Concept, Nature of Learning — input — process — outcome
- Factors of Learning — Personal and Environmental
- Approaches to Learning and their applicability—Behaviorism (Skinner, Pavlov, Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)
- Dimensions of Learning — Cognitive, Affective and Performance.
- Motivation and Sustenance —its role in learning.
- Memory & Forgetting
- Transfer of Learning

3. Pedagogical Concerns

- Teaching and its relationship with learning and learner.
- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts—Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods — Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups — Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
- Phases of Teaching — Pre active, Interactive and Post active
- General and Subject related skills, competencies required in teaching and attributes of good facilitator.
- Learning resources — Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal implications, Rights of a child, Time Management.
- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. తెలుగు భాషా పరిణామ చరిత్ర

   తెలుగు - ఇతర ద్రావిడ భాషలు.

   తెలుగుపై అన్యభాషల ప్రభావం

2. గ్రాంథిక వ్యావహారిక భాషావాదాలు - వివిధ భాషారూపాలు (శాసన, గ్రాంథిక, వ్యావహారిక, ఆధునిక ప్రామాణిక, ప్రసార మాధ్యమాల భాష)

3. ఎ) ప్రాచీన కవులు - కావ్యాలు

   ఇతిహాసం, పురాణం, ప్రబంధం, యక్షగానాలు, సంకీర్తనలు, చాటుపద్యాలు

   గద్యకావ్యాలు, ద్విపద కావ్యాలు

   బి) ఆధునిక కవులు - కావ్యాలు

   ఆధునిక కవిత్వ నిర్వచనం - లక్షణాలు, ఆధునిక కవితాధోరణులు. (భావ, అభ్యుదయ, విప్లవ, దిగంబర కవిత్వం మొదలగునవి)

4. శతక ప్రక్రియ - శతక సాహిత్య వికాసం - వివిధ శతకాలు, శతక కర్తలు

5. జానపదసాహిత్యం - వివిధ ప్రక్రియలు - జానపద విజ్ఞానం - వివిధ శాఖలు - జానపదసాహిత్యం - భాషావిశేషాలు - కళాకారులు

6. తెలుగు సాహిత్య ప్రక్రియలు (గద్యం)

   నవల, కథ, కథానిక, నాటకం/ నాటిక/ ఏకాంకిక, వ్యాసం, లేఖ, సంపాదకీయం, ఆత్మకథ, జీవితచరిత్ర, యాత్రాచరిత్ర, దినచర్య, విమర్శ, పీఠిక, గల్పిక

7. వివిధ రాజులు - సాహిత్యపోషణ - సాంస్కృతిక వికాసం

   శాతవాహనులు, పల్లవులు, విజయనగర రాజులు, నాయకరాజులు, రెడ్డిరాజులు, కాకతీయులు, గోల్కొండ నవాబులు.

8. సాహిత్య విమర్శ

   కవి, కావ్యం - నిర్వచనాలు, ప్రయోజనాలు, శైలి, రసం, అలంకారాలు

9. భాషాంశాలు

   వర్ణం, పదాంశం, పదం, వాక్యాంశం, వాక్యం, వాక్య భేదాలు, వాక్య భాగాలు, నిర్మాణం, క్రియలు - భేదాలు, ధ్వని పరిణామం, అర్థవిపరిణామం, వ్యాకరణ పరిభాష, పర్యాయపదాలు, నానార్థాలు, వ్యుత్పత్త్యర్థాలు, జాతీయాలు, సంధులు, సమాసాలు, ఛందస్సు

10. అనువాదం (ఆంగ్లం నుండి తెలుగు).

V. Teaching Methodology (Marks: 20)

1. భాష – వివిధ భావనలు, మాతృభాష – లక్ష్యాలు–స్పష్టీకరణలు, మాతృభాష ఉపాధ్యాయుడు.
2. భాషా నైపుణ్యాలు
3. ప్రణాళిక పతన – పాఠ్యగ్రంథాలు
4. విద్యాసాంకేతిక శాస్త్రం, సహపాఠ్య కార్యక్రమాలు
5. సాహిత్య ప్రక్రియలు, బోధన పద్ధతులు
6. మూల్యాంకనం – పరీక్షలు

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024

Category of Post: PGT
HINDI Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
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   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
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   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
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- Human Rights.

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6. **National Education Policy-2020**

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1. Development Of Child

- Development, Growth & Maturation — Concept & Nature
- Principles of development and their education implication
- Factors influencing Development — Biological, Psychological, Sociological, emotional.
- Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
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- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. हिंदी साहित्य का इतिहासः काल विभाजन - विभिन्न विद्वानों के विचार आदिकाल, भक्ति काल, रीति काल और आधुनिक काल
2. आधुनिक साहित्यः विभिन्न प्रवृत्तियाँ और प्रमुखवाद (छायावाद, प्रगतिवाद,प्रयोगवाद, रहस्यवाद आदि) साहित्यक विधाएँ (कविता, कहानी, उपन्यास, नाटक आदि)
3. हिंदी भाषा का इतिहासः उद्भव और विकासः हिंदी राष्ट्र भाषा, राजभाषा और विश्व भाषा के रुप में हिंदी देवनागरी लिपि का विकास, देश की एकता और हिंदी।
4. हिंदी भाषा का क्षेत्रः उपभाषाएँ और बोलियाँ
5. भारतीय काव्यशास्त्रः अर्थ, परिभाषा, प्रयोजन और लक्षण, रस, छंद, अलंकार
6. भाषा तत्व और व्याकरणः वर्णमाला : (स्वर, व्यंजन भेद वर्णों का उच्चारण स्थान) शब्दभेदः (रूप परिवर्तन के अधार पर विकारी अविकारी शब्द व्युत्पत्ति के आधार पर शब्द भेद रूढी,यौगिक, योग रूढ) उपसर्ग, प्रत्यय, लिंग वचन, कारक - काल - संधि - समास। पर्यायावाची शब्द, विलोम शब्द, शब्द परिचय तत्सम, तद्भव, देशी, विदेशी, क्रिया - सकर्मक, अकर्मक प्रेरणार्थक क्रियाएँ - मुहावरे, लोकोक्ति, कहावत, विराम चिह्न। वाक्य भेद, वाक्य और प्रयोग, वाक्य संरचना, भेद वाच्य कर्तृ वाच्य, कर्म वाच्य और भाव वाच्य पद-परिचय
7. हिंदी पाठ्य पुस्तकें (द्वितीय भाषा) छठवीं कक्षा से दसवीं कक्षा सहित (उपवाचक और पठनहेतु साहित)

V. Teaching Methodology (Marks: 20)

1. भाषा-अर्थ, परिभाषा, महत्व, प्रकृति और स्वरुप, ध्वनि विज्ञान, शब्द विज्ञान, वाक्य विज्ञान, विवध स्तरों पर हिंदी शिक्षण के लक्ष्य और उद्देश्य, प्रथम भाषा केरूप में हिंदी द्वितीय भाषा के रूप में हिंदी, त्रिभाषा सूत्र, भारतीय संविधान में हिंदी का स्थान।
2. हिंदी भाषा शिक्षण प्राथमिक, माध्यमिक और उच्च माध्यमिक स्तर पर
   (1) हिंदी भाषा - शिक्षण के उद्धेश्य
   (2) अच्छे शिक्षण और अच्छे शिक्षण की विशेषताएँ।
   (3) हिंदी अध्यापक और शिक्षण की विशेषताएँ
   (4) भाषा - शिक्षण के सामान्य सिद्धांत
   (5) भाषा शिक्षण प्रणालियाँ
   (6) भाषा शिक्षण की पद्धतियाँ (प्रत्यक्ष, परोक्ष, खेल माँन्तेसरी, निर्देशित, डाल्टन, आगमन, सूक्ष्म शिक्षण आदि)
   (7) शिक्षण सूत्र
3. शिक्षण में भाषा - कौशलों का महत्व

सुनना - ध्वनि की उत्पत्ति - ध्वनि और श्रवण का पारस्परिक संबंध
बोलना - शब्दोच्चारण, वाक्यंत्र, शुद्धोच्चारण का अभ्यास, मौखिक अभिव्यक्ति, पाठशाला में वार्तालाप का अभ्यास।
पढनाः वाचन की विशेषताएँ, प्रकार दोष और उपचार
लिखनाः महत्व, नियम विधियाँ, प्रकार, अक्षर-विन्यास

4. पाठ्यक्रम और सहगामी क्रियाएँ
   पाठ्यक्रम-पाठ्य पुस्तक, पुस्तकालय - दृश्य - श्रव्य उपकरण (शिक्षण उपकरण) पाठ सहागामी क्रियाएँ, भाषा प्रयोगशाला।
5. शिक्षण योजनाः
   (1) पाठ-योजना (गद्य, पद्य, व्याकरण, पत्र लेखन और रचना)
   (2) इकाई पाठ योजना
   (3) सूक्ष्म शिक्षण पाठ योजना
6. मूल्यांकन
   मूल्यांकन की धारणा, निरंतर समग्र मूल्यांकन, उत्तम परीक्षा की विशेषताएँ, प्रश्न पत्र का निर्माण, उपलब्धि परीक्षा, निदानात्मक एंव उपचारात्मक शिक्षण, अभिलेख।
7. आंध्रप्रदेश में हिंदी शिक्षण में आनेवाली समस्याएँ व उनका निराकरण।
8. ध्वनि, वर्ण, शब्द, वाक्य रचना व शुद्धाशुद्ध वर्तनी व वाक्य ज्ञान।

Government of Andhra Pradesh
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Category of Post: PGT
SANSKRIT Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
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   - Inclusive Education - Classroom Management in Inclusive Education
   - Role of Education in view of Liberalization, Privatization and Globalization

- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. Development Of Child

- Development, Growth & Maturation — Concept & Nature
- Principles of development and their education implication
- Factors influencing Development — Biological, Psychological, Sociological, emotional.
- Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
- Understanding Development — Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
- Individual differences — Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.
- Development of Personality — Concept, Factors effecting development of personality, self concept.
- Adjustment, Behavioural problems, Mental Health, Defense mechanism.
- Methods and Approaches of Child Development — Introspection, Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal
- Developmental tasks and Hazards

2. Understanding Learning

- Concept, Nature of Learning — input — process — outcome
- Factors of Learning — Personal and Environmental
- Approaches to Learning and their applicability—Behaviorism (Skinner, Pavlov,

Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)

- Dimensions of Learning — Cognitive, Affective and Performance.
- Motivation and Sustenance —its role in learning.
- Memory & Forgetting
- Transfer of Learning

3. Pedagogical Concerns

- Teaching and its relationship with learning and learner.
- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts—Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods — Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups — Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
- Phases of Teaching — Pre active, Interactive and Post active
- General and Subject related skills, competencies required in teaching and attributes of good facilitator.
- Learning resources — Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal implications, Rights of a child, Time Management.
- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

कवयः - काव्यम् - रचयितारः - रचनाः स्तोत्राणि शास्त्रग्रन्थाः - कर्तारः (आलङ्कारिक - न्याय व्याकरणेत्यादि ग्रन्थाः।) इत्यादयः।

रचनाप्रक्रियाः	इतिहास - पुराण - काव्य - नाटक - कथा - आत्मकथा - गीतम् - इत्यादि प्रक्रियास्वरूपविवरणम् - ।
वेदवाङ्मयम् -	वेदाः - वेदाङ्गानि - उपनिषदः।
भाषास्वरूपम् -	भाषोत्पत्ति विषयकवादाः - भाषाकुटुंबम् - वैदिकलौकिक संस्कृतयोः साम्यं वैषम्यं च।
साहित्यविमर्शः -	काव्यप्रयोजनं - काव्यलक्षण - काव्यभेदाः - शैली - अलङ्काररससंप्रदायाः - रसवादाः च।
संस्कृतव्याकरणम् -	संज्ञाप्रकरणम् संधिप्रकरणम् समासप्रकरणम् स्त्रीप्रत्ययप्रकरणम् विभक्त्यर्थप्रकरणम्
भाषांशाः	समानार्थकाः विरुद्धार्थकाः छन्दः अलङ्कारः प्रत्ययाः विभक्तिः क्रियापदः व्युत्पत्यर्थाः संख्यावाचकाः प्रयोगविपरिणामः इत्यादयः
पठनावगमनम्	परिचित/अपरिचत पद्य/गद्यांशाः - तदाधारितप्रश्नाः।

V. Methodology (20 Marks)

पाठ्यक्रमे संस्कृतस्य महत्वम् - स्थानम्।
संस्कृतशिक्षणस्य उद्देश्यानि - सामान्यसिद्धान्ताः - शिक्षणापद्धतीः।
पाठ्यक्रमयोजना - पाठ्यग्रन्थः।
विद्यासांकेतिक - सहपाठ्यकार्यक्रमाः।
विद्यालयव्यवस्था।
साहित्यप्रक्रियाः बोधनापद्धतीः।
शिक्षणाकौशलानि।
मूल्याङ्कनम् - परीक्षा च।

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
Category of Post: TGT, PGT & Principals
Paper I – ENGLISH LANGUAGE PROFECIENCY (For Non Languages)
Syllabus

English: (Content) (Marks: 100) (Intermediate level)

Area		Level Of Testing
Parts of Speech		Nouns, Pronouns, Adjectives, Adverbs, Conjunctions, Interjections - Types and functions
Synonyms		Identification of Shades of Meaning
Antonyms		Identifying Antonyms in a Context
Homophones		Identification & Usage
Homonyms		Identification & Usage
Hypernyms& Hyponyms		Identification & Usage
Spelling		Spelling
One-word Substitutes		Referring to Persons / Professions, Places, Collections
Phrasal Verbs		Identification of Meaning and usage
Idiomatic Expressions		Identification, Usage
Proverbs		Proverbs
Word Formation		Suffixes, Prefixes and other forms
Short Forms - Full Forms		Common Short Forms - Full Forms
Abbreviations - Full Forms		Common Abbreviations - Full Forms
Word Collocations		Word Collocations
Foreign Phrases Used in English		Standard and common Foreign Phrases Used in English
Helping Verbs		Form, Function & Contractions
Modal Auxiliaries		Form, Function & Contractions
Ordinary Verbs		Form, Function & Contractions
Articles		Use of Articles Including Omissions
Prepositions		Simple, Compound Prepositions Including Prepositions following Certain Words and Prepositional Phrases

Clauses		Main Clauses, sub-ordinate Clauses, Adjectival Clauses, Noun Clauses, Adverbial Clauses, Relative Clauses, Finite and Non-finite Clauses
Sentence Structures		Sentence Structures
Degrees of Comparison		Form, Function, Construction, Transformation
Language Functions		Language Functions with social norms (formal and informal)
Question Tags		Imperatives and Statements with semi negatives and indefinites subjects
Types of Sentences		Types of Sentences
Sentence Improvement		Sentence Improvement
Direct Speech & Indirect Speech		Statements, Questions, Imperatives and Exclamatory Sentences
Active Voice & Passive Voice		Active Voice & Passive Voice
Tenses		Use of tenses and framing including 'IF' conditionals Type 1, 2 &3
Agreement between subject & Verb		Agreement between subject & Verb
Word Order		Word Order In a phrase or a sentence
Linkers		Linkers
Transformation of Sentences		Simple. Compound and Complex Sentences
Common Errors		Based on all Vocabulary and Grammar Topics
Punctuation and Capitalization		Use of capital letters, comma, full stop, question mark, exclamation mark and inverted commas
Writing of Discourses		Letter Writing, News Report, Diary Entry, Conversation, Description, Diary Entry, Biographical Sketch, Story, Script for a speech
Dictionary Skills		Dictionary Skills
Reading comprehension		Prose (GENERAL)

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
Category of Post: PGT
Paper II – MATHEMATICS Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education - Classroom Management in Inclusive Education

- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
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6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. Development Of Child

- Development, Growth & Maturation - Concept & Nature
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  emotional.
- Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
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- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.

- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. **Sets:** Sets and their representations. Union and Intersection of sets, Difference of sets, Complement of a set.
2. **Relations & Functions:** Definition of relation, domain, co-domain and range of a relation. Function as a special kind of relation from one set to another. Domain, co-domain & range of a function, Real valued function of the real variable, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum and greatest integer functions. Sum, difference, product and quotients of functions. Union, intersection and complements of sets, and their algebraic properties, Relations, equivalence relations, mappings, one-one, into and onto mappings, composition of mappings.
3. **Principle of Mathematical Induction:** Processes of the proof by induction.
4. **Permutations & Combinations:** Fundamental principle of counting. Factorial n, Permutations and combinations, derivation of formulae and their connections, simple applications.
5. **Complex Numbers:** Algebraic properties of complex numbers, Argand plane and polar representation of complex numbers, Statement of Fundamental Theorem of Algebra, solution of quadratic equations in the complex number system. Modulus and Argument of a complex number, square root of a complex number, Cube roots of unity, triangle inequality.
6. **Linear Inequalities**: Algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables, Solution of system of linear inequalities in two variables – graphically, Absolute value, Inequality of means, Cauchy-Schwarz Inequality, Tchebychef's Inequality
7. **Binomial Theorem:** Statement and proof of the binomial theorem for positive integral indices. Pascal's triangle, general and middle term in binomial expansion, simple applications. Binomial Theorem for any index, Properties of Binomial Co-efficients, Simple applications for approximations.
8. **Sequence and Series:** Arithmetic, Geometric and Harmonic progressions, General terms and sum to n terms of A.P., G.P. and H.P. Arithmetic Mean (A.M.), Geometric Mean (G.M.), and Harmonic Mean (H.M.), Relation between A.M., G.M. and H.M. Insertion of Arithmetic, Geometric and Harmonic means between two given numbers. Special series, Sum to n terms of the special series. Arithmetico-Geometric Series, Exponential and Logarithmic series.
9. **Elementary Number Theory:** Peano's Aximms, Principle of Induction; First Principal, Second Principle, Third Principle, Basic Representation Theorem, Greatest Integer Function Test of Divisibility, Euclid's algorithm, The Unique Factorisation Theorem, Congruence, Sum of divisors of a number. Euler's totient function, Theorems of Fermat and Wilson
10. **Quadratic Equations:** Quadratic equations in real and complex number system and their solutions. Relation between roots and co-efficients, nature of roots,

formation of quadratic equations with given roots; Symmetric functions of roots, equations reducible to quadratic equations – application to practical problems. Polynomial functions, Remainder & Factor Theorems and their converse, Relation between roots and coefficients, Symmetric functions of the roots of an equation. Common roots.

11. **Matrices and Determinants:** Determinants and matrices of order two and three, properties of determinants, Evaluation of determinants. Area of triangles using determinants, Addition and multiplication of matrices, adjoint and inverse of matrix. Test of consistency and solution of simultaneous linear equations using determinants and matrices.
12. **Two dimensional Geometry:** Distance formula, section formula, area of a triangle, condition for the collinearity of three points, centroid and in-centre of a triangle, locus and its equation, translation of axes, slope of a line, parallel and perpendicular lines, intercepts of a line on the coordinate axes. Various forms of equations of a line, intersection of lines, angle between two lines, conditions for concurrence of three lines, distance of a point from a line, Equations of internal and external bisectors of angles between two lines, coordinates of centroid, orthocentre and circumcentre of a triangle, equation of family of lines passing through the point of intersection of two lines, homogeneous equation of second degree in x and y, angle between pair of lines through the origin, combined equation of the bisectors of the bisectors of the angles between a pair of lines, condition for the general second degree equation to represent a pair of lines, point of intersection and angle between pair of lines. Standard form of equation of a circle, general form of the equation of a circle, its radius and centre, equation of a circle in the parametric form, equation of a circle when the end points of a diameter are given, points of intersection of a line and a circle with the centre at the origin and condition for a line to be tangent to the circle, length of the tangent, equation of the tangent, equation of a family of circles through the intersection of two circles, condition for two intersecting circles to be orthogonal.

Sections of cones, equations of conic sections (parabola, ellipse and hyperbola) in standard forms, condition for $y = mx + c$ to be a tangent and points(s) of tangency.

13. **Trigonometric Functions:** Positive and negative angles, Measuring angles in radians & in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Expressing sin (x+y) and cos (x+y) in terms of sin x , sing y, cos x & cos y. Identities related to sin 2x, tan 2x, sin 3x and tan3x. Solution of trigonometric equations, proofs and simple applications of sine and cosine formulae. Solution of triangle. Heights and Distances.

    Inverse Trigonometric Functions: Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions.

14. **Differential Calculus:** Polynomials, rational, trigonometric, logarithmic and exponential functions, Inverse functions. Graphs of simple functions, Limits, Continuity and differentiability; Derivative, Geometrical interpretation of the derivative, Derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions, Derivatives of composite

functions; chain rule, derivatives of inverse trigonometric functions, derivative of implicit function, Exponential and logarithmic functions and their derivatives, Logarithmic differentiation, Derivative of functions expressed in parametric forms. Second order derivatives. Rolle's and Lagrange's Mean Value Theorems and their geometric interpretations.

Applications Of Derivatives: Applications of derivatives: rate of change, increasing / decreasing functions, tangents & normals, approximation, maxima and minima.

Integral Calculus: Integral as an anti-derivative. Fundamental integrals involving algebraic, trigonometric, exponential and logarithmic functions, Integration by substitution, by parts and by partial fractions, Integration using trigonometric identities, Definite integrals as a limit of a sum, Fundamental Theorem of Calculus. Basic Properties of definite integrals and evaluation of definite integrals; Applications of definite integrals in finding the area under simple curves, especially lines, areas of circles / Parabolas / ellipses, area between the two curves.

15. **Differential Equations:** Definition, order and degree, general and particular solutions of differential equation, Formation of differential equation whose general solution is given, Solution of differential equations by method of separation of variables, homogeneous differential equations of first order and first degree, Solutions of linear differential equation.

16. **Vectors:** Vectors and scalars, magnitude and direction of a vector, Direction cosines / rations of vectors, Types of vectors (equal, unit, zero, parallel and collinear vectors), poison vector of a point, negative of a vector, components of a vector, addition of vectors, multiplications of a vector by a scalar, position vector of a point dividing a line segment in a given ration. Scalar (dot) product of vectors, projection of a vector on a line. Vector (cross) product of vectors.

17. **Solid Geometry:** Coordinates of a point in space, distance between two points Section formula, Direction cosines / ratios of a line joining two points -

    The Plane: Equation of Plane in terms of its intercepts on the axis through the given points, Length of the perpendicular from a given point to a given plane, Bisectors of angles between two Planes, Combined Equation of Two Planes, orthogonal projection on a plane.

    The Line: Equations of a Line, angle between a line and a Plane, the Condition that a given line may lie in a given plane, the condition that two given lines are coplanar, Number of arbitrary constants in the Equations of a Straight Line. Sets of Conditions which determine a line, the Shortest distance between two lines. The length and Equations of the line of Shortest distance between two straight lines, Length of the perpendicular from a given point to a given line, Intersection of three planes, Triangular Prism, skew lines.

    The Sphere: Definition and equation of the Sphere, Equation of the sphere through four given points, Plane section of the sphere, Intersection of Two Spheres; Equation of a Sphere through a given circle : Intersection of a sphere and a line. Power of a point; Tangent Plane; Plane of Contact, Polar Plane, Conjugate points, Conjugate planes: Angle of intersection of Two Spheres. Conditions for two spheres to be orthogonal: Radical Plane, Coaxial System of Spheres; Simplified form of the equation of Two Spheres.

Cones, cylinders and Conicoids: Definitions of a cone, vertex, guiding curve, generators, Equation of the cone with a given vertex and guiding curve, Enveloping cone of a sphere, Quadratic of cones with vertex at origin, Condition that the general equation of the second degree should represent a cone, Condition that a cone may have three mutually perpendicular generators, Intersection of a line and a quadric cone. Tangent lines and tangent plane at apoint. Condition that a plane may touch a cone. Reciprocal cones. Intersection of two cones with a common vertex. Right circular cone. Equation of the right circular cone with a given vertex, axis and semi-vertical angle.

Definition of a cylinder, Equation to the cylinder whose generators intersect a given conic and are parallel to a given line, enveloping cylinder of a sphere. The right circular cylinder, Equation of the right circular cylinder with a given axis and radius.

The general equation of the second degree shapes of some surfaces, Nature of Ellipsoid, Nature of Hyperboloid of one sheet.

18. **Statistics:** Measures of central tendency for grouped and ungrouped data. Measures of dispersion; for ungrouped / grouped data. Analysis of frequency distributions with equal means but different variances.
19. **Probability:** Random experiments: outcome, sample spaces. Events: occurrence of events, exhaustive events, mutually exclusive events, Probability of an event, probability of 'not', 'and' & 'or' events., Multiplication theorem on probability. Conditional probability, independent events, Baye's theorem, Random variable and its probability distribution, Binomial and Poisson distributions and their properties.
20. **Linear Algebra:** Examples of vector spaces, vector spaces and subspace, independence in vector spaces, existence of a Basis, the row and column spaces of a matrix, sum and intersection of subspaces. Linear Transformations and Matrices, Kernel, Image, and Isomorphism, change of bases, Similarity, Rank and Nullity. Inner Product spaces, orthonormal sets and the Gram-Schmidt Process, the Method of Least Squares. Basic theory of Eigenvectors and Eigenvalues, algebraic and geometric multiplicity of eigen value, diagonalization of matrices, application to system of linear differential equations. Generalized Inverses of matrices, Moore-Penrose generalized inverse. Real quadratic forms, reduction and classification of quadratic forms, index and signature, triangular reduction of a pair of forms, singular value decomposition, extrema of quadratic forms. Jordan canonical form, vector and matrix decomposition.
    Field extensions, fundamental theorem of Galois theory, splitting fields, algebraic closure and normality, Galois group of a polynomial, finite fields, separability, cyclic extensions, solvability by radicals.
21. **Analysis:** Monotone functions and functions of bounded variation, Real valued functions, continuous functions, Absolute continuity of functions, standard properties. Uniform continuity, sequence of functions, uniform convergence, power series and radius of convergence, Riemann-Stieltjes integration, standard properties, multiple integrals and their evaluation by repeated integration, change of variable in multiple integration . Uniform convergence in improper integrals, differentiation under the sign of integral – Leibnitz rule, Dirichlet integral, Liouville's extension, Introduction to n-dimensional Euclidean space, open and closed intervals (rectangles), compact sets, Bolzano-Weierstrass theorem, Heine-

Borel theorem. Maxima-minima of functions of several variables, constrained maxima-minima of functions, Analytic function, Cauchy-Riemann equations, singularities, Statement of Cauchy theorem and of Cauchy integral formula with applications, Residue Statement of Cauchy theorem and of Cauchy integral formula with applications, Residue and contour integration, Fourier and Laplace transforms, Mellin's inversion theorem.
Conformal Mapping, Elliptic Function. Elementary Functions (Exponential, Logarithm, Complex Exponents, Trigs, Hyperbolic Functions) Integrals (Definite Integrals, Antiderivatives, Cauchy Goursat Theorem, Cauchy Integral Formula, Liouville's Theorem, Fundamental Theorem of Algebra, Maximum Modulus Principle) Series (Sequences, Convergence of Series, Taylor Series, Laurent Series, Absolute and Uniform Convergence, Power Series techniques) Residues and Poles (Residues, Cauchy's Residue Theorem, Residue at Infinity, Zeros of Analytic Functions.

22. **Abstract algebra and real analysis:**

Groups: Binary operations – Definition and properties, of Groups –Finite groups and group composition tables, sub groups and cyclic sub-groups, cyclic groups, Elementary properties of cyclic groups, subgroups of finite cyclic groups.

Rings: definitions and basic properties, homomorphism and isomorphism, fields, divisors of zero and cancellation laws, Integral Domain, the characteristic of a ring. Rings of polynomials. Polynomials in an indeterminate, Ideals and factor rings, Homomorphism and factor rings, Fundamental homomorphism theorem, Maximal and prime ideals.

V. Teaching Methodology (Marks: 20)

1. Meaning and Nature of Mathematics, History of Mathematics.
2. Contributions of Great Mathematicians – Aryabhatta, Bhaskaracharya, Srinivasa Ramanujan, Euclid, Pythagoras, George cantor.
3. Aims and Values of teaching Mathematics, Instructional objectives (Blooms taxonomy).
4. Mathematics curriculum: Principles, approaches of curriculum construction, Logical and Psychological, Topical and Concentric, Spiral approaches. Qualities of a good Mathematics text book.
5. Methods of teaching mathematics- Heuristic method, Laboratory method, Inductive and Deductive methods, Analytic and Synthetic methods, Project method and Problem Solving method.
6. Unit Plan, Year Plan, Lesson Planning in Mathematics.
7. Instructional materials, Edgar Dale's Cone of Experience.
8. Evolving strategies for the gifted students and slow learners.
9. Techniques of teaching mathematics like Oral work, Written work, Drilling, Assignment, Project, Speed and Accuracy.
10. Mathematics club, Mathematics structure, Mathematics order and pattern sequence.
11. Evaluation – Types, Tools and Techniques of Evaluation, Preparation of SAT Analysis, Characteristics of a good test.

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC - 2024
Category of Post: PGT
Paper II – Physical Science Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education

- Value Education – Moral Value and Professional Ethics in Education.
- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Aveshekar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. **Development Of Child**
   - Development, Growth & Maturation — Concept & Nature
   - Principles of development and their education implication
   - Factors influencing Development — Biological, Psychological, Sociological,
     emotional.
   - Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
   - Understanding Development — Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
   - Individual differences — Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.
   - Development of Personality — Concept, Factors effecting development

of personality, self concept.

- Adjustment, Behavioural problems, Mental Health, Defense mechanism.
- Methods and Approaches of Child Development — Introspection, Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal
- Developmental tasks and Hazards

2. Understanding Learning

- Concept, Nature of Learning — input — process — outcome
- Factors of Learning — Personal and Environmental
- Approaches to Learning and their applicability—Behaviorism (Skinner, Pavlov, Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)
- Dimensions of Learning — Cognitive, Affective and Performance.
- Motivation and Sustenance —its role in learning.
- Memory & Forgetting
- Transfer of Learning

3. Pedagogical Concerns

- Teaching and its relationship with learning and learner.
- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts—Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods — Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups — Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
- Phases of Teaching — Pre active, Interactive and Post active
- General and Subject related skills, competencies required in teaching and attributes of good facilitator.
- Learning resources — Self, Home, School, Community, Technology.

- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal implications, Rights of a child, Time Management.

- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. MEASUREMENT

Story of transport, Non- standard units of Measurements, Measuring the length of a Curved line, Measurement of length, area, volume and time. CGS and SI units of length, area, volume and time, Conversion of units from CGS to S.I and Vice versa.

2. MOTION

Describing Motion, Motion and Rest, Motion Along a Straight Line, Types of motion (Translatory, Rotatory and oscillatory), Scalars and vectors, Distance, Displacement, Speed, Velocity, Average speed, Average velocity, Acceleration, Graphical Representation of Motion, Distance-Time Graphs, Velocity-Time Graphs, Uniform Motion and Non- Uniform Motion, Equations of Motion, Uniform Circular Motion, Laws of Motion, Balanced and Unbalance Forces, First Law of Motion, Inertia and Mass, Momentum, Second Law of Motion, Third law of motion.

3. FORCE, FRICTION AND PRESSURE

Force – A Push or a Pull, Exploring Forces, Effect of Force on Objects, Types of forces (field force and contact force), Net force, Types of friction (static, Sliding and Rolling), Factors effecting Friction, Friction: A Necessary Evil, Increasing and Reducing Friction, Fluid friction, Pressure, Pressure Exerted by Liquids and Gases, Pressure of liquids at different depths, Atmospheric Pressure.

4. GRAVITATION

Uniform circular motion, Universal law of gravitation, Free Fall, Acceleration due to Gravity, Motion of Objects Under the Influence of Gravitational Force of the Earth, Mass and Weight, Thrust and Pressure, Pressure in Fluids, Buoyancy, Floating and Sinking Objects, Archimedes' Principle.

5. WORK, ENERGY

Scientific Conception of Work, Work Done by a Constant Force, Energy, Forms of Energy, Kinetic Energy, Potential Energy, Mechanical Energy. Law of Conservation of Energy, Conversion of Energy from one form to another, Power and its units.

6. SOUND

Sound - a form of energy, Production of sound, Some musical instruments, Sound Needs a Medium for Propagation, Human ear, Hearing Impairment, Noise and Music, Propagation of Sound, Types of waves (longitudinal and transverse), Characteristics of sound waves (Wavelength, Frequency, Time period, Speed of the wave), Relation between frequency and time period, Pitch, Loudness and Quality, Intensity of Sound, Speed Of Sound in Different Media, Reflection of Sound, Echo, Reverberation, Uses of Multiple Reflection of Sound, Range of Hearing, Infrasonic and Ultrasonics, Applications of Ultrasound, Sound pollution.

7. HEAT

Heat and temperature, Transfer of Heat (Conduction, convection, radiation), Kinds of clothes we wear in summer and winter, Units of temperature (centigrade, Fahrenheit and Kelvin; Conversions), Expansion of liquids due to heat, Types of thermometers, Thermal equilibrium, Temperature and Kinetic energy, Specific Heat, Applications of Specific heat capacity, Principle of method of mixtures, Determination of Specific heat of a solid, Evaporation, Condensation, Humidity, Dew and Fog, Boiling, Latent heat of vapourisation, Melting, Latent heat of fusion, Freezing, Temperature- time graph.

8. LIGHT

Light, Transparent, Opaque and Translucent Objects, Shadows and Images, Rectilinear Propagation of Light, A Pinhole Camera, Regular and Diffused Reflection, Reflection of light by plane surfaces (laws of reflection, periscope, multiple images, kaleidoscope, Characteristics of image formed by plane mirrors), Spherical Mirrors and Images, Spectrum, Wave nature of light, Fermat principle, Sign convention, Refraction, Refraction of Light at Plane Surfaces, Refractive index, Absolute refractive index, Relative refractive index, Snell's law, Critical angle, Total Internal Reflection, Applications of total internal reflection, Mirages, Optical fibres, Refraction Through a Glass Slab, Lateral shift, Vertical shift, Refraction of Light at Curved Surfaces, Lenses, Terminology used in the case of lenses -Focal length, Focus, Optic Centre, Principal axis, Radius of curvature, Centre of curvature, Focal plane, Behaviour of certain light rays when they are incident on a lens, Images formed by lenses for various distances of objects, UV method, Lens formula, Lens maker's formula, Human Eye, Least distance of distinct vision, Angle of vision, Myopia, Hypermetropia, Presbyopia, Care of the Eyes, Braille System, Visually Impaired Persons, Power of lens, Refractive index of a Prism, Dispersion of light through prism, Sunlight-Dispersion, Rainbow, Scattering of light.

9. ELECTRICITY

Simple Electric circuit and its components, Conductors, Insulators, Type of cells (Dry and liquid), Electric symbols and uses, Series and parallel connection of cells and bulbs, Heating effects of Electricity, Understanding of CFL, Fuse and MCBs, Chemical Effects Of Electric Current, Good/Poor Conducting Liquids, Electroplating, Magnetic Effects of Electric Current, Electromagnet, Electric bell, Electric current, Drude and Lorentz theory, Potential difference and EMF, Drift velocity and working of a cell, Ohm's law, Electric shock, Factors affecting the resistance, Series connection of resistors, Parallel Connection of resistors, Multi-meter, Kirchhoff's laws, Sign convention in a circuit, Electric power, Power consumption, Electric energy, Overload.

10. MAGNETISM AND ELECTROMAGNETISM

How Magnets were discovered, Magnetic and Non-Magnetic Materials, Types of Magnets, Poles of Magnet, Properties of Magnets, Storing magnets safely, Magnetic compass, Earth as a Magnet, Magnetic Induction, Oersted's experiment, Magnetic Field, Magnetic flux – Magnetic flux density, Magnetic field due to straight wire /circular coil/solenoid carrying current, Magnetic Force, Electric Motor, Electromagnetic induction, Faraday's Law, Lenz Law, Applications of Faraday's law of electromagnetic induction, Induced current, Induced EMF, Electric generator, DC and AC currents, rms values.

11. PRINCIPLES OF METALLURGY

Metallurgy, Occurrence of the metals in nature, Ores and Minerals, Extraction of metals, Activity series, Concentration or Dressing of the ore, Hand picking, Washing, Froth flotation, Magnetic Separation, Extraction of crude metal from the ore, Reduction of purified ore to the metal, Purification of the crude metal, Distillation, Poling, Liquation, Electrolytic refining, Corrosion, Prevention of corrosion, Thermite process, Smelting, Roasting, Calcination, Flux, Gangue, Blast furnace, Reverberatory furnace.

12. CARBON AND ITS COMPOUNDS

Allotropes of Carbon, Amorphous forms, Crystalline forms, Diamond, Graphite, Buckminsterfullerene, Nanotubes, Versatile nature of Carbon, Catenation, Tetravalency, Hydrocarbons, Saturated and unsaturated hydrocarbons, Homologous series, Isomerism, Functional groups, Nomenclature of Aliphatic Hydrocarbons, IUPAC names, Chemical properties of carbon compounds- Combustion, Oxidation reactions, Addition reactions, Substitution reactions, Ethanol, Ethanoic acid, Esters, Esterification Reactions, Soaps – Saponification and Micelles, Cleansing action of soap, Detergents.

13. SOME NATURAL PHENOMENON

The Story of Lightning, charging by Rubbing, Electric charge and properties of electric charge, Types of charges and their interactions, Transfer of charge, lightning, lightning safety, lightning conductors, Earthquake, Tsunami, Causes and effects, Protective measures.

14. STARS AND SOLAR SYSTEM

The Moon, The Moon's Surface, Phases of Moon, Eclipses (Solar and lunar eclipses), The Stars, Movement of Stars (Constellation, pole star), Movement of the sun, Solar System, Planets and Some Other Members of the Solar System, Artificial Satellites.

15. CHANGES AROUND US

Slow/fast changes, Temporary/permanent changes, Natural/man made changes, Physical/ chemical changes, Rusting of iron, Crystallisation, Galvanization, Corrosion, Rancidity, Oxidation / reduction

16. MATTER

Objects Around Us, Properties of Materials, Physical Nature of Matter, Characteristics of Particles of Matter, States of matter, Properties of solids, liquids and gases, Change of state of Matter –effect of change of temperature and pressure, Evaporation, Factors Affecting Evaporation, Sublimation, Deposition, Boiling, Latent heat of vaporisation, Latent heat of fusion, Mixture, Types of Mixtures, Solutions., Properties of a Solution, Types of Solutions, Concentration of solution, Expressing Concentration of Solutions, Suspension, Properties of

a Suspension, Colloidal Solution, Properties of a Colloid, Common examples of colloids, Mixtures, Methods of separation–handpicking, Threshing, Winnowing, Sedimentation, Decantation, Sieving, Filtration, Sublimation, Chromatography, Distillation and fractional distillation, Evaporation, Condensation, Use of more than one method of separation, Saturated and unsaturated solutions, Separation of immiscible liquids, Types of Pure Substances – Elements and Compounds.

17. ATOMS AND MOLECULES

Laws of Chemical Combination - Law of Conservation Of Mass, Law of Constant Proportions, Atom, Symbols of Atoms of Different Elements, Atomic Mass, Atomicity, Valency, Molecule, Molecules Of Elements, Molecules Of Compounds, Ion – Cation & Anion, Polyatomic ions, Names and symbols of ions, Formation of ions, Writing Chemical Formulae, Molecular Mass, Molar mass, Formula Unit Mass, Structure of The Atom, Subatomic particles, Charged Particles in Matter, Thomson's Model of an Atom, Rutherford's Model of an Atom, Bohr's Model of an Atom, Bohr-Sommerfeld model of an atom, Neutrons, Distribution of electrons into different Orbits, Atomic Number and Mass Number, Isotopes, Isobars, Atomic line spectra, Planck's quantum theory, Quantum numbers, Shapes of orbitals, Electronic Configuration, Pauli Exclusion Principle, Aufbau principle, Hund's Rule.

18. CLASSIFICATION OF ELEMENTS-THE PERIODIC TABLE

Dobereiner's law of Triads, Newlands' law of Octaves, Mendeleev's Periodic Table, Modern Periodic Table, Periodic properties of the elements and their gradation in the modern periodic table.

19. CHEMICAL BONDING

Lewis dot structures, Covalency, Electronic theory of valence by Lewis and Kossel, Octet rule, Ionic and Covalent bonds, Ionic and Covalent compounds, Bond lengths and Bond energies of covalent bonds, Valence shell electron pair repulsion theory, Valence bond theory, Hybridisation.

20. METALS AND NON METALS

Physical Properties of Metals and Non-metals, Chemical Properties of Metals and Non-metals, Uses of Metals and Non-metals, Examples of metals and non-metals, Reactivity order of metals.

21. SYNTHETIC FIBRES AND PLASTICS

Natural and Synthetic fibres, Preparation and uses, Types of Synthetic Fibres, Characteristics of Synthetic Fibres, Plastics as Materials of Choice, Types of plastics, Plastics and environment, Biodegradable – Non biodegradable materials.

22. COAL AND PETROLEUM

Exhaustible and inexhaustible Resources, Fuels – Types, Coal, Story of Coal, Uses of Coal and Coal products, Refining of petroleum, Petrochemical products in various sectors, Various Constituents of Petroleum and their Uses, Formation of coal and petroleum, Natural Gas, Misuse of Energy resources and Consequences.

23. COMBUSTION FUELS AND FLAME

Combustion, Types of Combustion, Ignition temperature, Inflammable substances, Flame, Fuel Efficiency, Burning of Fuels Leads to Harmful Products, Fire control, Structure of flame – colors zones – Intensities.

24. AIR

Atmosphere, Components of air, Availability of oxygen to plants and animals, Replacement of Oxygen in the Atmosphere.

25. ACIDS, BASES AND SALTS

Natural acid-base indicators, Synthetic acid-base Indicators, Olfactory indicators, Universal Indicator, Chemical properties of Acids and Bases, Reaction of Acids and bases with Metals, Reaction of Acids with carbonates and metal hydrogen Carbonates, Neutralization reaction, Reaction of Acids with metal oxides, Reaction of base with non-metal oxide, Production of H^+ions and OH- ions, Electrical conductivity of Acids and Bases, Properties of Bases, Dilution, Strength of acid or base, pH scale, Importance of pH in everyday life, Self-defense by animals and plants through chemical warfare, Family of salts, pH of Salts, Chemicals from common salt, Important product from chlor-alkali process and their uses, Water of crystallization, Common salt, Bleaching Powder, Baking soda, Washing soda, Plaster of paris, Gypsum, and their uses.

PHYSICS

- Physical World
- Units and Measurements
- Motion in a Straight Line
- Motion in a Plane
- Laws of Motion
- Work, Energy and Power
- System of Particles and Rotational Motion
- Oscillations
- Gravitation
- Mechanical Properties of Solids
- Mechanical Properties of Fluids
- Thermal Properties of Matter
- Thermodynamics
- Kinetic Theory
- Waves
- Ray Optics and Optical Instruments
- Wave Optics
- Electric Charges and Fields
- Electrostatic Potential and Capacitance
- Current Electricity

- Moving Charges and Magnetism
- Magnetism and Matter
- Electromagnetic Induction
- Alternating Current
- Electromagnetic Waves
- Dual Nature Of Radiation And Matter
- Atoms

CHEMISTRY

- Atomic Structure
- Classification of Elements & Periodicity in Properties
- Chemical Bonding & Molecular Structure
- States of Matter: Gases and Liquids
- Stoichiometry
- Thermodynamics
- Chemical Equilibrium & Acids-Bases
- Hydrogen & it's compounds
- s-Block elements (Alkali & Alkaline Earth Metals)
- p-Block Elements Group 13 (Boron family)
- p-Block Elements Group 14 (Carbon family)
- Environmental Chemistry
- Organic Chemistry-Some Basic Principles & Techniques & Hydrocarbons
- Solid State
- Solutions
- Electrochemistry & Chemical Kinetics
- Surface Chemistry
- General Principles of Metalillurgy
- p-Block elements (Group-15,16,17,18 Elements)
- d & f Block Elements & Coordination Compoounds
- Polymers
- Biomolecules
- Chemistry in Everyday life
- Halo Alkanes & Haloarenes
- Organic Compounds containing C, H & O (Alcohols, Phenols, Ethers, Aldehydes, Ketones & Carboxylic acids)
- Organic Compounds Containing Nitrogen

V. Methodology (Marks: 20)

1. The Nature of Science: Nature and scope of science, Science, ideology and Society, Structure of Science (a) Substantive structure - Empirical knowledge, Theoretical Knowledge - (Facts, Concepts, hypothesis, theory, Principle Law), (b)Syntactic Structure of Science - Scientific inquiry, Processes of Science, Attitudes of inquiry

2. The History and Development of Science: A brief introduction to oriental and western science, Contribution of the following Scientists in the Development of Science: Aryabhatta, BhaskaraCharya, Aristotle, Copernicus, Newton, Einstein, C.V.Raman, Various organizations working for the development of science in India
3. Aims and Values of teaching Physical Sciences: Aims of teaching Physical Sciences, Values of teaching Physical Science, Correlation of Physics and Chemistry with other subjects
4. Objectives of teaching Physical Sciences: Meaning and importance of objectives, Bloom's Taxonomy of Educational objectives, Specific / Behavioral objectives / (Instructional objectives), Critique on Bloom's Taxonomy
5. Approaches and Methods of teaching Physical Sciences: Inductive and Deductive Approaches, Micro Teaching, Team Teaching, Lecture Method, Lecture cum Demonstration Method, Historical Method, Heuristic Method, Project Method, Laboratory method, Problem Solving Method, Scientific Method, Multimedia Approach in Teaching Learning process, Programmed Learning, CAI and CAL
6. Planning for effective instruction in Science: Year Plan, Unit Plan, Lesson Plan, Learning experience, characteristics, classification, source and relevance.
7. Teaching Learning Material (TLM): Characteristics and Importance of TLM, Classification and Types of TLM, Hardware and Software in TLM, TLM-Principles to be followed, Edgar Dale's cone of learning experience.
8. Science laboratories: Importance of Practical work in science, Planning of Science laboratories, Procurement, care and maintenance of laboratory equipment, Registers, Management of safety and science kits, Development of improvised Apparatus.
9. Physical Science Curriculum: Principles of Curriculum Construction, Defects in the existing school science curriculum, Qualities of a good Science Text Book.
10. Non-formal Science Education: Science Clubs, Science Fairs - purposes, levels, organization, advantages, Science Library, Role of NGOs and State in popularizing Science
11. Evaluation: Concept and Process of Evaluation, Tools of Evaluation, Preparation of Scholastic Achievement Test (SAT), Analysis and interpretation of Scores.

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC - 2024

Category of Post: PGT
Paper II – BIOLOGICAL Science Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education

- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
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- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. **Development of Child**
   - Development, Growth & Maturation — Concept & Nature
   - Principles of development and their education implication
   - Factors influencing Development — Biological, Psychological, Sociological,
     emotional.
   - Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
   - Understanding Development — Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
   - Individual differences — Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.
   - Development of Personality — Concept, Factors effecting development of personality, self concept.
   - Adjustment, Behavioural problems, Mental Health, Defense mechanism.

- Methods and Approaches of Child Development — Introspection, Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal
- Developmental tasks and Hazards

2. Understanding Learning

- Concept, Nature of Learning — input — process — outcome
- Factors of Learning — Personal and Environmental
- Approaches to Learning and their applicability—Behaviorism (Skinner, Pavlov, Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)
- Dimensions of Learning — Cognitive, Affective and Performance.
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- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts—Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods — Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups — Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
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- Learning resources — Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non-threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal

implications, Rights of a child, Time Management.

- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. **Biological Sciences:** Importance and Human Welfare, Branches of Biology, Biologists.
2. **Living World:** Life and its Characteristics, Classification of Living Organisms, Nomenclature, different types of classification. Need for classification, Biological classification levels and Hierarchy of classification, species concept. Animal diversity, invertebrates, Chordates.
3. **Microbial World:** Virus, Bacteria, Algae, Fungi and Protozoan, Useful and Harmful Micro-organisms. Immunity, vaccination, Immunological disorders. Infections,
   life style diseases.
4. **Cell & Tissues:** Cell – Structure cell theory , cell organelles and their functions, differences between prokaryotic and Eukaryotic cells, plant cell and animal cell, cell cycle, cell division , Mitosis and Meiosis, tissues, structure, functions and types of plant and Animal tissues, Cancer biology, stem cells. Transportation of materials through the cells. Internal organization of plants, histology - anatomy of flowering plants.
5. **Plant World :** Morphology of a Typical Plant - Root, Stem, Leaf, Flower, Inflorescence, Fruit - their Structure, Types and Functions, Parts of a Flower, Seed dispersal Modifications of Root, Stem and Leaf, Photosynthesis, Transpiration, Transportation in plants (Ascent of Sap), Respiration, Excretion and Reproduction in Plants, Plant Hormones, food from the plants. Economic importance of Plants, Wild and Cultivated Plants, Agricultural Operations, Crop diseases and Control measures, Improvement in Crop yield, Storage, Preservation and Protection of Food and Plant Products. Single cell proteins (SCP), plant enzymes, mineral nutrition, plant growth and development.
6. **Animal World:** Organs and Organ Systems including man - Their Structure and Functions Digestive, Respiratory in human, type studies of the animals. Circulatory, . Immunology, Excretory, Locomotion in protozoa and humans - Muscular, Skeletal Systems, Nervous, Control and Coordination and Reproductive: Sexual, a sexual fission, syngamy, conjugation. Reproductive

health – Birth control methods, Sense Organs: Structure and Functions of Eye, Ear, Nose, Tongue and Skin. Nutrition in man - Nutrients and their functions, Balanced Diet, Deficiency diseases, Health - Tropical diseases (Viral, Bacterial, Protozoan, Helminth, Arthropod), Skin diseases (Fungal), Blindness in man: Causes, Prevention and Control, Health agencies, First Aid - Bites: Insect, Scorpion and Snakes, Fractures, Accidents, Life skills, Wild and Domesticated animals, Economic Importance of Animals, Animal Husbandry - Pisciculture, Sericulture, Poultry, Breeding of Cows and Buffaloes, animal behavior.

7. **Heredity and Evolution**: Terms, Mendel laws, Sex determination in humans, In heritance of Blood Groups, Erythroblastosis foetalis, Theories of Evolution, Speciation, Evidences of Evolution, Human Evolution, sex linkage, genetic disorders, syndromes, human genome project, evolutionary forces, DNA and finger printing.
8. **Our Environment – Ecology:** Abiotic and Biotic factors of Ecosystems, Ecosystem - Types, components, adaptations, Food chains, Food web and Ecological pyramids, Natural Resources
   - Type of water managements, soil waste land management, forests, sustainable development, fossil fuels and bio fuels, 4Rs, bio-geo-chemical cycles, pollution, air, water, soil, global environmental issues – global warming – (Green House Effect), acid rains and depletion of Ozone layer; Population - interaction in Eco-system, plant ecology.
9. **Recent Trends in Biology:** Hybridization, Gene - Genetic material, DNA , RNA, Genetic Engineering, Gene Bank, Gene Therapy, Tissue Culture and Bio-Technology – applications. Transgenic animals and plants, cloning, molecular diagnosis, bio medical technology, bio molecules, molecular biology.
10. **Biodiversity – Conservation:** Biodiversity – levels of bio diversity, conservation, wild life, sanctuaries, national parks in India, importance of species, diversity to the Ecosystem.

V. Teaching Methodology (Marks: 20)

1. The Nature & Scope of Science: A brief introduction of Oriental and Western Science, Nature of Science, Scope of Science, Substantive and Syntactic Structure of Science.
2. Aims and Values of Teaching Biological Sciences: Aims of teaching Biological Sciences, Values of teaching Biological Sciences.
3. Objectives of Teaching Biological Sciences: Importance of Objectives of Teaching Biological Sciences, Bloom's Taxonomy of Educational Objectives and limitations, Writing Instructional Objectives and Specifications.
4. Academic Standards in Biological Science.
5. Approaches and Methods of Teaching Biological Sciences: Inductive Approach and Deductive Approach, Methods of Teaching 1. Lecture Method, 2. Lecture cum Demonstration Method, 3. Heuristic Method, 4. Project Method, 5. Experimental Method, 6. Laboratory Method.

6. Planning for effective Instruction: Year Plan, Unit Plan, Lesson Plan - Herbartian and Bloom's Approach, Criteria for Evaluation of Lesson Plan. Self Evaluation and Peer Evaluation, Learning experiences - Characteristics, Classification, Sources and Relevance, Teaching - Learning Material and Resources in Biological Sciences.
7. Science Laboratories: Importance of Practical work in Biological Sciences, Planning Science Laboratory, Procurement, Care and Maintenance of Laboratory Equipment, Maintenance of different Registers, Safety and First aid, Development of Improvised Apparatus
8. Science Curriculum: Principles of Curriculum Construction, Defects in the existing School Science Curriculum, Correlation of Biological Sciences with other School Subjects, Qualities of a good Biological Science Text-book.
9. Biological Science Teacher: Qualities of a good Biological Sciences Teacher, Roles and Responsibilities
10. Non-formal Science Education: Science club, Eco-club, Blue-club, Red ribbon club, Science fairs - Objectives, levels of organizations, importance, Science Laboratories, Role of NGOS and State in popularizing science.
11. Evaluation: Concept and process of Measurement and Evaluation, Continuous Comprehensive Evaluation, Tools of Evaluation, Preparation of Scholastic Achievement Test(SAT), Analysis and interpretation of scores.

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
Category of Post: PGT
Paper II – BOTANY Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.
   - Health and Physical Education

- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. Development Of Child

- Development, Growth & Maturation — Concept & Nature
- Principles of development and their education implication
- Factors influencing Development — Biological, Psychological, Sociological,
  emotional.
- Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
- Understanding Development — Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
- Individual differences — Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.
- Development of Personality — Concept, Factors effecting development of personality, self concept.
- Adjustment, Behavioural problems, Mental Health, Defense mechanism.
- Methods and Approaches of Child Development — Introspection,

Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal

- Developmental tasks and Hazards

2. Understanding Learning

- Concept, Nature of Learning — input — process — outcome
- Factors of Learning — Personal and Environmental
- Approaches to Learning and their applicability—Behaviorism (Skinner, Pavlov, Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)
- Dimensions of Learning — Cognitive, Affective and Performance.
- Motivation and Sustenance —its role in learning.
- Memory & Forgetting
- Transfer of Learning

3. Pedagogical Concerns

- Teaching and its relationship with learning and learner.
- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts—Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods — Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups — Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
- Phases of Teaching — Pre active, Interactive and Post active
- General and Subject related skills, competencies required in teaching and attributes of good facilitator.
- Learning resources — Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal

implications, Rights of a child, Time Management.

- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. Classification of Plant Kingdom
2. Branches of Botany
3. Bacteria and Viruses: General account of Viruses: Characteristics, Chemistry, Ultra structure, Composition, Replication, Bacteriophage, Transmission of plant viruses. General account of Bacteria: Characteristics, Shape, Ultra structure of the cell, Nutrition, Reproduction, Classification and Importance.
4. Algae: Introduction and general classification of algae, criteria for the classification, thallus organisation of algae, economic importance of algae, general characteristics structure, reproduction, pigments, phylogeny, life cycles of Chlamedomonas, Volvox, Oedogonium, Chara, Vauchaeria, Ecocarpus, Polysiphonia.
5. Fungi: General characteristics of fungi, occurrence, thallus structure of fungi, modes of nutrition, reproduction, phylogeny of these types: Albugo, Mucor, Penicillium, Puccinia, Peziza, Alternaria. General account of Lichens, Economic importance of Fungi.
6. Bryophyta: General characteristics of Bryophyta, sporophyte, evolution in Bryophyta, classification of Bryophyta, structure, reproduction in Marchantia, Anthoceros, Polytrichum.
7. Pteridophyta: General characteristics of Pteridophyta, classification of Pteridophyta, structure, reproduction in Rhynia, Lycopodium, Equisetum and Marsilea.
8. Palaeobotany: Origin & evolution of land plants, Homospory, Heterospory, origin of seed, Telome theory and Origin of Sporophyte.
9. Gymnosperms: Characteristics and classification of Gymnosperms, Morphology, Life History & affinities of Cycas, Pinus & Gnetum.
10. Angiosperms: Taxonomy of Angiosperms, Systems of Classification: Hutchinson, Takhtajan, Pressey, Engler & Prantl, Bentham & Hooker.

Principles of taxonomy: Criteria of classification, categories of classification, International code of Botanical Nomenclature, principles, typification, citation & authority. Study of the following families with reference to their characteristics, economic importance and attributes etc. a) Annonaceae b) Malvaceae c) Fabaceae d) Caesalpinaceae e) Mimosaceae f) Cucurbitaceae g) Asclepiadaceae h) Euphorbiaceae i) Orchidaceae j) Rubiaceae k) Poaceae

11. Cell Biology and Anatomy: Ultra structure of cell and cell organelles, cell wall structure, tissue and tissue systems, meristems, shoot & root apices, normal & anomalous secondary growth.

12. Cytology, genetics and Evolution: Mitosis and Meiosis; Chromosome (Morphology, Structure, importance); concept of gene laws of inheritance; gene action; genetic code; linkage and crossing over; general account of mutations; polyploidy and its role in crop improvement, Concept of Primitive flower; development of anther and ovule; general account of embryosac and types of embryo; fertilization; endosperm morphology and types; polyembryony and apomixes.

13. Ecology: Ecosystem: Concept, biotic & abiotic components, ecological pyramids, productivity. Biogeochemical cycles (Carbon, Nitrogen, Sulphur, Phosphorous cycles), Plant succession – Xerosere and Hydrosere Bio-diversity and conservation.

14. Physiology Absorption and translocation of water; Transpiration and stomatal behaviour; Absorption and uptake of Ions, Donnan's equilibrium; Role of micronutrients in plant growth; Translocation of solutes; Photosynthesis (Light and dark reaction, Red drop, Emerson effect, Two pigment systems, Mechanism of Hydrogen transfer, Calvin cycle, Enzymes of CO_2 reduction, Hatch and slack cycle, C4 cycle, CAM Pathway, Factors affecting photosynthesis, Pigments.); Respiration (Glycolysis, Pentose phosphate shunt, structure and role of mitochondria, Kreb's cycle, Oxidative Phosphorylation, Photorespiration, respiratory quotient, fermentation, Pasteur effect, factors affecting.); The enzymes (Nomenclature and classification, structure and composition, Mode of enzyme action , Factors affecting.); Nitrogen metabolism and bio synthesis of proteins, Nitrogen fixation, Nitrogen cycle, (Physical and Biological); Nitrogen assimilation, Amino acid metabolism, Plant Hormones(Auxins, Gibberellins, Cytokinins, Abscissic acid – general account.)

15. Economic Botany: Utilisation of plants, food plants, fibres, vegetable oils, wood yielding plants, spices, medicinal plants, beverages and rubber.

16. Recent aspects of Botany: Genetic Engineering; Plant tissue culture; Social forestry; Environmental Pollution (Water, Soil, Air) Health hazards and control, Biotechnology.

V. Teaching Methodology (Marks: 20)

1. The Nature & Scope of Science: A brief introduction of Oriental and Western Science, Nature of Science, Scope of Science, Substantive and Syntactic Structure of Science.
2. Aims and Values of Teaching Biological Sciences: Aims of teaching Biological Sciences, Values of teaching Biological Sciences.

3. Objectives of Teaching Biological Sciences: Importance of Objectives of Teaching Biological Sciences, Bloom's Taxonomy of Educational Objectives and limitations, Writing Instructional Objectives and Specifications.

4. Approaches and Methods of Teaching Biological Sciences: Inductive Approach and Deductive Approach, Methods of Teaching 1. Lecture Method, 2. Lecture cum Demonstration Method, 3. Heuristic Method, 4. Project Method, 5. Experimental Method, 6. Laboratory Method.

5. Planning for effective Instruction: Year Plan, Unit Plan, Lesson Plan – Herbartian and Bloom's Approach, Criteria for Evaluation of Lesson Plan. Self Evaluation and Peer Evaluation, Learning experiences – Characteristics, Classification, Sources and Relevance, Teaching – Learning Material and Resources in Biological Sciences.
6. Science Laboratories: Importance of Practical work in Biological Sciences, Planning Science Laboratory, Procurement, Care and Maintenance of Laboratory Equipment, Maintenance of different Registers, Safety and First aid, Development of Improvised Apparatus.
7. Science Curriculum: Principles of Curriculum Construction, Defects in the existing School Science Curriculum, Correlation of Biological Sciences with other School Subjects, Qualities of a good Biological Science Text-book.
8. Biological Science Teacher: Qualities of a good Biological Sciences Teacher, Roles and Responsibilities.

9. Non-formal Science Education: Science club, Eco-club, Blue-club, Red ribbon club, Science fairs – Objectives, levels of organizations, importance, Science Laboratories, Role of NGO`S and State in popularizing science.

10. Evaluation: Concept and process of Measurement and Evaluation, Continuous Comprehensive Evaluation, Tools of Evaluation, Preparation of Scholastic Achievement Test (SAT), Analysis and interpretation of scores.

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024

Category of Post: PGT
Paper II – ZOOLOGY Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.

- Adolescence Education
- Value Education – Moral Value and Professional Ethics in Education.
- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**

- Right of Children to Free and Compulsory Education Act - 2009
- Right to Information Act - 2005
- Child Rights
- Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. Development Of Child

- Development, Growth & Maturation — Concept & Nature
- Principles of development and their education implication
- Factors influencing Development — Biological, Psychological, Sociological,
  emotional.
- Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
- Understanding Development — Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
- Individual differences — Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.

- Development of Personality — Concept, Factors effecting development of personality, self concept.
- Adjustment, Behavioural problems, Mental Health, Defense mechanism.
- Methods and Approaches of Child Development — Introspection, Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal
- Developmental tasks and Hazards

2. Understanding Learning

- Concept, Nature of Learning — input — process — outcome
- Factors of Learning — Personal and Environmental
- Approaches to Learning and their applicability—Behaviorism (Skinner, Pavlov, Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)
- Dimensions of Learning — Cognitive, Affective and Performance.
- Motivation and Sustenance —its role in learning.
- Memory & Forgetting
- Transfer of Learning

3. Pedagogical Concerns

- Teaching and its relationship with learning and learner.
- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts—Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods — Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups — Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
- Phases of Teaching — Pre active, Interactive and Post active

- General and Subject related skills, competencies required in teaching and attributes of good facilitator.
- Learning resources — Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal implications, Rights of a child, Time Management.
- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. **Classification of Animal Kingdom**
2. **Non Chordata**

   Classification of Non Chordata

   General characteristics and features of

Protozoa	:	Polystomella, Trypanozoma type study.
Porifera	:	Canal system, histology & Spicules.
Cnideria	:	Obelia type study,
Platihelmenthes	:	Fasciola type study,
Nematodes	:	Ascaris
Annelida	:	Earth worm, Leech type study
Arthropoda	:	Palaemon type study
Mollusca	:	Snail type study
Echinodermata	:	Star fish type study

3. **Chordata**

   Classification of Chordata

   General characteristics and type study of the following with reference to skeletal system, respiratory system, circulatory system and nervous system.

Pisces	:	Scoliodon
Amphibia	:	Frog
Reptilia	:	Calotes
Aves	:	Pigeon
Mammalia	:	Rabbit

4. **Cell Biology:** Ultra structure of the cell: Plasma membrane, mitochondria, Golgi bodies, Nucleus, Endoplasmic Reticulam, Ribosomes, Chromosomes and their fine structure, Mitosis and Meiosis, DNA & RNA and Genetic Code, Protein Synthesis, tissues.
5. **Genetics:** Mendel's Law of inheritance – critical view, Linkage, crossing-over, sex-linked inheritance, mutations, inborn errors of Metabolism, human Genetics and genetic engineering.
6. **Physiology:** Vitamins, Enzymes, Carbohydrates, Proteins and Lipids metabolism, Osmoregulation, Thermo-regulation, Excretion in vertebrates, muscle contraction, Nerve Impulse, vertebrate hormones and Mammalian reproduction.
7. **Animal Behaviour:** Taxis, reflexes, instinctive behaviour, motivatived behaviour, learning imprinting, habituation, classical conditioning, instrumental conditioning, trial and error learning, physiology and phylogeny of leaning, biological rhythms – circadian, lunar and circannual rhythms.
8. **Developmental Biology:** Gastrulation in Frog and Chick, Development of Chick upto 24 hrs, Foetal membranes of chick, Placenta in Mammals (Formation and types)
9. **Evolution:** Origin of Life – Modern concepts, theories of Evolution, Isolation, Speciation, Natural Selection, Hardy Weinberg's Law, population genetics and evolution, adaptations, evolution of Man.Zoogeographical realms of the world.
10. **Ecology:** Concept of Ecosystem, Biogeochemical cycles, influence of environmental factors on animals , energy flow in Ecosystem, food chains & tropic levels, community ecology. Ecological Succession, Environmental Pollution – Air, water, land, noise, radioactive, thermal and visual; Effects of pollution on ecosystem, prevention of pollution.
11. Wild Life in India and Conservation of Wild Life.

V. Teaching Methodology (Marks: 20)

1. The Nature & Scope of Science: A brief introduction of Oriental and Western Science, Nature of Science, Scope of Science, Substantive and Syntactic Structure of Science.
2. Aims and Values of Teaching Biological Sciences: Aims of teaching Biological Sciences, Values of teaching Biological Sciences.
3. Objectives of Teaching Biological Sciences: Importance of Objectives of Teaching Biological Sciences, Bloom's Taxonomy of Educational Objectives and limitations, Writing Instructional Objectives and Specifications.
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5. Planning for effective Instruction: Year Plan, Unit Plan, Lesson Plan – Herbartian and Bloom's Approach, Criteria for Evaluation of Lesson Plan. Self Evaluation and Peer Evaluation, Learning experiences – Characteristics, Classification, Sources and Relevance, Teaching – Learning Material and Resources in Biological Sciences.
6. Science Laboratories: Importance of Practical work in Biological Sciences, Planning Science Laboratory, Procurement, Care and Maintenance of Laboratory Equipment, Maintenance of different Registers, Safety and First aid, Development of Improvised Apparatus.
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Government of Andhra Pradesh
Department of School Education
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DSC-2024
Category of Posts: PGT
Paper – II - Social Studies - Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
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	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

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1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
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6. **National Education Policy-2020**

PART - III

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1. **Development Of Child**
   - Development, Growth & Maturation — Concept & Nature
   - Principles of development and their education implication
   - Factors influencing Development — Biological, Psychological, Sociological, emotional.
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   - Concept, Nature of Learning — input — process — outcome
   - Factors of Learning — Personal and Environmental

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- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
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PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

Theme - I: Diversity on the Earth

Universe- origin, Galaxy, Celestial bodies, Constellations, The Solar System, Our Earth ; Globe, Axis, Latitudes, Longitudes, Movements of the Earth, Equinox, Eclipses, Components of the Environment, Maps- Types, Components, Conventional Symbols, uses; Forests - Climatic regions, Types of forests, Uses, Forests in AP, Deforestation, Social Forestry and Conservation; Landforms - Major Landforms of AP, Podu Cultivation, Diversity in Lifestyles; Resources-Types, Conservation; Land, Soil, Water, Natural Vegetation and Wildlife Resources, Landslides, Factors of Soil formation, Degradation of soil and conservation measures, Water problems of water availability; India Size and Location, India's Neighbours, India Relief Features-Major Relief Divisions, Climate of India-Monsoon, Climogrphs, Climatic Controls, Drainage-The Himalayan Rivers and Peninsular rivers and river pollution, Indian Rivers and Water Resources.

Theme - II: Production Exchange and Livelihoods

Markets around us-Types of Markets, Consumer Protection; Road Safety-Traffic Signs, Road marking signs-using methods, Road safety measures, pedestrian safety, safe cycling, safety travelling; Mineral and Power Resources- Types of Minerals, Distribution, Conservation, Power Resources -Conventional, Non-Conventional; Agriculture- Types of farming, major crops; Industries-Classification, Distribution ; Human Resources-Population Density, Population size and distribution, Population Change Population growth, National population policy; Population composition; Weavers, Iron Smelters and Factory Owners- Indian Textiles and the World Market, The Sword of Tippu Sultan and Woods Steel; Public Facilities-Water as part of the Fundamental Right to life, Govt. role, The story of village Palampur, Ideas of Development-HDI, Production and Employment-GDP, organised, Unorganised Sectors, The People-Census, Changing Population Size, People as a Resource-Economic activities by men and women Quality of population, Unemployment, Poverty as a Challenge-Poverty line, Global poverty Scenario, anti-poverty measures, People and Settlement-Urbanisation, People and Migration-Rural, Urban and Seasonal, Temporary, International migrations, Rampur: A Village Economy, Globalisation-MNC,WTO, Food Security-Food Security in India, Access to Food, Nutritional status, MSP, PDS; Role of Cooperatives in Food Security, Sustainable Development with Equity.

Theme -III: Political Systems and Governance

Early life to Settled life - Belum Caves, Rock Paintings; Emergence of Kingdoms and Republics-Janapadas, Mahajanapadas; kingdoms and Empires- Mauryan, Gupta, Satavahana, Pallava, Chalukya; Delhi Sultanate; Kakatiya Kingdom, Vijayanagara Empire, Mughal Empire,How When and Where,From Trade to Territory- The company establishes Power -

East India Company, The Battle of Plassey, Tipu sultan, The Doctrine of Lapse; Ruling the Countryside - The company becomes the Diwan, The need to improve Agriculture, Munro System, Crops for Europe, Why the demand for indian Indigo?, The Blue Rebellion and After; Tribals, Dikus and the Vision of a Golden Age-How did Tribal groups live?, How did colonial rule affect tribal lives?; Forest Loss and their Impact, Birsa Munda; When people rebel 1857 and after-Policies and the people, Through the Eyes of the people, A Mutiny becomes a popular Rebellion, The Company fights back; Civilizing the "Native" Educating the nation-How the British saw Education, The agenda for a National education of British; The making of the National Movement-1870's - 1947,The Emergence of Nationalism, The growth of mass Nationalists, Dandi March, Quit India and Later; India after Independence-A new and Divided Nation, A Constitution is written, How were States to be formed, Planning for development, A Nation sixty years on; The French Revolution, Socialism in Europe and the Russian Revolution, Nazism and the rise of the Hilter, Forest society and Colonialism, Pastoralists in the Modern World, The World Between Wars Part-1,2, National Liberation Movement in the Colonies-China, Vietnam, Nigeria, National Movement in India and Partition and Independence:1939-1947, Independent India[The First 30 years-1947-77],Emerging Political Trends 1977-2000,Post-War World and India-UNO, Cold War, Military Alliances, India and its Neighbours.

Theme -IV: Social Organisation and Inequities

Towards Equality- Diversity, discrimination, Types, Constitutional Provisions; Women Change the World- Women's movement, Inspirational Women; Women, Caste and Reform-Working towards Change-Changing the lives of widows, Girls begin to going to School, Women write about Women, Caste and Social Reform-Gulamgiri who could enter, The Non Brahman movement; Indian Constitution - Introduction, Key features, Fundamental Rights and Duties ;Government- Types, Levels, Local self-Government, State Government-Legislative, Executive, Judiciary; Working of Institutions, Understanding Secularism; Why do we need Parliament, The role of the Parliament, Houses of Parliament, Who are the people in parliament?; Understanding Laws-How do new laws come out?, Unpopular and Controversial Laws, Judiciary-Independent Judiciary, Structure of Courts in India, Different Branches of the Legal System, Understanding Our Criminal Justice System-Role of the police, Public prosecutor, Judge, What is a Trial Crime?; Understanding Marginalisation-Who are Adivasis?, Adivasis and development, Minorities and Marginalisation; Confronting Marginalisation-Invoking Fundamental Rights, Laws for the Marginalised, Protecting the Rights of Dalits and Adivasis, Adivasi demands and 1989 Act; Law and Social Justice-Bhopal Gas tragedy, Enforcement of safety Laws, New Laws to protect the Environment, What is Democracy? why Democracy?, Constitutional Design-Democratic Constitution in South Africa, Struggle against Apartheid, Electoral politics, Democratic Rights, The Making of Independent India's Constitution, Social Movements in Our Times, Citizens and the Governments-RTI, Legal Service Authority.

Theme - V: Religion and Society

Religions-Hinduism, Jainism, Buddhism, Islam, Sikhism, Unity in Diversity; Bhakti Movement - Sufi Movement;

Theme -VI: Culture and Communication

Early Civilisations-Indus, Vedic period, Vedic Literature, Indian Culture, Languages.

Geography:

General Geography-Definition and scope of Geography – Branches of Geography-Geography as an integrating Discipline and as Spacial Science with physical, biological and social sciences.
Solar System-Origin and Evolution of solar system-Rotation and Revolution of the Earth and their effects-Latitudes and Longitudes-Standard Time and International Date line.
The Earth - Interior of the Earth-Wegner's theory of continental drift -Major Rock types and their characteristics.
Geomorphology -Major landforms: Mountains, Plateaus and Plains-Geomorphic Process: Weathering - Physical and Chemical Weathering-Landforms associated with wind and river – Erosional and depositional.
Climatology -Climate: Elements of weather and climate-Atmosphere: Composition and structure of atmosphere -Insolation: Insolation and Heat Budget of the Planet Earth-Temperature: Factors influencing Temperature, Vertical and horizontal distribution of temperature Pressure- Global pressure belts Winds Planetary winds, Seasonal and Local winds-Precipitation: Forms and types of rain fall (Convectional, Orographic and Cyclonic rain fall).
Bio geography -Biomes of the world- Equatorial, Tropical and Temporate -Biodiversity and Conservation -Concept of Ecosystem and Ecological Balance- Oceanography, Hydrology and Natural hazards
Oceanography-Divisions of the Ocean floor- Continental shelf, Continental slope, Deep Sea plains and Ocean deeps-Ocean Temperatures- Vertical and horizontal distribution-Ocean Salinity Definition, vertical and horizontal distribution-Oceanic Movements: Waves, Tides and Currents, (Currents of Atlantic, Pacific and Indian Ocean)
Hydrology-Elements of Hydrological cycle: Precipitation, evaporation, evapo-transpiration, run off, infiltration and recharge -Hydrological Cycle.
Natural Hazards-Causes and Spatial distribution of floods, droughts, cyclones, Tsunamis, Earthquakes and landslidesGlobal Warming and its consequences-Disaster Management in India-Human Geography : Definition, Content and scope- Man and Environment: Definition, Content, Classification of environment-Environmental impact World Population : Growth, Factors influencing, density and distribution
Human activities - Primary, Secondary and tertiary activities-Resources - Definition, Classification and Conservation-Agriculture -Definition, Types, food crops (Rice and wheat) Nonfood crops (Cotton, Sugarcane) and Plantation crops-(Rubber, tea and coffee) their Significance, Conditions - for cultivation, production and distribution.
Definition and Classification (Metallic - Iron), non Metallic – bauxite and (fuel minerals - coal andpetroleum) Industries - Location factors, types of industries -Agro – based (Cotton textiles) Forest based (Paper mills) -Mineral based (Iron and steel) - Chemical based (Fertilizers)- Transportation -Road ways, Railways, Water ways and Air ways - Rail ways-Intensive net work rail way, Regional rail-ways and Trans continental railways - Water ways-

Mjor sea ports: London, San Francisco-Reo De Janeiro, Cape Town, Kolkata and Sydney-Major Air ports- Tokyo, Paris, Chicago, Bogota and -Wellington
Physical features of India - Major features - Northern mountains, Indo – Gangetic-plains, Peninsular plateau of India and coastal plains- Major rivers of India - Perennial rivers- Indus, Ganges and Brahmaputra-Non Perennial rivers- Narmada, Tapati, Mahanadi, -Godavari, Krishna, Pennar and Cauvery - Climate of India - Cold weather season: Temperature Rainfall &Pressure distribution Hot weather season- Temperature, Rainfall &Pressure distribution South west monsoon season- Temperature, Rainfall &Pressure distributionNorth east monsoon season: Temperature, Rainfall &Pressure distribution-Natural vegetation of India-Types of vegetation based on rainfall and their-distribution. Evergreen forest, deciduous forest, scrub -forest,& Thorny forest -Soils - Definition, factors for formation, types and -their distribution.
Population- Growth trends from 1901 to 2001, Distribution based-on density, problems of high population- Irrigation-Types of irrigation: canals, wells and tanks. Major -multipurpose projects. Bakranangal, Hirakud, -Damodarvalley corporation and Nagarjuna Sagar-Agriculture: Cropped area, production and distribution of -selected crops: Rice, Wheat, Millets, Coffee, Tea,Sugarcane, Cotton, Jute and tobacco; Problems ofIndian agriculture.
Minerals- Production and distribution of coal, petroleum, iron,mica and manganese, bauxite. Industries- Location factors growth and distribution of iron andsteel, cotton textile and ship building industries- Transportation-Means of Transport – Road ways, Rail ways, Water -ways and Air ways; Major ports of India – Mumbai, -Cochin, Kandla, Kolkata, Visakhapatnam and Chennai.
Geography of Andhra Pradesh: Location, Physiography and Climate, Population.

History:

What is History: Definition - Scope – Sources – Historiography – Relationship with other Social Sciences – Impact of Geography on history - Relevance of History.
Ancient Civilizations and Culture : Pre Harappan Cultures - Harappan Civilization – Script, town planning, society, economy and culture - Vedic age and Post Vedic Culture.
Early States, Empires and Economy : Early States – 16 Mahajanapadas - Rise of Magadha – Economy and Agriculture – urbanization.
Early Societies, and religious movements: Early Societies – Social differences – Religious movements – Jainism – Buddhism and other sects Ajjivikas and Lokayats.
Polity, Economy, Society and Culture between 3rd to 7th Century A.D. :Mauryas - Kushanas – Guptas – Pushyabhuties – Origin of feudalism – Polity, Society, Economy and Culture.
Deccan and South India up to 8th A.D: Sangam age – Satavahanas – Pallavas – Chalukyas – Rastrakutas – Cholas – Polity, Society, Economy and culture.
Age of Delhi Sultanate: Sources/Travellors Accounts - Arab Invasions – Turkish invasions – Delhi Sultanate – Polity, Economy, Society and Culture.
Age of Mughals: Chronicles/Sources – Mughal rule – Babur, Humayun, Shershah, Akbar, Jahangir, ShahJahan and Aurangazeb - Polity, Economy, Society and culture - Disintegration - Maratas, Sikhs.
Bhakti and Sufi Traditions 8 A.D. 16 Century A.D: Prevailing Religious Traditions and beliefs in the Society – Bhakti Saints and their Preachings – Sufism – Main features and their impact.
Deccan and South India 8th A.D – 16 the A.D : Sources - Kakatiyas – Vijyanagara – Bahamanis – Qutbshahis and Asafjahis – a brief survey.
India under the Colonial Rule : Sources - Portuguese – Dutch – French – English East India Company – Era of Governor Generals and their Polices – Reforms of Viceroys – 1857 Mutiny.

Indian National Movement: Background to National Movement, Socio-religious movement – rise of Nationalism – Vandemataram movement – Home rule movement – Emergence of Mahatma Gandhi and leadership – Revolutionary movement, Subhash Chandra Bose – Poona Pact Quit India movement – Partition of India – Emergence of Independent India.
The Modern World- Beginning of Modern Age, Renaissance, Development in Science, The Reformation Movement, Rise of Nation States, Struggle against Absolute Monarchies - Capitalism and Industrial Revolution -The Revolutionary Movements -The Glorious Revolution, The American war of Independence, The French Revolution of 1789 - .Nationalist Movements: Rise and fall of Napoleon, French Revolution of 1830 and the 1848 Revolt, Unification of Germany and Italy, Socialist Movements – Rise of Working class, Paris Commune of 1871
Imperialism: Factors in the rise of Imperialism, Forms and Methods of Imperialism, Scramble for Africa and Asia
Contemporary World: The First World war, League of Nations, The Russian Revolution of 1905 and 1917 -The World upto World War II: Rise of Fascism and Nazism, Militarism in Japan, U.S.A. and U.S.S.R. after World War I, Turkey after World War I, Failure of League of Nations, Spanish Civil war, World war II, The Nationalist Movements in Asia and Africa, Emergence of Latin America
The World after World War II: Formation of Military Blocks, Role of independent Nations of Asia and Africa in the World Affairs, Non-Alignment Movement, Role of UNO in preserving World Peace, Problems of Disarmament and Nuclear Weapons, Prominent Personalities of the World.

Civics:

Scope and Significance of political Science - Introduction to Civics and Political Science, Origin and Evolution, Meaning, Definitions, What do we study? Why do we study?
State - State – Meaning, Definitions, Elements, Relation of state with other Institutions – Society, Association, Government.
Nationalism - Nation, Nationality, Nationalism, Factors contributing for Nationality, Is India a Nation? Meaning, Forms (Traditional and modern)
law -Meaning, Definitions, Classification, Law and morality, Rule of Law. Liberty and Equality – Meaning, Definitions, Types, Safeguards, Liberty – Equality.
Rights and Responsibilities– Meaning, Definitions, functions Forms, Relationship between Rights and Responsibilities, Human Rights
Justice - Justice – Meaning, Forms of Justice, Social Justice.
Citizenship - Meaning, Definitions, Methods of Acquiring, Citizen – Alien , Loss of Citizenship, Hindrances to Good Citizenship, Universal Citizenship
Democracy- Meaning, Definitions, features, types, merits, devices, future
Secularism -Meaning, Secular State, Western Model, Indian Model, Why India was made a Secular State? Criticism of Indian Secularism
Constitution– Meaning, Definitions, features, Classification
Government - Unitary, Federal, Parliamentary, Presidential, Theory of Separation of Powers, Organs of Government
Indian Constitution: Indian National Movement- Government of India Acts – 1909, 1919 & 1935-
Salient features of Indian Constitution
Fundamental Rights &Directive Principles of State Policy- Fundamental Rights- Directive Principles of state Policy- Fundamental Duties
Union Government- Union Executive – President of India - Vice – President of India - Prime Minister & Council of Ministers

Indian Parliament - LokSabha-Composition – Powers and functions- Rajya Sabha: Composition – Powers and functions
Parliamentary Committees- Public Accounts Committee – Estimates -Committee – Committee on Public Undertakings
Union Judiciary - Supreme Court of India – Composition- Powers and Functions of Supreme Court -of India - Judicial Review
State Government- State Executive – Governor- Powers and Functions-Chief Minister - Powers and Functions- Council of Ministers
State Legislature-Legislative Assembly- Composition – Powers and Functions- Legislative Council-Composition – Powers and Functions - Legislative Committees: Public Accounts Committee – Estimates-Committee and Ethics Committee
State Judiciary-High Court – Composition- Powers and Functions of High Court- District Courts: Composition – Powers and Functions.
Union – State Relations - Legislative Relations-Administrative Relations - Financial Relations.
Local Government - Rural Local Government-Panchayati Raj Institutions – 73rd Constitution Amendment Act- Urban Local Government: Municipalities - Municipal Corporation – 74th Constitution Amendment Act- District Collector: Role in Local Governments
India's Foreign Policy - Determinants of Foreign Policy- Basic features of India's Foreign Policy-
South Asian Association for Regional Cooperation (SAARC)
United Nation Organization (UNO)-Origin of UNO-Principal Organs of UNO- Achievements and failures of UNO
Contemporary Trends and Issues- Globalization- Terrorism-Corruption.

Economics:

Origin and meaning of Economics - Definitions of Economics; Adam Smith, Alfred Marshall, Lionel Robbins, Paul Samuelson, & Jocob Viner- Concept of Economics – Micro & Macro Economics Deductive and Inductive Method, Static and Dynamic Analysis, Positive and Normative Economics. Goods: (Free, Economic, Consumer, Producer, and Intermediary), Wealth, Income, Utility, Value, Price, wants and welfare.
Theory of Consumption - Cardinal and Ordinal Utility, the law of Diminishing Marginal Utility – Limitations – Importance; law of Equi-Marginal Utility Limitations and – Importance of the Law, Indifference Curve Analysis – Properties and Consumer's Equilibrium.
Theory of Demand - Meaning – Demand Function – Determinants of Demand, Demand Schedule – Demand Curve, Law of Demand, Exceptions to Law of Demand - Causes for the downward slope of the demand curve, Types of Demand – Price Demand, Income Demand, and Cross Demand- Elasticity of Demand – Meaning and Types – Price Elasticity, and Income Elasticity and Cross Elasticity – Price Elasticity-Types; Measurement of Price Elasticity of Demand- Point Method. Arc Method, Total Outlay Method. Determinants of Elasticity of Demand; Importance of Elasticity of Demand.
Theory of Production - Meaning - Production Function – Factors of Production; Short-run and Long-run Production Function; Law of variable proportions - Law of returns to scale; Economies of Scale - Internal and External- Supply – Supply Function - Determinants of Supply — Law of Supply- Cost Analysis – Basic Concepts of Costs- (Money, Real, Opportunity, Fixed and Variable, Total, Average and Marginal costs)- Revenue Analysis – Revenue under perfect and imperfect competition.

Theory of Value - Meaning and Classification of Markets – Perfect competition – features – price determination- Short-run and Long-run equilibrium of a firm and Industry- Imperfect Competition – Monopoly – Price Determination – Price-Discrimination-Monopolistic Competition- Features- Meaning of Oligopoly – Duopoly.

Theory of Distribution - Determination of Factor Prices – Marginal Productivity Theory - Rent – Ricardian theory of Rent – Modern theory - Quasi Rent – Transfer earnings - Wages – Meaning and types of wages – Money and Real wages - Interest- Meaning – Gross and Net interests - Profits – Meaning – Gross and Net profits.

National Income : Definitions of National Income and Concepts- Measurement of National Income – Census of Product Method – Census of Income Method – Census of Expenditure Method- Methods of Measuring National Income in India; Problems and importance

Macro Economic Aspects - Classical theory of Employment –J.B. Say Law of Markets-Limitations – J.M. Keynes Effective Demand- Public Economics - Public Revenue – Public Expenditure – Public debt – Components of Budget.

Money, Banking and Inflation - Money – Definitions and Functions of money – Types of Money - Banking – Commercial Banks – Functions; Central Bank – Functions – Reserve Bank of India – Net Banking- Inflation – Definitions – Types – Causes and Effects of inflation – Remedial Measures.

Statistics for Economics - Meaning, Scope and Importance of Statistics in Economics with Diagrams (Bar diagrams and Pie diagrams)-Measures of central tendency – Mean, Median, Mode.

Economic Growth And Development - Differences Between Economic Growth and Development classification of the world countries - Indicators of Economic development - Determinants of Economic Development - Characteristic features of Developed Countries - Characteristic features of Developing countries with special reference to India

Population and Human Resources Development - Theory of Demographic Transition - World Population - Causes of rapid Growth of population in India - Occupational distribution of population of India - Meaning of Human Resources Development - Role of Education and Health in Economic Development- Human Development Index (HDI)

National Income - Trends in the growth of India's National Income - Trends in distribution of national income by industry Origin - Share of Public Sector and Private Sector in Gross Domestic Product - Share of Organised and Un-organised Sector in Net Domestic Product - Income Inequalities - Causes of Income Inequalities - Measures to control income inequalities -Unemployment in India – Poverty - Micro Finace-Eradication of Poverty

Agriculture Sector-Importance of agriculture in India - Features of Indian agriculture - Agriculture Labour in India - Land utilization pattern in India - Cropping pattern in India - Organic Farming -Irrigation facilities in India - Productivity of agriculture - Land holdings in India - Land reforms in India - Green Revolution in India - Rural credit in India - Rural Indebtedness in India - Agricultural

Marketing - Industrial Sector - Significance of the Indian Industrial Sector in Post –Reform Period -Industrial Policy Resolution 1948 - Industrial Policy Resolution 1956 - Industrial Policy Resolution 1991 - National Manufacturing Policy- Disinvestment - National Investment Fund (NIF) -Foreign Direct Investment -Special Economic Zones (SEZs) - Causes of industrial backwardness in India -Small Scale Enterprises (MSMEs) - Industrial Estates - Industrial Finance in India - The Industrial Development under the Five Year Plans in India.

Tertiary Sector - Importance of Services Sector -India's Services Sector - State-Wise Comparison of Services - Infrastructure Development - Tourism - Banking and Insurance - Communication -Science and Technology - Software Industry in India

Planning And Economic Reforms - Meaning of Planning -NITI Ayog -Five Year Plans in India - XII Five Year Plan - Regional Imbalances - Role of Trade in Economic Development - Economic Reforms in India - GATT – WTO

Environment and Sustainable Economic Development - Environment - Economic Development -Environment and Economic Linkages. - Harmony between Environment & Economy

Economy Of Andhra Pradesh - History of Andhra Pradesh - Characteristic features of A.P. Economy -Demographic features - Occupational distribution of labour - Health Sector - Education -Environment - Agricultural sector - Industrial sector - Service and Infrastructure sector - Information and Technology - Tourism -Andhra Pradesh and Welfare Programmes/ Schemes

Economic Statistics - Measures of Dispersion - Definitions of Dispersion - Importance of Measuring Variation -Properties of a good measure of variation -Methods of Studying Variation - Measures of Dispersion for average - Lorenz Curve - Correlation -Index Numbers - Weighted Aggregation Method.

V. Methodology (Marks: 20)

1. **Aims and objectives of learning Social Sciences**

   - values through Social Sciences - learning objectives and illustrations - learning objectives in constructivist approach - Academic Standards

2. **School curriculum and resources in Social Sciences**

   - NCF-2005, RTE-2009, SCF-2011 - syllabus – Learning Resources.

3. **Social Sciences as on integrating area of study: Context and concerns**

   - Distinguishing between Natural and Social Sciences - Social Studies and various Social Sciences -contributions of some eminent Social Scientists

4. **Approaches and strategies for learning Social Sciences**

   - collaborative learning approach - 5E learning model - problem solving approach - planning -concept mapping

5. **Community Resources and Social Sciences Laboratory**

6. **Tools and techniques of assessment for learning: Social Sciences**

7. Evaluation - CCE - assessment framework - assessment learning of students with specialneed

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Category of Post: PGT
Paper II – CIVICS Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education – Moral Value and Professional Ethics in Education.

- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**

- Right of Children to Free and Compulsory Education Act - 2009
- Right to Information Act - 2005
- Child Rights
- Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. Development Of Child

- Development, Growth & Maturation — Concept & Nature
- Principles of development and their education implication
- Factors influencing Development — Biological, Psychological, Sociological,
  emotional.
- Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
- Understanding Development — Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
- Individual differences — Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.
- Development of Personality — Concept, Factors effecting development of personality, self concept.
- Adjustment, Behavioural problems, Mental Health, Defense mechanism.

- Methods and Approaches of Child Development — Introspection, Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal
- Developmental tasks and Hazards

2. Understanding Learning

- Concept, Nature of Learning — input — process — outcome
- Factors of Learning — Personal and Environmental
- Approaches to Learning and their applicability—Behaviorism (Skinner, Pavlov, Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)
- Dimensions of Learning — Cognitive, Affective and Performance.
- Motivation and Sustenance —its role in learning.
- Memory & Forgetting
- Transfer of Learning

3. Pedagogical Concerns

- Teaching and its relationship with learning and learner.
- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts—Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods — Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups — Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
- Phases of Teaching — Pre active, Interactive and Post active
- General and Subject related skills, competencies required in teaching and attributes of good facilitator.
- Learning resources — Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal

implications, Rights of a child, Time Management.

- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

I.

1. Concepts, Theories and Institutions:
   a. Introduction: Definition, Scope and importance of political Science
   b. State: Nation formation and its functions
   c. Law: Sources of Law
   d. Liberty and Equality: Their relationship
   e. Kinds of rights
2. Ideologies; Individualism, Anarchism, Fascism and Socialism
3. Forms of Government
   a. Democracy: Direct and Indirect
   b. Unitary and Federal
   c. Parliamentary and Presidential

   Organs of Government
   a. Legislature
   b. Executive
   c. Judiciary

II. Indian Government and policies

1. Evolution of Indian Constitution
2. Indian Federation: Centre State relations
3. Fundamental rights, duties, Constitutional remedies.
4. President: Election, Powers functions, Prime Minister and Council of Minister.
5. Parliament Composition Powers, Judicial review
6. Judiciary: Supreme Court, Powers, Judicial review.

7. Election commission: Electoral reforms, Voting Behaviour.
8. Local Government: 73rd and 74th Amendments.

III. Political Thought

1. Indian Political Thought
   a. Manu
   b. Koutilya
   c. Gandhi
   d. Ambedkar

IV. Control over Administration

1. Legislative control
2. Executive control
3. Judicial Control
4. Lok Pal
5. Lokayukta

V. Government and Politics in Andhra Pradesh

1. Historical Background of the A.P.: Socio – Political Struggle in Hyderabad State
2. States Reorganization and Formation of Andhra Pradesh Party System: National and Regional Parties pressure Groups.

V. Teaching Methodology (Marks: 20)

1. Social Studies – Meaning, Nature and Scope: Defining Social Studies, Main features of Social Studies, Social Studies and Social Sciences differentiated, Scope of Social Studies – Types of Subject material and learning experiences included in the study of Social Studies, Need and importance of Social Studies.
2. Values, Aims and Objectives of Teaching Social Studies: Values of teaching Social Studies, Aims of teaching Social Studies at Secondary Level, Instructional Objectives of teaching Social Studies, Relationship of instructional objectives with general aims and objectives of Social Studies, Taxonomy of Educational and instructional objectives, Writing objectives in behavioural terms.
3. Social Studies Curriculum: Social Studies as a Core subject, Principles of Curriculum Construction in Social Studies, Organization of subject matter – different approaches correlated, integrated, topical, concentric, unit and chronological.
4. Instructional Strategies in Social Studies: Techniques, devices and maxims, Different methods of teaching Social Studies - Story telling, lecture, source, discussion, project, problem, inductive, deductive, observation, assignment – socialized recitation, Team teaching, Supervised study.
5. Planning for Instruction: Developing teaching skills through Micro-teaching, Year Planning, Unit Planning, Lesson Planning
6. Instructional Material and Resources: Text books, work books, supplementary material syllabus, curriculum guides, hand books, Audio visual, Social Studies

laboratory, library, clubs and museum, Utilizing community resources.

7. Social Studies Teacher: Qualities of a good Social Studies teacher, Roles and responsibilities.
8. Evaluation in Social Studies: Concept and purpose, Types of Evaluation, Evaluation as a continuous and comprehensive process, Different techniques of Evaluation, Preparation for Scholastic Achievement test

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Category of Post: PGT
Paper II – ECONOMICS Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.

- Adolescence Education
- Value Education – Moral Value and Professional Ethics in Education.
- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**

- Right of Children to Free and Compulsory Education Act - 2009
- Right to Information Act - 2005
- Child Rights
- Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. Development Of Child

- Development, Growth & Maturation — Concept & Nature
- Principles of development and their education implication
- Factors influencing Development — Biological, Psychological, Sociological,
  emotional.
- Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
- Understanding Development — Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
- Individual differences — Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.
- Development of Personality — Concept, Factors effecting development of personality, self concept.

- Adjustment, Behavioural problems, Mental Health, Defense mechanism.
- Methods and Approaches of Child Development — Introspection, Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal
- Developmental tasks and Hazards

2. Understanding Learning

- Concept, Nature of Learning — input — process — outcome
- Factors of Learning — Personal and Environmental
- Approaches to Learning and their applicability—Behaviorism (Skinner, Pavlov, Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)
- Dimensions of Learning — Cognitive, Affective and Performance.
- Motivation and Sustenance —its role in learning.
- Memory & Forgetting
- Transfer of Learning

3. Pedagogical Concerns

- Teaching and its relationship with learning and learner.
- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts—Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods — Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups — Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
- Phases of Teaching — Pre active, Interactive and Post active
- General and Subject related skills, competencies required in teaching and attributes of good facilitator.

- Learning resources — Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal implications, Rights of a child, Time Management.

- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. Consumer Behaviour and Demand: Consumer`s Equilibrium – Meaning and attainment of equilibrium through utility approach and Indifference approach, Demand, Market Demand, Determinants of Demand, Demand Curve, Movement along and Shifts in Demand Curve, Law of Demand, and its exceptions, Price, Elasticity of Demand, Measurement of Price Elasticity of Demand, Methods.

2. Producer Behaviour and Supply: Agents of Production, Production Function, Cost of Revenue – Meaning and Various types of Costs and revenue. Isoquants – Supply, Market Supply, Determinants of Supply, Supply Curve, Movement along shifts in Supply Curve. Price elasticity of Supply and its Measurement, Components and theories of Distribution. Welfare Economics – Pare to optimality, Private and Social Products, Consumer Surplus, Production Possibility Curve and Opportunity Cost.
3. Forms of Market and Price Determination: Forms of Market – Meaning and features – Price determination under Perfect Competition, and Imperfect Competition – Monopoly, Duopoly, Monopolistic Competition, Oligopoly.
4. National Income and Related Aggregates: Macro Economics : Meaning, Circular flow of income, Concepts of GDP, GNP, NDP, NNP (at Market price and factor cost), National Disposable and Personal Disposable income – Measurement of National income.
5. Determination of income and Employment: Aggregate demand, Aggregate Supply and their Components. Propensity to consume and propensity to save. Involuntary Unemployment and full Employment. Determination of income and employment. Concept of Investment Multiplier and it's working. Inflation: Meaning, Causes and remedies.
6. Money and Banking: Money – Meaning, evolution and functions – Classification of money – M_1, M_2, M_3 & M_4. Central Bank – meaning and functions methods of

credit control. Commercial Banks – Meaning and functions. Recent Significant reforms and issues in Indian Banking system.

7. Indian Public Finance; Salient Features of Indian Tax System – Direct and Indirect Taxes. Sources of Public revenue, GST, VAT – Tax and Expenditure Reforms. Government budget – Meaning and its components. Objectives of Government budget. Classification of receipts; Classification of expenditure. Types of budget – meaning and implications; Measures to control different deficits. Downsizing the role of Government.
8. International Economics: Theories if International trade, the basis of International Trade – Classical theories of Trade – Adam Smith, Ricardo; Neo – Classical Theories – Herberler's opportunity Cost approaches; modern Theories of Trade – Hecksher and Ohlin Model; Factor Price Equalization Theorem; Rybezynski Theorem; Leontief's Paradox. Balance of Payments – Meaning and Components – Foreign Exchange rate – Meaning (Fixed and Flexible), Merits and demerits. IMF – the World Bank & its associates. WTO.
9. Concepts of Shares, debentures, SEBI, NSEW, BSE and various indices.
10. A.P.Economy: State income: Sectoral Contribution, Population, Programmes initiated by the State Government towards Rural Development Programmes, Special Economic Zones, APIIC in the process of industrial development of Andhra Pradesh.
11. Introduction and Collection, Organization of data: Meaning, Scope and importance of Statistics in Economics. Collection and Organization of data. Census of India and national Sample Survey Organization. Statistical Tools and Interpretation: Measures of Central Tendency, Measures of Dispersion, Measures of Correlation – Karl Pearson's Method, Spearman's rank correlation.
12. Economic Growth and Development – Concepts – Factors affecting economic growth – A brief introduction of the State of Indian Economy on the eve of independence. Common goals of Five Year plans, Major Controversies on Planning in India. Main Features, Problems and Policies of Agriculture, industry and Foreign Trade.
13. Economic activities from 1950 to 1990, Economic Reforms since 1991: Need and Main features, liberalization, Globalization and Privatization; an appraisal of LPG Policies.
14. Current Challenges facing Indian Economy: Poverty and Unemployment – Meaning and Types programmes for alleviation of poverty and Unemployment – Rural development; Key issues – Credit and Marketing – Role of Cooperatives; Agricultural Diversification; Alternative Farming – Organic Farming, Human Capital Formation. Growth of Education Sector in India.

    Employment: Opportunities and other related issues. Infrastructural Problems and Policies. Sustainable Economic Development: Meaning; Effects of Economic Development on Resources and Environment.
15. Sectors of Indian Economy, consumer rights, Infrastructure, Rural Development.

V. Teaching Methodology (Marks: 20)

1. Social Studies – Meaning, Nature and Scope: Defining Social Studies, Main features of Social Studies, Social Studies and Social Sciences differentiated, Scope of Social Studies – Types of Subject material and learning experiences included in the study of Social Studies, Need and importance of Social Studies.
2. Values, Aims and Objectives of Teaching Social Studies: Values of teaching Social Studies, Aims of teaching Social Studies at Secondary Level, Instructional Objectives of teaching Social Studies, Relationship of instructional objectives with general aims and objectives of Social Studies, Taxonomy of Educational and instructional objectives, Writing objectives in behavioural terms.
3. Social Studies Curriculum: Social Studies as a Core subject, Principles of Curriculum Construction in Social Studies, Organization of subject matter – different approaches correlated, integrated, topical, concentric, unit and chronological.
4. Instructional Strategies in Social Studies: Techniques, devices and maxims, Different methods of teaching Social Studies - Story telling, lecture, source, discussion, project, problem, inductive, deductive, observation, assignment – socialized recitation, Team teaching, Supervised study.
5. Planning for Instruction: Developing teaching skills through Micro-teaching, Year Planning, Unit Planning, Lesson Planning.
6. Instructional Material and Resources: Text books, work books, Supplementary material syllabus, curriculum guides, hand books, Audio visual, Social Studies laboratory, library, clubs and museum, Utilizing community resources.
7. Social Studies Teacher: Qualities of a good Social Studies teacher, Roles and responsibilities.
8. Evaluation in Social Studies: Concept and purpose, Types of Evaluation, Evaluation as a continuous and comprehensive process, Different techniques of Evaluation, Preparation for Scholastic Achievement test.

Government of Andhra Pradesh
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DSC-2024

Category of Post: PGT
Paper II – COMMERCE Syllabus

1.	**G.K & Current Affairs**	-	**10M**
2.	**Perspectives in Education**	-	**10M**
3.	**Educational Psychology**	-	**10M**
4.	**Content**	-	**50M**
5.	**Methodology**	-	**20M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 10)

PART - II

II. Perspectives in Education (Marks: 10)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.

- Adolescence Education
- Value Education – Moral Value and Professional Ethics in Education.
- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**

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- Right to Information Act - 2005
- Child Rights
- Human Rights.

5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.

6. **National Education Policy-2020**

PART - III

III. Educational Psychology – 10 Marks

1. Development Of Child

- Development, Growth & Maturation — Concept & Nature
- Principles of development and their education implication
- Factors influencing Development — Biological, Psychological, Sociological,
  emotional.
- Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
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personality, self concept.

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- Concept, Nature of Learning — input — process — outcome
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- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
- Phases of Teaching — Pre active, Interactive and Post active
- General and Subject related skills, competencies required in teaching and

attributes of good facilitator.

- Learning resources — Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal implications, Rights of a child, Time Management.

- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

PART - IV

IV. Content: (50 Marks)

Classes VI to 3 years Bachelor Degree course in A.P. State

1. Business Studies And Management

- Introduction to Business– Concepts, characteristics, objectives. Classification of business as industry and commerce. Distinctive features of business - Business, profession and employment. Choice of Form of Organization .Large Scale and Small Scale Business-.Assistance by Government to Small Scale Sector and Micro enterprises.
- Form of Business Organizations – Sole Proprietors, Joint Hindu Family, Partnership, Joint Stock Company and its formation, Cooperative organization.

- Business ownership– Private, public and Joint sector. Public Enterprises, Role-dynamics of Public Sector, Global Enterprises (Multinational Companies), Joint Ventures.
- Business Services – banking, insurance, transportation, warehousing, communication, Impact of Technology on Business Services.
- Trade: Internal Trade - Retail and Wholesale trade, Emerging modes of business-franchising, E-business and Outsourcing. International Business– Export-Import – Procedure and documentation, EPZ/SEZ. International Trade Institutions and Agreements – WTO, UNCTAD, World-Bank, IMF, GATS (General Agreement of Trade in Services).
- Business Finance: Sources – owners and borrowed fund, Sources of raising finance, Equity and preference Shares, GDR(Global Deposit Receipts), ADR (American Deposit Receipts), Debentures, Bonds – Retained Profit, Public Deposits, Loan from Financial Institutions and commercial banks, Credit-rating and rating agencies, Trade credit, Micro-credit.

- Social Responsibility of Business, Business Ethics, Corporate Governance, Environment protection.
- Management – concept, objectives, nature of management as Science, Art and Profession, levels, Principles of Management general and scientific.
- Business Environment – meaning, importance, dimensions, changing business environment–special reference to liberalization, privatization and globalization, Business - a Futuristic vision.
- Management Functions – Planning, organizing, staffing, directing, controlling and coordination
- Business Finance: Financial Management – meaning, scope, role and objectives, financial planning, Capital structure, leverage, Fixed and working capital – meaning and factors affecting its requirements.
- Financial Markets – Money Market-nature, instruments, Capital Market-Primary and secondary, Stock exchange, NSEI, OTCEI, Procedures, SEBI.
- Human Resource Management– meaning , importance, man-power estimation , Recruitment and selection, Training and development , Compensation, Performance Evaluation
- Marketing – meaning, functions and role, Levels of Marketing, Changing facets of marketing, Product-mix, Models of Marketing.
- Organizational Behaviors: Individual behaviors, Motivation–concepts and applications, Personality perception, Learning and attitude, Leadership and its approaches, Communication, Group dynamics.
- Emerging Trends in Management – Business Process Reengineering, Total Quality Management, Quality Circles, Benchmarking, Strategic Management, Knowledge Management.
- Consumer Protection – Meaning, importance, consumers' rights, Consumers' responsibilities, Consumer awareness and Legal redressal with special reference to consumer Protection Act, Role of consumer organization and NGOs.

2. Financial Accounting And Financial Statement Analysis

- Accounting: Meaning, objectives, qualitative characteristics of Accounting information, Accounting Principles, Accounting concepts, Accounting standards, Cash and Accrual Basis of Accounting.
- Accounting Standards – growing importance in global accounting environment – International Accounting Standards (IAS) – International Financial Reporting Standards (IFRS) – US Generally Accepted Accounting Principles (GAAP).
- Process of Accounting :Voucher, transaction ,Accounting Equation, Rules of Debit and Credit, Book of original entry-Journal and Special Purpose Books, Ledger ,posting from Journal and subsidiary books, Balancing of Accounts, Trial Balance and Rectification of Errors .Bank Reconciliation Statement.
- Accounting for depreciation, Provisions and Reserves ,Bills of Exchange, Non-Profit Organization , Partnership Firms - Reconstitution of Partnership (Admission, Retirement ,Death and Dissolution), Account of Incomplete

Records (Single entry, Hire Purchase & Instalment), Consignment and Joint ventures.

- Accounting of Joint stock Companies: Share capital types of shares, accounting for issue, allotment forfeiture and re-issue of shares. Debentures – types, issue and method of redemption. Final Accounts of Sole proprietor and Joint Stock Companies. Emerging trends of presentation of Final Accounts.
  Valuation of Good will, Liquidation, Amalgamation & Reconstruction. Bank Accounts and Accounts of Insurance Companies.
  Accounts of Government Companies.
- Accounting for liquidation.
- Financial Statement Analysis: Meaning, significance, limitation .Tools for Financial Statement Analysis-comparative statements, common size statements, Trend analysis, accounting ratios.
- Funds Flow Statement and Cash Flow Statement: Meaning, objectives, preparation as per revised standard issued by ICAI.
- Computers In Accounting: Introduction to Computers and Accounting Information System, Application of Computers in Accounting, Automation of Accounting process, designing accounting reports, MIS reporting, data exchange with other information system. Readymade, customized and tailor made Accounting Systems.
- Accounting and Database Management System –Meaning, concept of entity and relationship in an accounting system, Data Base Management System (DBMS) in accounting.
- Inflation accounting and Accounting for Human Resource of an Organization and Social Responsibility.

V. Teaching Methodology (Marks: 20)

1. Social Studies – Meaning, Nature and Scope: Defining Social Studies, Main features of Social Studies, Social Studies and Social Sciences differentiated, Scope of Social Studies – Types of Subject material and learning experiences included in the study of Social Studies, Need and importance of Social Studies.
2. Values, Aims and Objectives of Teaching Social Studies: Values of teaching Social Studies, Aims of teaching Social Studies at Secondary Level, Instructional Objectives of teaching Social Studies, Relationship of instructional objectives with general aims and objectives of Social Studies, Taxonomy of Educational and instructional objectives, Writing objectives in behavioural terms.
3. Social Studies Curriculum: Social Studies as a Core subject, Principles of Curriculum Construction in Social Studies, Organization of subject matter – different approaches correlated, integrated, topical, concentric, unit and chronological.
4. Instructional Strategies in Social Studies: Techniques, devices and maxims,

Different methods of teaching Social Studies - Story telling, lecture, source, discussion, project, problem, inductive, deductive, observation, assignment – socialized recitation, Team teaching, Supervised study.

5. Planning for Instruction: Developing teaching skills through Micro-teaching, Year Planning, Unit Planning, Lesson Planning.
6. Instructional Material and Resources: Text books, work books, supplementary material syllabus, curriculum guides, hand books, Audio visual, Social Studies laboratory, library, clubs and museum, Utilizing community resources.
7. Social Studies Teacher: Qualities of a good Social Studies teacher, Roles and responsibilities.
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Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC-2024
Category of Post: TGT, PGT & Principals
Paper I – ENGLISH LANGUAGE PROFICIENCY
Syllabus

English: (Content) (Marks: 100) (Intermediate level)

Area		Level Of Testing
Parts of Speech		Nouns, Pronouns, Adjectives, Adverbs, Conjunctions, Interjections - Types and functions
Synonyms		Identification of Shades of Meaning
Antonyms		Identifying Antonyms in a Context
Homophones		Identification & Usage
Homonyms		Identification & Usage
Hypernyms& Hyponyms		Identification & Usage
Spelling		Spelling
One-word Substitutes		Referring to Persons / Professions, Places, Collections
Phrasal Verbs		Identification of Meaning and usage
Idiomatic Expressions		Identification, Usage
Proverbs		Proverbs
Word Formation		Suffixes, Prefixes and other forms
Short Forms - Full Forms		Common Short Forms - Full Forms
Abbreviations - Full Forms		Common Abbreviations - Full Forms
Word Collocations		Word Collocations
Foreign Phrases Used in English		Standard and common Foreign Phrases Used in English
Helping Verbs		Form, Function & Contractions
Modal Auxiliaries		Form, Function & Contractions
Ordinary Verbs		Form, Function & Contractions
Articles		Use of Articles Including Omissions
Prepositions		Simple, Compound Prepositions Including Prepositions following Certain Words and Prepositional Phrases

Clauses		Main Clauses, sub-ordinate Clauses, Adjectival Clauses, Noun Clauses, Adverbial Clauses, Relative Clauses, Finite and Non-finite Clauses
Sentence Structures		Sentence Structures
Degrees of Comparison		Form, Function, Construction, Transformation
Language Functions		Language Functions with social norms (formal and informal)
Question Tags		Imperatives and Statements with semi negatives and indefinites subjects
Types of Sentences		Types of Sentences
Sentence Improvement		Sentence Improvement
Direct Speech & Indirect Speech		Statements, Questions, Imperatives and Exclamatory Sentences
Active Voice & Passive Voice		Active Voice & Passive Voice
Tenses		Use of tenses and framing including 'IF' conditionals Type 1, 2 &3
Agreement between subject & Verb		Agreement between subject & Verb
Word Order		Word Order In a phrase or a sentence
Linkers		Linkers
Transformation of Sentences		Simple. Compound and Complex Sentences
Common Errors		Based on all Vocabulary and Grammar Topics
Punctuation and Capitalization		Use of capital letters, comma, full stop, question mark, exclamation mark and inverted commas
Writing of Discourses		Letter Writing, News Report, Diary Entry, Conversation, Description, Diary Entry, Biographical Sketch, Story, Script for a speech
Dictionary Skills		Dictionary Skills
Reading comprehension		Prose (GENERAL)

Government of Andhra Pradesh
Department of School Education
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Category of Post: PRINCIPAL
Paper II Syllabus

1.	**G.K & current Affairs**	-	**15M**
2.	**Perspectives in Education**	-	**15M**
3.	**Educational Psychology**	-	**20M**
4.	**Content**	-	**35M**
5.	**Methodology**	-	**15M**
	Total	-	**100 M**

PART – I

I. General Knowledge And Current Affairs (Marks: 15)

PART - II

II. Perspectives In Education (Marks: 15)

1. **History of Education :**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era - Woods Despatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender - Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education

- Value Education – Moral Value and Professional Ethics in Education.
- Health and Physical Education
- Inclusive Education - Classroom Management in Inclusive Education
- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan (RMSA), Rashtriya Aveshekar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarship, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts / Rights:**
   - Right of Children to Free and Compulsory Education Act - 2009
   - Right to Information Act - 2005
   - Child Rights
   - Human Rights.

5. **National Curriculum** - Framework, 2005: Perspective, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessment, Systemic Reforms.

6. **National Educational Policy-2020**

PART - III

III. Educational Psychology – 20 Marks

1. **Development Of Child**
   - Development, Growth & Maturation — Concept & Nature
   - Principles of development and their education implication
   - Factors influencing Development — Biological, Psychological, Sociological, emotional.
   - Dimensions of Development and their interrelationships — Physical & Motor, Cognitive, Emotional, Social, Moral, Language relating to Infancy, early Childhood, late Child hood, adolescence.
   - Understanding Development — Piaget, Kohlberg, Chomsky, Carl Rogers, Erikson
   - Individual differences — Infra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Intelligence and their Assessment.
   - Development of Personality — Concept, Factors effecting development of personality, self concept.
   - Adjustment, Behavioural problems, Mental Health, Defense mechanism.

- Methods and Approaches of Child Development — Introspection, Observation, Interview, Case study, Experimental, Cross sectional and Longitudinal
- Developmental tasks and Hazards

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- Concept, Nature of Learning — input — process — outcome
- Factors of Learning — Personal and Environmental
- Approaches to Learning and their applicability—Behaviorism (Skinner, Pavlov, Thorndike) Constructivism (Piaget, Vygotsky), Gestalt(Kohler, Koffka) and Observational (Bandura)
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- Motivation and Sustenance —its role in learning.
- Memory & Forgetting
- Transfer of Learning

3. Pedagogical Concerns

- Teaching and its relationship with learning and learner.
- Learners in Contexts: Situating learner in the socio-political and cultural context
- Children from diverse contexts—Children With Special Needs (CWSN), Inclusive Education.
- Understanding of pedagogic methods — Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Cooperative and collaborative learning.
- Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills.
- Organizing learning in heterogeneous class room groups — Socio-economic background, Abilities and Interest.
- Paradigms of organizing Learning-Teacher centric, Subject centric and Learner centric.
- Theory of instruction – Bruner
- Teaching as Planned activity — Elements of Planning
- Phases of Teaching — Pre active, Interactive and Post active
- General and Subject related skills, competencies required in teaching and attributes of good facilitator.
- Learning resources — Self, Home, School, Community, Technology.
- Class room Management: Role of student, teacher, Leadership style of teacher, Creation of non threatening learning environment, Managing behaviour problems, Guidance &Counselling, Punishment and its legal implications, Rights of a child, Time Management.

- Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice.
- Understanding teaching & learning in the context of NCF, 2005 & Right to Education Act, 2009.

Part – IV - (35 Marks)

Contemporary Social, Economic and Cultural Issues

Activities and programmes relating to School Education.

Financial Management.

School Administration.

Monitoring – Leadership qualities.

Acts / Rights:

- Right of Children to Free and Compulsory Education Act - 2009
- Right to Information Act - 2005
- Child Rights
- Human Rights.

National Curriculum - Framework, 2005: Perspective, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessment, Systemic Reforms

State Curriculum – Framework, 2010: State vision, State Conceren, Systamic reforms, Possion papers of A.P. State.

School Organization: Institutional Planning, Principal as a Leader, Teacher Quality, Linkages and Interface with other institutions and vice versa, Student Quality, Organization of Teaching, Co-curricular Activities, Office Management, Resources required for a good school, Organizational Climate, Evaluation, Job satisfaction of the Staff.

Part – V

Understanding of Teaching Methodology (15 Marks)

(i) Curriculum: Meaning, Principles, types of curriculum organization, approaches.

(ii) Approaches and Methods of Teaching: Lecture Method and Modified form of the Lecture Method, Project Method, Heuristic Method, Scientific Method, Laboratory Method, Inductive Method, Deductive Method, Problem solving Method, Analytical Method, Synthetic Method, Programmed Instruction, Team Teaching, Remedial Teaching.

(iii) Planning: Instructional Plan-Year Plan, Unit Plan, Lesson Plan.

(iv) Instructional material and resources: Text Books, Work books, Supplementary material, AV aids, Laboratories, Library, Clubs-Museums-Community, Information and Communication Technology.

(v) Evaluation: Types, tools, Characteristics of a good test, Continuous and Comprehensive Evaluation, Analysis and Interpretation of Scholastic Achievement Test.

Government of Andhra Pradesh
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DSC -2024

PHYSICAL EDUCATION TEACHER (PET) SYLLABUS

1.	**G.K & Current Affairs**	–	**05M**
2.	**Perspectives in Education**	–	**05M**
3.	**Physical Education Pedagogy**	–	**20M**
4.	**Content**	–	**70M**
	Total		**100M**

PART–I

General Knowledge and Current Affairs (Marks: 05)

PART–II

Perspectives in Education (Marks: 05)

1. **History of Education:**
   - The Education in Ancient India - Pre-Vedic and Post-Vedic period, Medieval Education.
   - Education in Pre Independent era – Woods Dispatch (1854), Hunter Commission (1882), Hartog Committee (1929), Sargent Committee (1944).
   - Education in Post Independent era - Mudaliar Commission (1952-53), Kothari Commission (1964-66), Ishwarbhai Patel committee (1977), NPE-1986, POA-1992
2. **Teacher Empowerment:**
   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
3. **Educational Concerns in Contemporary India:**
   - Democracy and Education, Equality, Equity, Quality in Education, Equality of Educational opportunities.
   - Economics of Education, Education as Human Capital, Education and Human Resource Development, Literacy - Saakshar Bharat Mission.
   - Population Education, Gender-Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
   - Adolescence Education
   - Value Education– Moral Value and Professional Ethics in Education.
   - Health and Physical Education
   - Inclusive Education-Classroom Management in Inclusive Education

- Role of Education in view of Liberalization, Privatization and Globalization
- Programmes and Projects – APPEP, DPEP, Sarva Shiksha Abhiyan, National Programme for Education of Girls at Elementary Level (NPEGEL), Rashtriya Madhyamika Shiksha Abhiyan(RMSA), Rashtriya Avishkar Abhiyan (RAA), KGBVs, Model Schools.
- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts/Rights:**
   - Right of Children to Free and CompulsoryEducationAct-2009
   - RighttoInformationAct-2005
   - Child Rights
   - Human Rights.
5. **National Curriculum Framework - 2005:** Perspectives, Guiding Principles, Learning and Knowledge, Teaching Learning Process, Assessments, Systemic Reforms.
6. **National Education Policy - 2020**

PART–III

Physical Education Psychology Pedagogy- Methods of teaching in Physical education and Educational Technology (Marks: 20)
(As per D.P.Ed Curriculum)

- Meaning, Definition and Nature of Psychology, Child Psychology, Educational Psycholgy and Sports Psychology Importance of Sports Psychology. Motivation – Definition, Importance and types of motivation;
- Stages of Growth and Development of Children - Physical, mental, social and communication skill development, psycho-motor learning at different stages. Play-Theories of play;
- Meaning, Definition and Importance of Sociology and Sports Sociology; Culture and Sports, Socialization and Sports, Gender and Sports;
- Social Mobility – Sports Professionalization – Role of social factors on sports performance.
- Meaning, Definition, Importance and Factors Influencing on Methods of teaching;
- Principles of Presentation Technique and Class Management in physical education: Commands, Class Formation, Teaching aids: Audio visuals;
- Methods of classification of students: Mccloy method, YMCA method. Method of teaching: Command Method, Lecture Method, Demonstration Method,

Discussion Method, Part Method, Whole Method, Part-Whole Methods, Whole part whole method and their application in minor, major, rhythmic calisthenics and Gymnastics;

- Lesson Plan – Concept of lesson plan, Principles, importance of lesson plan. Preparation of Lesson Plan in Physical Education – Steps in lesson plan.

PART–IV

Physical Education Content (Marks: 70)
(As per D.P.Ed Curriculum)

1. Organization and Administration of Physical Education, Adoptive Physical Education & Corrective Exercises

- Meaning, importance and principles of administration and organization; Factors influencing on good administration; Types of good Administration; Qualifications and qualities of good administration. Organisational setup at different levels: Schools, Colleges, Universities, Mandal, District, State & National
- Facilities and standards of Physical Education: Play fields, (Different play areas) Gymnasium, Swimming pool. Purchase & Care of sports equipments, Maintenance of Stock, Maintenance of records and Registers, Cash register, Tapal register, Stock Issue register, Attendance Register, Physical Fitness records, Health records and achievement records. Process of Verification, Write-off and Condemnation of Stock;
- Tournaments: Meaning of tournament and types of tournaments – Knock-out (Elimination), League (Round Robin), Knock-out cum league, League cum knock-out, Double league, Double knockout, Challenge. Method of drawing Fixtures: Seeding, Special Seeding. Rotation Method, Stair case method. Intramural and Extramural and their importance, Sports Day/ Play Day
- Time tables – Meaning and maintenance of Time table, factors influencing time table. Types of Physical Education periods; Budget: Meaning and importance of Budget, Budget income, expenditure and rules regarding expenditure, Preparation and Administration of Budget.
- Adapted Physical Education- Meaning, Definition, Objectives and Importance;
- Concept and Significance of Good Posture: Postural Deformities, Lordosis, Kyphosis, Kypholordosis, Scoliosis, Knocknees, Bow legs, flat foot and their Remedies, Corrective Exercises for Postural illnesses and deformities;

- Classification of various disabilities (Different abled) – physically challenged, mentally challenged, visually challenged, hearing impaired, Principles of adapted Physical Education programme;
- Co-curricular activities for the disabled - Indoor/ Outdoor programmes, rhythmic and dance activities, aquatic activities, fitness testing of disabled child.

2. Principles, Philosophy and History of Physical Education, Foundations of Physical Education

- Meaning and Definition of Education and Physical Education, Aim and Objectives of Physical Education, Role of Physical Education in General Education.
- Historical Development of physical education in India: Pre and post Independent India, in world (Greece, Germany),
- Policies, Schemes, Awards: Bharata Ratna, Padmasri, Padmabhushan, Padmavibhushan, Arjuna, Dronacharya, Rajiv Khel Ratna, Ekalavya, Jhansi Laxmibai, Abhimanya,, Trophies/ Cups in Physical Education and Sports at State/National level.
- Institutes bodies for Physical Education and Sports in India (YMCA, LNUPE, SAI, NSNIS, IOA, AIU, SGFI, CABPE, PYKKA, RGKA, SAAP, Physical Education & Sports Universities.
- Physical Education in relation to Humanities (Pedagogy, Psychology, Sociology, Statistics),
- Physical Education in relation to Science Disciplines: Anatomy, Physiology, Anthropometry, Kinesiology, Biomechanics, Nutrition.
- Heredity Traits, Unsynchronized development, Growth and Development at various levels - pre-adolescence, adolescence, adulthood, Differences in boys and girls, Classification of body types: Kretchmer's and Sheldon classification.
- Learning - meaning and definition, Theories of Learning - Trial and Error Theory, Conditioned Response Theory, Insightful Learning, Laws of Learning: Law of Readiness, Law of Use and Disuse, Law of Effect, Law of Recency, Law of Frequency, Types of Learning - Primary, associate, concomitant, Transfer of Learning, Learning Curve.

3. Basic anatomy, Physiology

- Meaning, Definition and importance of Anatomy and Physiology; Cell: Definition and importance, structure and functions of cell.
- Skeletal System: Bones, in Axial and Appendicular skeleton , structure , functions and types of bones – types of joints – structural and functional

classification, movements around joints, effects of exercise on skeletal system. Muscular System: Structural and functional classification of muscles, characteristics of muscles, fatigue and performance, palpated muscles around shoulder, elbow, hip and knee joint, Effects of Exercise on muscular system.

- Digestive system: Structure of digestive system, process of digestion, effects of exercise on digestive system. Respiratory system: Structure of human respiratory system, mechanism of respiration, oxygen debt and second wind, effects of exercise on respiratory system. Circulatory System: Composition and functions of blood, structure and functions of human heart, effects of exercise on circulatory system.
- Excretory system: Structure and functions of skin and kidneys, effects of exercise on Excretory system. Nervous system: Structure and functions of human brain and spinal cord.

4. Health Education and Environmental Studies, sports injuries, Safety education and Physiology of exercise. Nutrition and Naturopathy

- Meaning, Definition, Dimensions and Importance of Health; Principles of Health Education. Factors influencing health – Heridity, Environment and Health Habits; Coordinated school health programme – Health services, Health instruction, Health records and Health supervision
- Common Health Problems in India, Communicable and Non-Communicable Diseases, Hygiene – Personal, Environmental, Occupational Health, Cleanliness and awareness through educational activities;
- Environmental Studies - Meaning, natural and men made Hazards. Environmental pollution – Meaning, Definition, prevention and control of Air, Water, Soil and Sound Pollution;
- Natural Calamities – Cyclone, Tsunami, Earthquake – Their prevention and safety measures. WHO, UNICEF, UNESCO and other agencies.
- Sports Nutrition, Concept of Nutrition, Types of Nutrients, Balanced Diet;
- Obesity - Causes and Prevention; Weight Management through Life style Modification. Malnutrition; Naturopathy - Meaning, Definition and Principles of
- Naturopathy; Methods of Nature Cure, Fasting, Mud Therapy and Hydrotherapy;
- Application of Naturopathy, technique for various diseases like cold, cough, fever, constipation, diarrhea
- Meaning and Causes of Sports Injuries. Principles of prevention of sports injuries;

- Common Sports Injuries, symptoms and their treatment, Ligament sprain – Muscle sprain – Tennis elbow- Golfer's elbow, lower back strain – Dislocation – Fractures, Runners knee – Shin pain – Blisters – contusion, Abrasion, Laceration, Haematoma, Contusion;
- Definition of First-Aid, DRABC formula (Danger, Response, Airways, Breathing & Circulation), Artificial respiration techniques – Mouth to mouth, mouth to nose respiration, CPR(Cardio Pulmonary Resuscitation), First Aid for Haemorrhage, Fracture, Sprain and Strain, Drowning, Heat Stroke and Heat Exhaustion; Concept of PRICE(Prevention, Rest, Ice, Compression and Elevation)
- Rehabilitation - Meaning, Objectives and importance of Rehabilitation; Rehabilitation Modalities - Cold, Heat, Water, Radiation.

5. Yoga in Physical Education

- Meaning, Definition, Importance of Yoga. Streams of Yoga: Karma Yoga, Raja Yoga, Jnana Yoga, Bakti Yoga, Hatha yoga and their values; Development of Yoga in India.
- Effects of Yogasanas on various systems of the body: Muscular, respiratory, Digestive , Circulatory systems.Types and importance of asanas with special reference to physical education and sports. Suryanamaskara of 12 stages;
- Meaning and importance of Ashtanga Yoga - Yama, Niyama, Asana, Pranayama,Pratyahar, Dharna, Dhyan, Samadhi;
- Shatkriyas, Bandhas: Jalandhar Bandha, Moolabandha, Udyana Bandha; Mudras: Yoga mudra, Chinmayamudra, Aswani mudra, Brahma mudra; Chakras: Types of chakras..

6. Recreation and Value education

- Meaning and Importance of Recreation in physical education, Principles of recreation in physical education, qualities and qualifications of recreation leader, worthy use of leisure time activities and their educational values;
- Organisation of recreational activities, individual and home agencies, government agencies, voluntary agencies, private agencies and commercial agencies: qualities of the recreation leader. Meaning and importance of picnic, Benefits of picnic, organisation of picnic, Essential constituents of good picnic.
- Inculcation of Human Values, Ethical values, Spiritual values through Sports.
- Social values, ethical values of officials and coaches on sports ground, ethical behaviour in sports and sportsman spirit, ethical judgment.

7. Sports training

- Meaning, Definition, Importance, Characteristics and Principles of Sports Training. Brief introduction on Detraining and Retraining;
- Training Load and Adaptation Process; Overload - Causes, Symptoms and Preventive Measures, recovery and its benefits;
- Definition and Types of Flexibility, Strength, Endurance, Speed and Coordinative Abilities;
- Training methods: Continuous training, Interval training, Repetition training, fartlek training, resistance training, circuit training, plyometric training. Methods of developing Fitness Components - Flexibility, Strength, Endurance, Speed and Coordinative Abilities, Talent Identification and nurturing of talent.

8. Information Technology in Physical Education Officiating and coaching, Tests and measurements in Physical education

- Officiating, Meaning, importance and principles of officiating. Qualities and qualifications of good official, Duties of Officials. (Hockey, Football, Handball, Volleyball, Basketball, Tabletennis, Kabaddi, Kho-Kho, Throwball, Tennis, Badminton, Ball Badminton, Cricket, Softball and Tennikoit), System of officiating in games;
- Rules of various games, Layout of courts and fields of games. Track and field – layout of track and field, rules of track and field events – Runs, Jumps, Throws Systems of officiating in track and field events;
- Coaching definition, principles and physiology of coaching, qualities and qualification and responsibilities of a good coach;
- Coaching camps, Skill, Technique, Tactics and strategies, System of playing games, selection of team, Brief description of teaching, coaching and training.
- Introduction to Computer System: definition, Characteristics, Principles, Parts of Computer and their functions, Generations, Input and Output Devices, Operating Systems, Memory (RAM, ROM);
- WINDOWS: Meaning and Features of Windows, , Start and Shutdown Computer, Creating Folders and Short cut Icons. Saving, Copying and Deleting Files, Use of Note Pad and Paint Brush;
- MS OFFICE: MS Word, MS Excel and MS Power point and introduction to Internet;
- Computer Applications in Physical Education: principles of development of self instruction materials special reference to school children, principles of designing e-learning modules.
- Meaning and definition of Test, Measurement and evaluation, Importance of Test, Measurement and Evaluation in the field of physical education and sports;

- Criteria of good test: Classification of tests, Test Administration (Pre, During and Post)
- Tests for different variables Speed – 50metre dash, Maximum speed - 30metres dash with flying start, cardio vascular endurance – Cooper's 12 minutes run – walk test, Muscular endurance – Bent knee sit-ups – Explosive power – Standing Broad jump;
- Anthropometric Measurements: Height, Weight, Arm length, Leg length. BMI and its classification.

Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC -2024

SA - PHYSICAL EDUCATION / PHYSICAL DIRECTOR (PD) SYLLABUS

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   - Need, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.
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   - Population Education, Gender-Equality, Equity and Empowerment of Women, Urbanization and migration, Life skills.
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- Incentives and special provisions – Mid Day Meals, Free Books, Scholarships, Awards, Welfare Hostels, Transportation.
- Current Trends in Education

4. **Acts/Rights:**
   - Right of Children to Free and CompulsoryEducationAct-2009
   - RighttoInformationAct-2005
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6. **National Education Policy - 2020**

PART–III

PHYSICAL EDUCATION PEDAGOGY - EDUCATIONAL TECHNOLOGY AND METHODS OF TEACHING IN PHYSICAL EDUCATION (Marks: 20)
(As per B.P.Ed Curriculum)

- **Introduction:** Meaning and Definition of Education, Technology and Educational Technology, Objectives of Educational Technology and importance of Educational technology.
- **Types of Education:** Formal, Informal and Non-Formal education, Educative Process, Devices and their importance in Teaching.
- **Teaching Techniques and teaching aids:** Teaching Technique, Lecture method, Command method, Demonstration method, Imitation method, part method, whole method and whole part - whole method. Presentation Technique: Personal and technical preparation.
- **Command:** Meaning of command, types of command: Rhythmic and response command, uses of command in different situations.
- **Teaching Aids:** Meaning and Importance of teaching aids. Types of Teaching aids; Audio, Visual, Audio - visual aids, Chalk board, Digital boards, Pin boards, Charts, Model, Slide projector, Motion picture.
- **Team Teaching:** Meaning, Principles and advantage of team teaching.
- **Tournaments:** Meaning of tournament and types of tournaments – Knock-out (Elimination), League (Round Robin), Knock-out cum league, League cum knock-out, Double league, Double knockout, Challenge.
- **Method of drawing Fixtures:** Seeding, Special Seeding. Rotation Method, Stair case method. Intramural and Extramural and their importance, Sports Day/ Play Day.
- **Lesson Planning:** Meaning, Type, principles and lesson plan. General, particular/specific and coaching lesson plan.

PART–IV

Physical Education Content (Marks: 70)
(As per B.P.Ed Curriculum)

1. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION

- Meaning, importance and principles of administration and organization; Factors influencing on good administration; Types of good Administration; Qualifications and qualities of good administration.
- Organizational setup at different levels: Schools, Colleges, Universities, Mandal, District, State & National.
- Facilities and standards of Physical Education: Play fields, (Different play areas) Gymnasium, Swimming pool.
- Purchase & Care of sports equipments, Maintenance of Stock, Maintenance of records and Registers, Cash register, Tapal register, Stock Issue register, Attendance Register, Physical Fitness records, Health records and achievement records. Process of Verification, Write-off and Condemnation of Stock;
- Tournaments: Meaning of tournament and types of tournaments – Knock-out (Elimination), League (Round Robin), Knock-out cum league, League cum knock-out, Double league, Double knockout, Challenge.
- Method of drawing Fixtures: Seeding, Special Seeding. Rotation Method, Stair case method. Intramural and Extramural and their importance, Sports Day/ Play Day
- Time tables – Meaning and maintenance of Time table, factors influencing time table. Types of Physical Education periods;
- Budget: Meaning and importance of Budget, Budget income, expenditure and rules regarding expenditure, Preparation and Administration of Budget.

2. HISTORY OF PHYSICAL EDUCATION

- Introduction: Meaning, Definition and Scope of Physical Education, Aims and Objectives of Physical Education, Importance of Physical Education in present era, Concepts and misconceptions about Physical Education, Relationship of Physical Education with General Education, Physical Education as Arts and Science.
- Historical Development of Physical Education: Historical Development of Physical Education Indus Valley Civilization Period, Vedic Period, Early Hindu Period and Later Hindu Period, Medieval Period, British Period, Physical Education in India (After 1947), Physical Education in Greece, Germany, Sweden Contribution of Akhadas and Vyayamsalas, H.V.P.Mandals,
- Institutions/Sports Bodies: YMCA, LNIPE, NSNIS, IOA, AIU, SAI, SAF, SGF, PYKKA, RGKA, SAAP, Physical Education & Sports Universities.
- Policies, Schemes, Awards: Bharata Ratna, Padmasri, Padmabhushan, Padmavibhushan, Arjuna, Dronacharya, Rajiv Khel Ratna, Ekalvya, Jhansi Laxmibhai, Abhimanyu. Trophies/Cups in Physical Education and Sports at State/National Level.

- Foundations of Physical Education: Foundations of Physical Education Philosophical foundation: Idealism, Pragmatism, Naturalism, Realism, Humanism, Existentialism and Indian Philosophy and Culture.
- Principles of Physical Education: Biological: Growth and development, Gender Difference: Physical, Physiological & Anthropometric (Sheldon and Kretchmer). Psychological: Types of Learning, learning curve, Laws and principles of learning, Attitude, interest, cognition, emotions and sentiments. Sociological: Society and culture, Social acceptance and recognition, Leadership, Social integration and cohesiveness.

3. BASIC ANATOMY, PHYSIOLOGY, KINESIOLOGY AND BIOMECHANICS

- Meaning and Definition of Anatomy, Physiology and their importance in Physical Education. Structure, function and division of cell. Tissues: Functions and types.
- Skeletal System: Axial and Appendicular Skeletal system, Types of Bones and Joints.
- Blood and circulatory system Constituents of blood and their functions, Blood groups, structure of the heart, circulation of blood: Pulmonary, Systemic and General Circulation, Blood pressure.
- Respiratory system: Structure of respiratory system – Mechanism of Respiration (Internal and External).
- Digestive system: structure and functions of the digestive system, Process of Digestion.
- Nervous system: Organs of Nervous System, Structure and functions of Brain and Spinal cord. Structure, properties and functions of skeletal muscles. Role of Oxygen in Physical Training, Oxygen Debt, Second wind, Lung capacity, Vital capacity, Tidal Volume, Residual volume.
- Endocrine system: Functions of glands, Pituitary, Thyroid, Parathyroid, Adrenal and Pancreas. Effects of training on cardiovascular system, Effects of training on respiratory system, Effects of training on muscular system, Fatigue and performance in sports.
- Introduction to Kinesiology and Sports Biomechanics: Meaning and Definition of Kinesiology and Sports Biomechanics, Importance of Kinesiology and Sports Biomechanics in Physical Education and Sports, Terminology of Fundamental Movements, Planes and Axes, Gravity, Base, Centre of Gravity, Equilibrium, Line of Gravity.
- Fundamentals Concept of Anatomy and Physiology: Definition of Joints, Structure and functional classification of joints and muscles. Types of Muscle Contractions,

- Posture: Meaning, Types and Importance of good posture. Mechanical Concepts:
- Force: Meaning, definition, types and its application in sports.
- Lever: Meaning, definition, types and its application in sports.
- Newton's Laws of Motion and their application in sports.
- Projectile: Factors influencing projectile trajectory.
- Kinematics and Kinetics of Human Movement: Linear Kinematics: Distance and Displacement, speed and velocity, Acceleration. Angular kinematics: Angular Distance and Displacement, Angular Speed and velocity, Angular Acceleration. Linear Kinetics: Inertia, Mass, Momentum, Friction. Angular Kinetics: Moment of Inertia, Couple, Stability.

4. HEALTH EDUCATION AND SPORTS INJURIES, SPORTS MEDICINE, PHYSIOTHERAPY AND REHABILITATION

- Health Education: Definition of Health, Health Education. Aims, objectives and Principles of Health Education.
- Dimensions of Health: physical, mental and social dimensions. Factors affecting Health, School Health Programme: Health Instructions, Health Supervision, Health Service. Balanced diet, constituents of balanced diet.
- Health Problems in India: Communicable diseases: Chickenpox, Measles, Mumps, Influenza, Whooping cough, Typhoid, Malaria, Aids.
- Non Communicable Diseases: Obesity, Hypertension, Stroke, Diabetes. Malnutrition. Other problems: Explosive Population, Personal and Environmental Hygiene for schools, Nutritional service, Health appraisal, Health record, Healthful school environment, first-aid and emergency care.
- Environmental Science: Definition, Scope, Need and Importance of environmental studies, Concept of environmental education, Historical background of environmental education, Celebration of various days in relation with environment, Pollution of Plastic bags/covers, Role of school in environmental conservation and sustainable development.
- Natural resources and related environmental issues: Water resources, food resources and land resources, Definition, effects and control measures of Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution, Role of pollution control board.
- Sports Medicine: Meaning, Definition, and Importance of Sports Medicine. Role of Physical Education Teachers and Coaches in Athletes Care and Rehabilitation. Common sports injuries and their prevention. First Aid: Definition of First Aid, DRABC formula (Danger, Response, Airways, Breathing and Circulation), Artificial respiration technique: Mouth to mouth, Mouth to nose respiration, CPR (Cardio Pulmonary Resuscitation). Treatments: Laceration, Blisters, Contusion, Strain, Sprain, Fracture, Dislocation and Cramps. Bandages: Types of Bandages,

Taping and supports.

- Physiotherapy: Definition: Guiding principles of physiotherapy, Importance of physiotherapy. Treatment Modalities: Electrotherapy, infrared rays, Ultraviolet rays, short wave diathermy, ultra sound.
- Hydrotherapy and Massage: Hydrotherapy: Meaning and Methods, Cryotherapy, Thermo therapy, Contrast Bath, Whirlpool Bath, Steam Bath, Sauna Bath, Hot Water Fomentation. Massage: Meaning and importance of massage, Indications and contraindications of massage. Types of Manipulation, Physiological effects of Massage.
- Therapeutic Exercise Definition, Principles and Importance of Therapeutic Exercises. Classification of Therapeutic exercise: Passive Movements (Relaxed, Forced and passive stretching). Active movements (concentric, Eccentric and static). Free Mobility Exercise for Shoulder, Wrist, Fingers, Hip, Ankle, Foot joints and Neck exercises.

5. YOGA IN PHYSICAL EDUCATION

- Introduction: Meaning, Definition & Scope of Yoga, Aims, Objectives and functions of Yoga.
- Early yoga practices: Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi.
- Streams of Yoga Practices: Hatha Yoga, Karma Yoga, Bhakti Yoga, Raja Yoga, Jnana Yoga.
- Basic Yogic Methods; Asana: Classification of Asanas, Sitting, Standing, Lying, Inverted asanas.
- Benefits of Asanas: Effects of Asanas on general health. Pranayama: Importance & impact on Muscular, Cardio Respiratory and Nervous System.
- Relaxation and meditation: Importance & impact on body at work and body at rest.
- Bandhas: Jalandhara, Mula, Udyana.
- Mudras: Chin, Yoga, Aswini, Anjali, Brahma Mudra.
- Kriyas: Neti, Nauli, Kapalabhati, Trataka, Dhauthi, Bhastrika.
- Chakras: Types and Importance.

6. RECREATION AND LEISURE MANAGEMENT

- Introduction: Meaning, Definition of Recreation and Leisure Management, Importance, Values of Recreation, Principles of Recreation. Fundamental needs of Recreation, qualities and qualifications of Leaders of Recreation.
- Recreation and Play Theories of Recreation, Theories of Play, Therapeutic

Recreation, Therapeutic use of activity, Recreation for the life, Role of recreation and leisure on the human development.

- Types of recreational activities: Indoor, Outdoor games, Music, Dance, Picnics and Excursions.
- Recreational Agencies: Organization and Administration of Recreational agencies, Individual and Home agencies, Government Agencies, Voluntary Agencies, Private Agencies, Commercial Agencies, Modern trends in recreation and Leisure Management, Issues related to Recreation and Leisure Management.

7. SPORTS TRAINING

- Introduction: Meaning and Definition of Sports Training, Aims and Objective of Sports Training, Principles of Sports Training.
- Methods of Sports Training: Continuous training, Interval training, Repetition training, Fartlek training, Resistance training, Circuit training, Plyometric training. Warm-up and warm down, Athletic diet: Pre competition, during competition and post competition.
- Training Components: Strength: Meaning and Definition, Methods of Strength Development. Speed: Meaning and Definition, Methods of Speed Development. Endurance: Meaning and Definition, Methods of Endurance Development. Coordination: Meaning and Definition, Methods of coordination Development. Flexibility: Meaning and Definition, Methods of Flexibility Development.
- Training Process: Load: Definition and Types of Load. Principles of Intensity and Volume of stimulus. Technical Training: Meaning and Methods of Technical Training. Tactical Training: Meaning and Methods of Tactical Training.
- Training program and planning: Periodization: Meaning and types of Periodization. Aims and Content of Periods: Preparatory, Competition, Transitional. Planning: Training session, Talent Identification and Development.

8. CONCEPTS OF WELLNESS MANAGEMENT

- WELLNESS: Definition and scope of wellness- Wellness continuum and health - Dimensions of wellness - Physical Wellness - Emotional Wellness - Social Wellness - Spiritual wellness - Intellectual wellness and Environmental wellness.
- STRESS MANAGEMENT: Stress: Definition of Stress, Stress management techniques.
- FITNESS AND BODY COMPOSITION: Health fitness components, body composition, muscular endurance, strength, Cardio vascular fitness and flexibility, importance of cardio respiratory endurance. Body composition indicators and measurements. Obesity and health risk factors, childhood obesity and problems.

9. SPORTS MANAGEMENT

- Concept of management: Meaning, definition, scope, concept and importance of sports management. Functions of management: Planning, Organizing, Staffing, Directing, and Controlling.
- Leadership: Meaning, Definition & Elements of good leadership styles, Methods. Forms of Leadership: Autocratic, Laissez-faire, Democratic, Benevolent and Dictator. Qualities of Administrative leader, Preparation of administrative leader & Effects of good leadership on organizational performance.
- Financial management: Financial management in physical education and sports in schools, colleges and universities. Criteria of good budget, steps of budget making. Model budget for a school. Procedures for purchases and constructions. Records and Registers.

10. RESEARCH AND STATISTICS IN PHYSICAL EDUCATION

- Introduction to Research: Definition of Research, Need and importance of Research in Physical Education and Sports. Classification of Research, Meaning of Research Problem, Location and criteria of Selection of Problem, Formulation of a Research Problem, Limitations and Delimitations.
- Various methods of Research, Need for surveying related literature, Literature Sources, Research Proposal.
- Basics in Statistics: Meaning, Definition, Nature, Importance and its Types. Raw Score: Grouped Data, Un Grouped Data. Grouped Data: Discrete and Continuous Series.
- Construction of frequency Table: Class Intervals, Class Distribution. Normal Probability curve, Skewnes and kurtosis.
- Statistical Methods in Physical Education and Sports:
- Measures of Central Tendency: Mean Median and Mode-Meaning, Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data.
- Measures of Variability: Meaning, importance. Computing Range, Mean Deviation, Quartile Deviation, Deciles, Percentile and Standard Deviation.
- Correlation: Computing Karl Pearson Product Moment Co-relation and Karl Spearman Rank Order co-relation.

11. OFFICIATING AND COACHING

- Introduction of officiating and coaching: Definition of officiating and coaching, Importance and principles of officiating, Relationship of official and coach with management, players and spectators, Measures of improving the standards of officiating and coaching.

- Coach as a Mentor: Duties of coach in general, pre, during and post game. Philosophy of coaching, responsibilities of a coach on and off the field, Psychology of coach in competition and coaching.
- Duties of Official: Duties of official in general, pre, during and post game in (Hockey, Football, Handball, Volleyball, Basketball, Table Tennis, Kabaddi, Kho-Kho, Throw ball, Tennis, Badminton, Ball Badminton, Cricket, Softball and Tennikoit). Philosophy of officiating, Mechanism of officiating, position, Signals and movement, Ethics of officiating.
- Qualities and Qualifications of Coach and Official: Qualities and qualifications of good coach and good official. Layout of courts/fields and Rules of games, Layout of standard Track & Field and Rules.

12. SPORTS PSYCHOLOGY AND SOCIOLOGY

- Introduction: Meaning, Definition, Importance and scope of Sports Psychology. Characteristics of Various Stages of growth and development. Individual differences. Heredity and environment. Dynamics of Human behaviour, Play and theories of Play.
- Learning, Personality, Motivation: Learning: Theories of learning, Transfer of Learning.
- Personality: Meaning and definition of personality, characteristics of personality, Dimension of personality, Personality and Sports performance.
- Motivation: Meaning, Definition and importance of Motivation. Types of Motivation: Intrinsic & Extrinsic, Motivation techniques and their impact on sports performance. Aggression, Anxiety and their effects on Sports performance.

13. OLYMPIC MOVEMENT

- Origin of Olympic Movement Aims of Olympic movement, the early history of the Olympic movement, and the significant stages in the development of the modern Olympic movement, Educational and cultural values of Olympic movement.
- Modern Olympic Games Significance of Olympic Ideals, Olympic Rings, Olympic Flag, Olympic Protocol for member countries, Olympic Code of Ethics, Olympism in action, Sports for all.
- Different Olympic Games: Para Olympic Games, Summer Olympics, Winter Olympics, Youth Olympic Games. Committees of Olympic Games International
- Olympic Committee - Structure and Functions, National Olympic committees and their role in Olympic movement, Olympic commission and their functions, Olympic medal winners of India till to date.

14. MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

- Introduction to Test, Measurement Evaluation: Meaning of Test, Measurement & Evaluation in Physical Education, Need & Importance of Test, Measurement & Evaluation in Physical Education, Principles of Evaluation, Criteria of good Test.

- Classification and Administration of test: Classification of Tests, Administration of test: Pre, During and post test, Methods of Scoring test.
- Physical Fitness Tests: AAHPER youth fitness test, JCR test, Cooper's 12 minute run/ walk test, Harward Step test, Indiana Motor Fitness Test, Barrow motor ability test.
- Sports Skill Tests: Lockhart and McPherson badminton test, Johnson basketball test, McDonald soccer test, Russell - Lange Volleyball test, Schmithals French Field Hockey test