Government of Andhra Pradesh
Department of School Education
State Council of Educational Research & Training
DSC - 2025
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) 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: 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 ಗೊಳಸುವುದು
  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 – ಬೋಽಸುವ 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