പൊതുപരീക്ഷയ്ക്കായി കൂടുതൽ ശ്രദ്ധ നൽകേണ്ട

പാഠഭാഗങ്ങൾ

സ്റ്റാൻഡേർഡ് XI

കേരളസർക്കാർ
പൊതുവിദ്യാഭ്യാസവകുപ്പ്
സംസ്ഥാന വിദ്യാഭ്യാസ ഗവേഷണ പരിശീലന സമിതി (SCERT), കേരളം
2021

മുഖവുര

കോവിഡിന്റെ പ്രതികൂല സാഹചര്യത്തിൽ ഹയർ സെക്കണ്ടറി ഒന്നാം വർഷ വിദ്യാർത്ഥികൾക്ക് ക്ലാസ് മുറി പഠനവും സ്വാഭാവിക സ്കൂൾ അനുഭവങ്ങളും ഈ അധ്യയന വർഷം (2020-21) സാധ്യമായിട്ടില്ല. നിലവിൽ വീഡിയോ ക്ലാസുകളിലൂടെയാണ് അവർ എല്ലാ പാഠങ്ങളും പരിചയപ്പെടുന്നത്. ഇതിന്റെ തുടർച്ചയായി അധ്യാപകരുടെ സഹായത്തോടെ അസൈൻമെന്റുകൾ പൂർത്തിയാക്കുകയും സംശയനിവാരണം നടത്തുകയും ചെയ്തുവരുന്നു. ഇനി അവർ സ്കൂൾതല സംശയനിവാരണത്തിലേക്കും തുടർപഠനത്തിലേക്കും പിന്നീട് പൊതുപരീക്ഷയിലേക്കും നീങ്ങുകയാണ്. ആത്മവിശ്വാസത്തോടെ പരീക്ഷ എഴുതാൻ നമുക്ക് അവരെ സഹായിക്കേണ്ടതുണ്ട്. വ്യത്യസ്ത നിലവാരത്തിലുള്ള വിദ്യാർത്ഥികളെ അവരുടെ സാധ്യതകൾക്കനുസരിച്ച് പിന്തുണ നൽകാൻ നമുക്ക് കഴിയണം.

കുട്ടികളുടെ അഭിരുചിമേഖലകൾ ഭിന്നമായതിനാൽ അവയെല്ലാം ഉൾക്കൊള്ളുന്നതിനായി പാഠഭാഗങ്ങൾ ഒന്നുംതന്നെ ഒഴിവാക്കേണ്ടതില്ല എന്നാണ് തീരുമാനിച്ചിട്ടുള്ളത്. എന്നിരുന്നാലും ക്ലാസ് റൂം ചർച്ചയ്ക്കും വിശകലനത്തിനുമായി കൂടുതൽ ശ്രദ്ധ നൽകേണ്ട പാഠഭാഗങ്ങളാണ് ഇതോടൊപ്പമുള്ളത്. രണ്ടാംവർഷ പഠനത്തെ സഹായിക്കുന്നതും ഉപരിപഠനത്തിന് പ്രയോജനപ്പെടുന്നതുമായ പാഠഭാഗങ്ങളാണ് ഊന്നൽ മേഖലയിൽ പ്രധാനമായും ഉൾപ്പെടുത്തിയിട്ടുള്ളത്. ഈ പാഠഭാഗങ്ങൾ അർഥപൂർണമായി സ്വാംശീകരിക്കുന്നതിന് ആവശ്യമായ പഠനപ്രവർത്തനങ്ങളും പഠനപിന്തുണയും നൽകാൻ അധ്യാപകർ പ്രത്യേകം ശ്രദ്ധിക്കേണ്ടതാണ്. ഇങ്ങനെ ചെയ്യുമ്പോൾ മറ്റു പാഠഭാഗങ്ങളുമായി ബന്ധപ്പെട്ട് ഉയർന്നുവരുന്ന സംശയങ്ങൾക്ക് അതത് സമയം തന്നെ അധ്യാപകർ നിവാരണം വരുത്തേണ്ടതാണ്. വീഡിയോ ക്ലാസിലൂടെയും സ്വയംപഠനത്തിലൂടെയും എത്രമാത്രാണ് ആശയഗ്രഹണം നടന്നത് എന്ന് വിലയിരുത്തിയാകണം പഠനപ്രവർത്തനങ്ങൾ ആസൂത്രണം ചെയ്യേണ്ടത്.

ഡയറക്ടർ
എസ്.സി.ഇ.ആർ.ടി

മലയാളം

യൂണിറ്റ് 1.	**കിനാവ്**
	പ്രവേശകം സന്ദർശനം ഓർമ്മയുടെ ഞരമ്പ് വേരുകൾ നഷ്ടപ്പെടുത്തുന്നവർ മത്സ്യം
യൂണിറ്റ് 3.	**ഉള്ളുറിവ്**
	പ്രവേശകം കാവ്യകലയെക്കുറിച്ച് ചില നിരീക്ഷണങ്ങൾ ഊഞ്ഞാലിൽ അനർഘനിമിഷം ലാത്തിയും വെടിയുണ്ടയും

മലയാളം (ഐച്ഛികം)

യൂണിറ്റ് 1	**ദീപ്തമായ ഓർമ്മകൾ**
	പറിച്ചുനടീൽ മാതൃസന്നിധാനത്തിൽ
യൂണിറ്റ് 2	**കഥാമുദ്രകൾ**
	മോതിരം പക്ഷിയുടെ മണം
യൂണിറ്റ് 3	**ഭാഷ എന്ന വിസ്മയം**
	അക്ഷരമാല മാറുന്ന മലയാള സംസാരഭാഷ
യൂണിറ്റ് 4	**കവിതയുടെ വഴികൾ**
	ബിംബിസാരന്റെ ഇടയൻ പാവം മാനവഹൃദയം

ENGLISH

Lesson	Focus Area
1.	His First Flight
2.	I Will Fly
3.	If
4.	And then Gandhi Came
5.	The Price of Flowers
6.	Death the Leveller
7.	The Sacred Turtles of Kadavu
8.	The Serang of Ranaganji

HINDI (SECOND LANGUAGE)

യൂണിറ്റ്	പാഠം
इकाई 1	1 अनुताप (लघुकथा) 2 मधुऋतु (कविता) 3 जुलूस (नाट्य रूपांतर)
इकाई 2	4 दोहे (कबीरदास)
इकाई 3	5 आनंद की फुलझडियाँ (निबंध) 6 पत्थर की बेंच (कविता)

HINDI (OPTIONAL)

യൂണിറ്റ്	പാഠം
इकाई 1	1 एकलव्य (कविता) 2 ईदगाह (कहानी) 3 संज्ञा (व्याकरण) 4 आदिकाल (इतिहास
इकाई 2	5 दोहे (कबीरदास) 6 चीफ़ की दावत (कहानी) 7 महात्मा गाँधी (संस्मरण)
इकाई 3	8 विशेषण (व्याकरण)

ARABIC (SECOND LANGUAGE)

Focus Area - Plus One Arabic			
Sl. No.	Unit	Chapter	Chapter
1	1	1	في رحاب المدرسة
2	1	2	أوهن البيوت
3	1	3	هنيئا لكم
4	2	1	لحمة إلى الطبيعة
5	2	2	درات ثمينة
6	2	3	كم تشتكي

ARABIC (OPTIONAL)

Focus Area - Plus One Arabic Optional		
Sl. No.	Unit	Lesson
1	I	جمال صنع البارئ
2	I	الحفاظ على البيئة
3	I	الماء أساس الحياة
4	I	سرعة الغزال
5	II	فريسة الجوع
6	II	البريد الالكتروني

SANSKRIT - SECOND LANGUAGE

एककम्		पाठस्य नाम
I. पाथेयम्	१.	पाथेयम्।
	२.	कर्मणैव हि संसिद्धिः।
	३.	पुरतो भ्रम लोकचक्र।
II. मौलिकम्	४.	शब्दाह्वयं ज्योतिः ।
	५.	शरीरमाद्यं खलु धर्मसाधनम्।

SANSKRIT - OPTIONAL (SASTHRA)

पाठस्य नाम	
प्रथमो भागः	♦ संज्ञाप्रकरणम्।
	♦ अच्सन्धिप्रकरणम्।
द्वितीयो भागः	♦ आमुखम्।
	♦ उद्देशप्रकरणम्।
	♦ द्रव्यनिरूपणम्।
	♦ कारणनिरूपणप्रकरणम्।
	♦ प्रत्यक्षप्रकरणम्।

SANSKRIT - OPTIONAL (SAHITHYA)

पाठस्य नाम
१. आलोचनामृताः वाण्यः।
२. बुद्धिरेव गरीयसी।
३. सीतादर्शनम्।
४. संस्कृतोपासकाः।

PART - II - TAMIL (SECOND LANGUAGE)

Sl.No	அலகு	பாடப்பகுதி
1	கலையும் பண்பாடும்	• தமிழர் பண்பாடும் இலக்கியமும் • இந்திர விழா • யாரடா வெண்மணி தூணிலே நரசிம்மா • படையணி
2	சுவைகளின் கலவை	• இலக்கியச் சுவைகள்
3	புதுவெள்ளம்	• நவீனத்துவம் • பெண்ணுலகு • மண்மொழி
4	வாழ்வு நலமாக	• தமிழிலக்கியம் காட்டும் இயற்கை • மூன்றாம் உலகப் போர்

PART - III - TAMIL (OPTIONAL)

Sl.No	அலகு	பாடப்பகுதி
1	கவிதைச் சிமிழ்	• மானுடம் • அறிவு • குருவிக்கு வேண்டுகோள் • அறிமுக நோக்கில் ஹைகூ
2	விரல் நுனியில் உலகம்	• இணையமும் இலக்கியமும் • பச்சை வயல்
3	தொன்மை	• மொழி • தமிழ்விடு தூது • எது தமிழ்ச் செல்வம்
4	மண்ணின்மணம்	• பழமொழியும் நகைச்சுவையும் • தோல்பாவைக் கலைஞருடன் ஒரு நாள்
5	பழமையும் இனிமையும்	• எட்டும் பத்தும்

PART - II - KANNADA (SECOND LANGUAGE)

SL. NO	UNIT	LESSON
1.	I. ವರ್ಣನಾ ವಿಲಾಸ	* ಸುಗ್ಗಿ ಬರುತಿದೆ * ಕಡಲ ಒಡಲು
2.	II. ಜನ – ಜಾನಪದ	* ಇದ್ಯ ಬಲ್ಲವಗೆ ಭಯವುಂಟೆ
3.	III. ಸಮಾಜ ದರ್ಶನ	* ಮಂಕುತಿಮ್ಮನ ಕಗ್ಗ
4.	IV. ಅರಿವು - ಕುರುಹು	* ಸುನಾಮಿಯ ಹಾಡು * ಒಸರು * ಹುಗ್ಗಿ
5.	V. ಹಿಂದಣ ಹೆಜ್ಜೆ	* ನಿನ್ನಯ ವೀರರೈವರ ನೋಯಿಸೆನು

PART - III - KANNADA (OPTIONAL)

SL. NO	UNIT	LESSON
1.	I. ವಚನ ಸಿರಿ	* ಅಳಿಮನದವನ ಭಕ್ತಿ * ದಯೆಯೇ ಧರ್ಮದ ಮೂಲವಯ್ಯ
2.	II. ಕೀರ್ತನ ಮಾಧುರಿ	* ಬೇವು ಬೆಲ್ಲದೊಳಿಡಲೇನು ಫಲ * ಮಳೆಯ ದಯಮಾಡೋ
3.	III. ಜನಪದ ಕುಸುಮ	* ಕಣ್ಣ ಮುಂದೈತೆ ಕೈಲಾಸ
4.	VI. ಕಾವ್ಯ ಕಸ್ತೂರಿ	* ವೈಶಾಖ ಪೂರ್ಣಿಮೆಯ ಮಾರ್ತಂಡನುದಯಿಸಿದಂ * ಅಶ್ವತ್ಥಾಮ * ಪೆಂಟಯ್ಯನ ಅಂಗಿ
5.	V. ಗದ್ಯ ಚಂದನ	* ಬಾಶಿಂಗ ಬಲ * ಚಂದ್ರಗಿರಿಯ ತೀರದಲ್ಲಿ

RUSSIAN

Lesson	Focus area
Lesson 1	Let always be..... (prayer song)
Lesson 2	Luli lulii lulenki..... (folk song)
Lesson 3	Good morning .....
Lesson 4	Guci.... Guci.....
Lesson 5	On the street.....
Lesson 6	My House.....

FRENCH

UNIT	Lesson	Focus Area
Unité-1	Leçon: 1	BONJOUR
Unité-1	Leçon: 2	A ParisLa Rencontre
Unité-1	Leçon: 3	Le SportAu Supermarché
Unité-1	Leçon: 4	A la MaisonAu Restaurant MacDo
Unité-2	Leçon: 5	L'AnniversaireA la Soirée

LATIN

Lessons	
1.	Latin to English
2.	Inflection and Cases
3.	Italia
4.	Romulus et Remus
5.	Atalanta
6.	Midas et Aurum
8.	Lotio Pedum

SYRIAC

Lesson	Focus area
Lesson 1	Letters
Lesson 2	Vowels
Lesson 3	Numerals
Lesson 4	Number and Gender of Words
Lesson 5	Adjectives
Lesson 6	Pronouns (Personal& Demonstrative)
Lesson 7	Pronominal Suffixesto nouns
Lesson 9	Farewell of Moses and Aaron
Lesson 10	Select Sentences of St. Ephrem
Lesson 11	To Christ, the Good Shepherd.
Lesson 13	A Brief History of SyriacLanguage

GERMAN

Unit	Title
Lektion 1	DER ANFÄNGER
Lektion 2	Pages 8 to 15 (Whole)
Lektion 3	Pages 16 to 24 (Whole)

PART - III - URDU

UNIT	LESSONS
1۔آتی ہے اردو زبان آتے آتے	۱) آپ کا پیارا گاندھی ۲) آدمی نامہ ۳)رباعی۔فراق گورکھپوری
2۔سب سے پیارا گلستان ہمارا	۵)تاج محل
3۔فن کی دنیا من کی دنیا	۷)غزل۔مرزا غالبؔ ۸)ہے جس کی زبان اردو کی طرح ۹)غزل۔ناصر کاظمی
4۔یہ دنیا ہے سب کی یہ سبکے لیے	۱۱)شکایت

URDU (OPTIONAL)

UNIT	LESSONS
	۱) غزل۔ولیؔ دکنی ۲) اردو کا سفر ۳) رباعی۔الطاف حسین حالیؔ ۴) روشنی ۵)غزل۔میر تقی میرؔ
	۶)برج بانو ۷)رباعی۔ تلوک چند محرومؔ ۸)قطعہ
	۹)زبانِ انقلاب ۱۰)وطن کا لال چلا گیا

ENGLISH LITERATURE

SECTION I POETRY

1. Since Brass, Nor Stone, Nor Earth, Nor Boundless Sea
2. A Red Red Rose
3. To the Cuckoo
4. My Last Duchess
5. I had gone a-Begging
6. Bangle Sellers

SECTION 2 SHORT STORY

1. The Orator
2. The Romance of a Busy Broker
3. A Man

SECTION 3 NON- FICTION

1. On Saying Please
2. Why Literature
3. Last Day at School.

SECTION 4 ONE ACT PLAY

1. The Boy Comes Home

COMMUNICATIVE ENGLISH

Unit I The Art of Communication

- Communication Process
- Extempore speech
- Preparing outline of a Presentation
- Sign posting

Unit II Different Media, One Message

- Media vocabulary and job titles
- Different types of news
- News reports and news headlines
- Radio news bulletin

Unit III The Wander Thirst

- Different types of Travel-Safari, Cruise, Trekking, Eco-tourism etc
- A check-in conversation at the hotel
- Describing a tourist spot
- Drafting a letter of complaint

Unit IV We are What we Eat

- Food vocabulary
- Recipe
- Interview on food choices/good health practices
- Debate

Unit V The World of Opportunities

- Job application and Curriculum Vitae

MATHEMATICS (SCIENCE)

CHAPTER	FOCUS AREA
1. SETS	1.2 Sets and their representations
	1.6 Subsets
	1.10 Operations on sets
	1.11Complement of a set.
	1.12 Practical problems of union and intersection on two sets.
2. RELATIONS AND FUNCTIONS	2.3 Relations
	2.4.1 Some of functions and their graphs
3. TRIGONOMETRIC FUNCTIONS	3.3 Trigonometric functions
	3.4 Trigonometric functions of sum and difference of two angles.
4. PRINCIPLE OF MATHEMATICAL INDUCTION	4.3 Principle of Mathematical induction [Problems involving equalities only.]
5. COMPLEX NUMBERS AND QUADRATIC EQUATIONS	5.3 Algebra of complex numbers
6. LINEAR INEQUALITIES	6.5 Solution of system of linear inequalities in two variables.
7. PERMUTATIONS AND COMBINATIONS	7.2 Fundamental principle of counting
	7.4 Combinations.
8. BINOMIAL THEOREM	8.2 Binomial theorem for positive integral indices
9. SEQUENCES AND SERIES	9.5 Geometric progression (GP).

10. STRAIGHT LINES	10.2.2 Condition for parallelism and perpendicularity of a line in terms of their slopes.
	10.3.5 Intercept form
	10.4 General equation of a line. [Excluding 10.4.1(c) Normal form]
11. CONIC SECTIONS	11.4 Parabola
	11.5 Ellipse
12. INTRODUCTION TO THREE DIMENSIONAL GEOMETRY	12.3 Coordinates of a point in space
	12.4 Distance between two points
13. LIMITS AND DERIVATIVES	13.3 Limits
	13.5.1 Algebra of derivatives of a function
	13.5.2 [Excluding derivatives of trigonometric functions]
14. MATHEMATICAL REASONING	14.3.1 Negation of statements
	14.5.1 Contrapositive and converse
15. STATISTICS	15.5 Variance and Standard deviation
16. PROBABILITY	16.4.2 Probabilities of equally likely outcomes
	16.4.3 Probability of the event 'A or B'.
	16.4.4 Probability of event 'not A'.

MATHEMATICS (COMMERCE)

CHAPTER	FOCUS AREA
1. SETS	1.2 Sets and their representations
	1.6 Subsets
	1.10 Operations on sets
	1.11Complement of a set.
2. RELATIONS AND FUNCTIONS	2.3 Relations
	2.4.1 Some of functions and their graphs
3. TRIGONOMETRIC FUNCTIONS	3.3 Trigonometric functions
	3.4 Trigonometric functions of sum and difference of two angles.
4. PRINCIPLE OF MATHEMATICAL INDUCTION	4.3 Principle of Mathematical induction [Problems involving equalities only.]
5. COMPLEX NUMBERS AND QUADRATIC EQUATIONS	5.3 Algebra of complex numbers
6. LINEAR INEQUALITIES	6.5 Solution of system of linear inequalities in two variables.
7. PERMUTATIONS AND COMBINATIONS	7.2 Fundamental principle of counting
	7.4 Combinations.
8. BINOMIAL THEOREM	8.2 Binomial theorem for positive integral indices
9. SEQUENCES AND SERIES	9.5 Geometric progression (GP).

10. STRAIGHT LINES	10.2.2 Condition for parallelism and perpendicularity of a line in terms of their slopes.
	10.3.5 Intercept form
	10.4 General equation of a line. [Excluding 10.4.1(c) Normal form]
11. CONIC SECTIONS	11.4 Parabola
	11.5 Ellipse
12. INTRODUCTION TO THREE DIMENSIONAL GEOMETRY	12.3 Coordinates of a point in space
	12.4 Distance between two points
13. LIMITS AND DERIVATIVES	13.3 Limits
	13.5.1 Algebra of derivatives of a function
	13.5.2 [Excluding derivatives of trigonometric functions]
14. MATHEMATICAL REASONING	14.3.1 Negation of statements
	14.5.1 Contrapositive and converse
15. STATISTICS	15.4 Mean deviation
	15.5 Variance and Standard deviation
16. PROBABILITY	16.4.2 Probabilities of equally likely outcomes
	16.4.3 Probability of the event 'A or B'.
	16.4.4 Probability of event 'not A'.

CHEMISTRY

Unit no.	Name of unit	Focus area
1	SOME BASIC CONCEPT OF CHEMISTRY	1.5.2 Law of Definite Proportion 1.5.3 Law of Multiple Proportion 1.7 Atomic and molecular mass 1.8 Mole concept and molar mass 1.10.1 Limiting reagent
2	STRUCTURE OF ATOM	2.2.2 Rutherford's Nuclear model of atom 2.3.2 Particle nature of electromagnetic radiation (Planck Quantum theory, Photoelectric effect) 2.3.3 Atomic spectrum (Line spectrum of hydrogen) 2.4 Bohr model for Hydrogen atom 2.5.1 Dual behaviour of matter 2.5.2 Heisenberg's uncertainty principle 2.6.1 Orbitals and Quantum numbers 2.6.4 Filling of orbitals in atom 2.6.6 Stability of completely filled and half filled subshells
3	CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES	3.3 Modern periodic law and the present form of the periodic table 3.7.1 Trends in Physical Properties
4	CHEMICAL BONDING AND MOLECULAR STRUCTURE	4.4 The valence shell electron pair repulsion (VSEPR) Theory 4.5 Valence Bond Theory 4.6.1 Types of Hybridisation 4.6.2 Other Examples of *sp*3, *sp*2 and *sp* Hybridisation 4.7 Molecular Orbital Theory 4.8 Bonding in some homonuclear diatomic molecules (Hydrogen molecule, Helium molecule and Oxygen molecule)
5	STATES OF MATTER	5.5.1 Boyle's Law (Pressure – Volume Relationship) 5.5.2 Charles' Law (Temperature – Volume Relationship) 5.5.4 Avogadro Law (Volume – Amount Relationship) 5.6 Ideal gas equation(Derivation of ideal gas equation and related problems only) 5.8 Kinetic molecular theory of gases 5.9 Behaviour of real gases: deviation from ideal gas behaviour
6	THERMODYNAMICS	6.1.1 The system and surrounding 6.1.2 Types of the system 6.1.4 The internal energy as state function [(c) The general case] 6.2.2 Enthalpy, *H* [(a) A useful new state function, (b) Extensive and intensive properties] 6.4 Enthalpy change, $\Delta_r H$ of a reaction – reaction enthalpy [(a) Standard enthalpy of reaction, (e)Hess law of constant heat summation-statement and illustration) 6.6 Spontaneity
7	EQUILIBRIUM	7.3 Law of chemical equilibrium and equilibrium constant 7.4.1Equilibrium constant in gaseous systems 7.10.1 Arrhenius concept of acids and bases

		7.10.2 The Bronsted-Lowry acids and bases 7.10.3 Lewis acids and bases 7.11.1 The Ionization Constant of Water and its Ionic Product 7.11.2 The pH Scale 7.12 Buffer solutions (Definition and example only)
8	REDOX REACTIONS	8.3 Oxidation number - Types of Redox Reactions, Balancing of Redox Reactions (Half reaction method)
9	HYDROGEN	9.3.2 Commercial Production of Dihydrogen 9.5 Hydrides 9.6.5 Hard and Soft Water 9.7.5 Storage of Hydrogen peroxide (H_2O_2)
10	THE s-BLOCK ELEMENTS	10.1.6 Chemical Properties- Solutions in liquid ammonia 10.3 Anomalous properties of lithium 10.4 Some important compounds of sodium - Sodium Carbonate (Washing Soda),$Na_2CO_3 \cdot 10H_2O$, Sodium Hydrogen carbonate (Baking Soda), $NaHCO_3$ 10.9 Some important compounds of calcium
11	THE p -BLOCK ELEMENTS	11.3.3 Diborane 11.7 Allotropes of carbon 11.8.1Carbon monoxide 11.8.4 Silicones
12	ORGANIC CHEMISTRY – SOME BASIC PRINCIPLES AND TECHNIQUES	12.5 Nomenclature of organic compounds 12.6 Isomerism 12.9.1 Detection of Carbon and Hydrogen 12.9.2 Detection of Other Elements - (A) Test for Nitrogen 12.10.1 Carbon and Hydrogen
13	HYDROCARBONS	13.2.2 Preparation(alkanes)- From unsaturated hydrocarbons, From alkyl halide(Wurtz reaction) 13.2.3 Properties - Isomerisation, Aromatization 13.2.4 Conformations 13.3.4 Preparation(alkenes) - From alkyl halides 13.3.5 Properties - Addition of hydrogen halides 13.4.3 Preparation(alkynes) 13.4.4 Properties - Addition of water, Cyclic polymerisation 13.5.4 Preparation of Benzene 13.5.5 Properties – Nitration, Friedel-Crafts alkylation reaction
14	ENVIRONMENTAL CHEMISTRY	14.2.1 Tropospheric Pollution - Global Warming and Greenhouse Effect, Acid rain 14.3 Water pollution – Biochemical Oxygen Demand(BOD) 14.7.2 Green chemistry in day- to-day life

PHYSICS

No	Name of Chapter	Focus Area Topics
1.	Physical World	1.2 Scope and Excitement of Physics
2.	Units And Measurement	2.2 The International System Of Units
		2.10. Dimensional Analysis and its applications
3.	Motion In A Straight Line	3.2 Position, Path Length And Displacement
		3.3 Average Velocity And Average Speed
		3.5 Acceleration
		3.6 Kinematic Equations For Uniformly Accelerated Motion
4	Motion In A Plane	4.2 Scalars And Vectors
		4.10 Projectile Motion
5	Laws Of Motion	5.5 Newton's Second Law Of Motion
		5.7 Conservation Of Momentum
		5.9.1 Friction
		5.10 Circular Motion
6	Work , Energy And Power	6.3 Work
		6.4 Kinetic Energy
		6.7 The Concept of Potential Energy
		6.8 The Conservation of Mechanical Energy
		6.11 Power
7	Systems Of Particles And Rotational Motion	7.6 Angular Velocity And Its Relation With Linear Velocity
		7.7 Torque And Angular Momentum
		7.9 Moment Of Inertia
		7.10 Theorems of Perpendicular And Parallel Axes
8	Gravitation	8.3 Universal Law of Gravitation
		8.5 Acceleration Due To Gravity of The Earth
		8.6 Acceleration Due To Gravity Below And Above The Surface Of Earth
9	Mechanical Properties Of Solids	9.3 Stress And Strain
		9.4 Hooke's Law
		9.5 Stress Strain Curve
10	Mechanical Properties Of Fluids	10.2.1 Pascal's Law 10.2.4 Hydraulic machines 10.4 Bernoulli's Principle (10.4.1 to 10.4 .4 not necessary)
11	Thermal Properties Of Matter	11.5 Thermal Expansion
		11.8 Change Of State
12	Thermodynamics	12.5 First Law Of Thermodynamics
		12.8 Thermodynamic Processes
		12.9 Heat Engines
13	Kinetic Theory	13.4 Kinetic theory of an ideal gas
14	Oscillations	14.3 Simple Harmonic Motion
		14.8.2 The simple pendulum
15	Waves	15.3 Displacement relation in a progressive wave
		15.4 The Speed Of A Travelling Wave

BOTANY

SL. NO.	CHAPTER NAME	FOCUS AREA
1	Chapter 1 BIOLOGICAL CLASSIFICATION	**Table 2.1** Characteristics of the Five Kingdoms (R.H. Whittaker's Classification) **2.3** Kingdom Fungi (General characters of Fungi, page 22 and 23) **2.6** Viruses (page 25 and 26)
2	Chapter 3 PLANT KINGDOM	**3.1** Algae (General characters of algae, page 30 to 32) and **Table 3.1** Divisions of Algae and their main characteristics(page 33) **3.2** Bryophytes (page 34 to 35)
3	Chapter 5 MORPHOLOGY OF FLOWERING PLANTS	**5.1** The Root **5.1.2** Modifications of Root **5.2** The Stem **5.2.1** Modifications of Stem **5.3** The Leaf **5.4** The Inflorescence **5.5** The Flower **5.5.1** Parts of a Flower**(5.5.1.1 to 5.5.1.4)** **5.9.1** Fabaceae (Floral characters and Floral Formula) **5.9.3** Liliaceae (Floral characters and Floral Formula)
4	Chapter 6 ANATOMY OF FLOWERING PLANTS	**6.1.1** Meristematic tissues **6.1.2.2** Complex Tissues **6.2.1** Epidermal Tissue System **6.2.3** The Vascular Tissue System **6.3.1** Dicotyledonous root **6.3.2** Monocotyledonous root **6.3.3** Dicotyledonous stem **6.3.4** Monocotyledonous stem **6.3.5** Dorsiventral (Dicotyledonous leaf)
5	Chapter 8 CELL : THE UNIT OF LIFE	**8.4** Prokaryotic cells **8.5.1** Cell Membrane **8.5.4** Mitochondria **8.5.5** Plastids **8.5.6** Ribosomes **8.5.10** Nucleus

6	Chapter 10 CELL CYCLE AND CELL DIVISION	**10.1.1** Phases of Cell Cycle **10.2 to 10.2.5** – M Phase, Prophase, Metaphase, Anaphase, Telophase, Cytokinesis **10.4 to 10.4.2** – Meiosis, Meiosis I and Meiosis II
7	Chapter 11 TRANSPORT IN PLANTS	**11.2.1** Water Potential **11.2.2** Osmosis **11.2.3** Plasmolysis **11.2.4** Imbibition **11.3.1** How do plants absorb water? **11.3.2.2** Transpiration Pull **11.4** Transpiration
8	Chapter 12 MINERAL NUTRITION	**12.2.1** Criteria for essentiality of elements **12.6.1** Nitrogen cycle **12.6.2** Biological Nitrogen fixation, Symbiotic biological nitrogen fixation, Nodule Formation.
9	Chapter 13 PHOTOSYNTHESIS IN HIGHER PLANTS	**13.3** Where does Photosynthesis take place? **13.4** How many types of Pigments are involved in Photosynthesis? **13.5** What is light reaction? **13.6** The Electron Transport **13.6.1** Splitting of water **13.6.2** Cyclic and Non-cyclic Photo-phosphorylation **13.6.3** Chemiosmotic Hypothesis **13.7.1** The Primary acceptor of CO 2 **13.7.2** Calvin cycle
10	Chapter 14 RESPIRATION IN PLANTS	**14.2** Glycolysis **14.3** Fermentation **14.4** Aerobic respiration **14.4.1** Tricarboxylic Acid Cycle **14.4.2** ETS and Oxidative Phosphorylation
11	Chapter 15 PLANT GROWTH AND DEVELOPMENT	**15.4.1** Plant Growth Regulators – Characteristics **15.4.3.1** Auxins **15.4.3.2** Gibberellins **15.4.3.3** Cytokinins **15.4.3.4** Ethylene **15.4.3.5** Abscisic acid **15.5** Photoperiodism

ZOOLOGY

Sl. No	Name of the Chapter	Focus Area
1	**Chapter 1 The Living world**	Table 1.1 (Scientific name of Man and Housefly) 1.4 Taxonomical AIDS
2	**Chapter 4 Animal Kingdom**	4.1.2 Symmetry 4.1.3 Diploblastic and Triploblastic Organisation 4.1.4 Coelom 4.2.1 Phylum Porifera (ostia, osculum, choanocytes; examples) 4.2.2 Phylum Coelenterata (Cnidoblast; alternation of generations; examples) 4.2.3 Phylum Ctenophora (Comb plates; Bioluminescence; examples) 4.2.4 Phylum Platyhelminthes (Adaptations of parasitic forms; examples) 4.2.5 Phylum Aschelminthes (Difference between male & female worms; Egs) 4.2.6 Phylum Annelida (Metamerism; Parapodia,nephridia- function; examples) 4.2.7 Phylum Arthropoda (Malpighian tubules ; Egs for economically important insects & vectors) 4.2.8 Phylum Mollusca (Radula; examples) 4.2.9 Phylum Echinodermata (Water vascular system; examples) 4.2.11 Phylum Chordata (Fundamental characteristics only) Table 4.1-Comparison of Chordates and Non-chordates 4.2.11.2 Class Chondrichthyes (Scales; Eg Scoliodon, Pristis) 4.2.11.3 Class Osteichthyes (Significance of air bladder;Scales Eg Hippocampus, Catla); Difference between chondrichthyes and osteichthyes) 4.2.11.4 Class Amphibia (Respiration; Cloaca; eg : Salamandra , Rana) 4.2.11.5 Class Reptilia (Epidermal scales, skin cast; examples) 4.2.11 .6 Class Aves(Adaptations; examples) 4.2.11.7 Class Mammalia (Characteristics; Examples)
3	**Chapter 7 Structural organisation in Animals**	7.1.1 Epithelial tissue (three types of Simple Epithelium,their location and function ; Tight junction, Adhering junction and Gap Junction) 7.1.2 Connective tissue (Functions of Areolar; Adipose; tendons; ligaments) 7.1.3 Muscle tissue (figure 7.7 Comparison of skeletal , smooth & cardiac muscle tissue) 7.1.4 Neural tissue (Neuroglial cells-function) 7.4.1 Morphology (mouth parts) 7.4.2 Anatomy(Alimentary canal of cockroach; Nervous system of Cockroach – Ommatidia; Mosaic vision)
4	**Chapter 9 Biomolecules**	9.2 Primary and secondary metabolites (table 9.3 some secondary metabolites) 9.4 Proteins (Table 9.5 proteins and their functions) 9.7 Structure of proteins (primary, secondary, tertiary and quaternary structure, figure 9.4) 9.8 Nature of Bond linking monomers in a polymer (peptide, glycosidic, phospho diester bond; Structure of DNA) 9.12.4 Factors affecting enzyme activity (Temperature and pH ; concentration of substrate) 9.12.5 Classification and nomenclature of enzymes 9.12.6 Co factors
5	**Chapter 16 Digestion and Absorption**	16.1.1 Alimentary canal (Thecodont,Diphyodont,Heterodont : dental formula of man; layers in the wall of alimentary canal, figure 16.4) 16.2 Digestion of food -(function of mucus and bicarbonate ions; inactive enzymes in pancreatic juice; functions of Goblet cells; succus entericus 16.4 Disorders of Digestive system

6	**Chapter 17 Breathing and Exchange of Gases**	17.1.1 Human Respiratory System (Pharynx,Glottis,Epiglottis, Pleura ; Steps in Respiration) 17.2 Mechanism of breathing 17.2.1 Respiratory volumes and Capacities (TV, RV) 17.4.1 Transport of Oxygen 17.6 Disorders
7	**Chapter 18 Body Fluids and circulation**	18. 1. 3.1 ABO grouping(Table 18.1 blood groups and donor compatibility) 18.1.3.2 RH grouping (Erythroblastosis Foetalis) 18.1.4 Coagulation of blood 18.3.1 Human circulatory system(Pericardium,bicuspid valve, tricuspid valve, semilunar valves, SA node, AV node, bundle of HIS, purkinje fibres 18. 3. 2 Cardiac cycle (systole, diastole, heart sounds) 18.3.3 ECG (figure 18.3; waves in ECG, significance) 18.6 Disorders of circulatory system
8	**Chapter 19 Excretory products and their elimination**	Ammonotelic, uricotelic, ureotelic 19.1 Human excretory system(structure of nephron) 19.2 Urine formation 19.5 Regulation of kidney function (Function of ADH & ANF ; Renin – Angiotensin mechanism) 19.8 Disorders of the excretory system (Uremia, Glomerulonephritis)
9	**Chapter 20 Locomotion and movement**	20.2.1 Structure of contractile proteins 20.2.2 Mechanism of muscle contraction (Stages of Cross bridge formation) Refer Fig: 20.4 20.3 Skeletal system (ribs) 20.4 Joints 20.5 Disorders (Arthritis,Osteoporosis,Gout)
10	**Chapter 21 Neural control and coordination**	21.3 Neuron as structural and functional unit of neural system 21.3.2 Transmission of impulses 21.4.1 Fore Brain (Corpus callosum, hypothalamus and its functions) 21.4.2 Midbrain (Corpora quadrigemina) 21.4.3 Hind brain 21.5 Reflex action and reflex arc 21.6.1.1 Parts of an eye 21.6.2 The Ear - structure
11	**Chapter 22 Chemical control and coordination**	22.2.1 Hypothalamus(Function of GnRH, Somatostatin) 22.2.2 The Pituitary gland (Functions of GH,TSH,FSH,Oxytocin,Vasopressin; Gigantism, acromegaly, dwarfism, diabetes insipidus) 22.2.3 Pineal gland 22.2.4 Thyroid gland (Functions of Thyroid hormones) 22.2.5 Parathyroid 22.2.7 Adrenal gland (emergency hormones) 22.2.8 Pancreas (Hormones and their function) 22.2.9 Testis(Leydig cells,androgens) 22.2.10 Ovary (Corpus luteum, progesterone, oestrogen) 22.3 Hormones of heart, kidney and gastrointestinal tract (Atrial natriuretic factor, erythropoietin)

Unless specified, the topics under the main heading has to be studied. Specified topics are given inside the brackets

HISTORY

	Name of the Themes	Focus Area
1.	From the beginning of time	Primates - Hominoids - Hominids Australopithecus, Homo -Replacement and Regional continuity models - Ways of obtaining food. From Trees, to Caves and Open air Sites.
2.	Writing and City life	Mesopotamia and its geography - The development of writing (cuneiform). A trading town in a pastoral zone - The Legacy of writing
3.	An Empire across three Continents	Roman empire and its geographical position - Social hierarchies - Late Antiquity
4.	The Central Islamic Lands	The Caliphate - The Umayyads - Abbasid Revolution Learning and Culture
5.	Nomadic Empires	Quriltais - Yasa - Yam - Military Organization
6.	The Three Orders	The First order, The Second order - The Third order
7.	Changing cultural Traditions	Revival of Italian cities - Universities and humanism - Artists and realism - architecture
8.	Confrontation of Cultures	The Aztecs, The Mayans The Incas of peru
9.	The Industrial Revolution	Why Britain - Coal and iron - cotton spinning and Weaving
10.	Displacing Indigenous Peoples	The Gold Rush and the Growth of Industries
11.	Paths to Modernization	Establishing the Republic - The Rise of the communist party of china - Establishing the new Democracy: 1949-65

POLITICAL SCIENCE

TEXT-1 INDIAN CONSTITUTION AT WORK

Sl.No	Chapter	Topics
1.	Constitution: Why and How?	a. Why do we need a Constitution? b. Borrowed provisions in Indian Constitution.
2.	Rights in the Indian Constitution	a. Fundamental Rights in the Indian Constitution.
3.	Election and Representation	a. Comparison of FPTP and PR System of Election. b. Election Commission of India: Powers and Functions. c. Electoral Reforms.
4.	Executive	a. Parliamentary Executive in India: 'The President' and the 'Prime Minister and Council of Ministers'. b. Permanent Executive.
5.	Legislature	a. Special powers of Lok Sabha and Rajya Sabha. b. How does the Parliament make Laws? c. How does the Parliament control the Executive?
6.	Judiciary	a. Independence of Judiciary. b. Jurisdiction of Supreme Court.
7.	Federalism	a. Division of Powers in India. b. Federalism in India with a strong Central Government.
8.	Local Governments	a. Features of 73rd Amendment.
9.	Constitution as a living document	a. How to Amend the Constitution of India?
10.	The Philosophy of the Constitution	a. Limitations of Indian Constitution. b. Criticisms against Indian Constitution.

TEXT-2 POLITICAL THEORY

Sl.No	**Chapter**	**Topics**
1.	Political Theory: An Introduction.	a. Why should we study Political Theory?
2.	Freedom.	a. Harm Principle. b. Negative and Positive Liberty.
3.	Equality.	a. Three dimensions of Equality. b. How can we promote Equality?
4.	Social Justice.	a. Three Principles of Justice.
5.	Rights.	a. Kinds of Rights.
6.	Citizenship.	a. Ways of attaining Indian Citizenship. b. Universal Citizenship and Global Citizenship.
7.	Nationalism.	a. Factors/Assumptions leading to Nationalism.
8.	Secularism.	a. Indian and Western models of secularism.
9.	Peace.	a. Forms of Structural Violence. b. Contemporary challenges to Peace.
10.	Development.	a. Social and Environmental costs of Development.

ECONOMICS

Part I INDIAN ECONOMIC DEVELOPMENT

Chapter Number	Name of the Chapter	Areas to be Focussed
UNIT I Chapter 1	*Development Policies and Experience (1947-90)* Indian Economy on The Eve of Independence	*NIL*
Chapter 2	Indian Economy 1950–1990	*NIL*
UNIT II Chapter 3	*Economic Reforms Since 1991* Liberalisation, Privatisation and Globalisation: An Appraisal	*3.1 Introduction* *3.2 Background* *3.3 Liberalisation* *3.4 Privatisation* *3.5 Globalisation* *3.6 Indian Economy During Reforms: an Assessment* *3.7 Conclusion*
UNIT III Chapter 4	*Current Challenges Facing the Indian Economy* Poverty	*4.1 Introduction* *4.2 Who are the Poor?* *4.3 How are Poor People Identified?* *4.4 The Number of Poor in India* *4.5 What Causes Poverty?* *4 .6 Policies and Programmes Towards Poverty Alleviation* *4.7 Poverty Alleviation Programmes - a Critical Assessment* *4.8 Conclusion*
Chapter 5	Human Capital Formation in India	*NIL*
Chapter 6	Rural Development	*NIL*
Chapter 7	Employment: Growth, Informalisation and Other Issues	*NIL*

Chapter 8	Infrastructure	*8.1 Introduction* *8.2 What is Infrastructure?* *8.3 Relevance of Infrastructure* *8.4 The State of Infrastructure in India* *8.5 Energy* *8.6 Health* *8.7 Conclusion*
Chapter 9	Environment and Sustainable Development	*9.1 Introduction* *9.2 Environment - Definition and Functions* *9.3 State of India's Environment* *9.4 Sustainable Development* *9.5 Strategies for Sustainable Development* *9.6 Conclusion*
UNIT IV	*Development Experiences of India: A Comparison with Neighbours*	
Chapter 10	Comparative Development Experiences of India and its Neighbours	*NIL*

Part 2 STATISTICS FOR ECONOMICS

Chapter Number	Name of the Chapter	Areas to be Focussed
Chapter 1	*Introduction*	*1. Why Economics?* *2. Statistics in Economics* *3. What is Statistics?* *4. What Statistics Does?* *5. Conclusion*
Chapter 2	*Collection of Data*	*1. Introduction* *2. What are the Sources of Data?* *3. How Do We Collect the Data?* *4. Census and Sample Surveys Sampling and Non-Sampling Errors* *5. Census of India and NSSO* *6. Conclusion*
Chapter 3	*Organisation of Data*	*1. Introduction* *2. Raw Data* *3. Classification of Data* *4. Variables: Continuous and Discrete* *5. What is a Frequency Distribution?* *6. Bivariate Frequency Distribution Conclusion*
Chapter 4	*Presentation of Data*	*1. Introduction* *2. Textual Presentation of Data* *3. Tabular Presentation of Data* *4. Tabulation of Data and Parts of a Table* *5. Diagrammatic Presentation of Data* *6. Conclusion*
Chapter 5	*Measures of Central Tendency*	*NIL*
Chapter 6	*Measures of Dispersion*	*NIL*
Chapter 7	*Correlation*	*NIL*
Chapter 8	*Index Numbers*	*NIL*
Chapter 9	*Use of Statistical Tools*	*1. Introduction* *2. Steps Towards Making a Project*

GEOGRAPHY

TEXTBOOK : FUNDAMENTALS OF PHYSICAL GEOGRAPHY		
Sl. No	**Chapter No.**	**Name of the chapters**
1	1	Geography as a Discipline
2	3	Interior of the Earth
3	4	Distributon of Oceans and Contnents
4	8	Compositon and Structure of Atmosphere
5	14	Movements of Ocean Water
TEXTBOOK : INDIA : PHYSICAL ENVIRONMENT		
6	1	India – Locaton
7	2	Structure and Physiography

ANTHROPOLOGY

Unit 1 Introducing Anthropology

- Meaning and Nature of Anthropology
- Major Branches of Anthropology
- Relevance of Anthropology
  - Important Career Opportunities
  - Concept of Applied Anthropology and Action Anthropology
- Origin and Development of World Anthropology : (Classification of T.K. Penniman)

Unit 2 Basics of Social Cultural Anthropology

- **All Contents** (Except Brief History of Ethnographic studies)

Unit 3 Basics of Biological Anthropology

- Meaning and Scope of Biological Anthropology
- Theories of Evolution
  - Lamarkism
  - Darwinism
  - Neo-Darwimism
  - Synthetic Theory of Evolution.
- Human Evolution
  - Classification of Animal Kingdom.
  - Human's Place among primates
  - Human Evolution 4 stages
- Blood groups
  - ABO System
  - Group Identification
  - Inheritance pattern

Unit 4 Basics of Archaeological Anthropology

- Basic Concepts in Archaeology
- Stone Tool Typology
- Stone Tool Technology
- Stone Tool Tradition
- Life and Culture in Stone Age
- Dating methods

Unit 5 Basics of Linguistic Anthropology

- Linguistic Anthropology and Linguistics
- Relationship between Language and Culture
- Language and Physiological modifications
- Language Acquisition
- Non Verbal Communication
- Para Language

GEOLOGY

Chapter No & Name	Focus areas
1.Geology as a discipline	Geology and its branches- Physical geology, Geomorphology, Mineralogy, Petrology, Historical geology (Palaeontology and Stratigraphy), Structural geology, Economic geology and Environmental geology. Geology and human society Names of major geological organizations of India- Geological Survey of India, Oil and Natural Gas Corporation, National Centre for Earth Science Studies, Centre for Water Resource Development and Management, Kerala state mining and geology department, Kerala state ground water department.
2. Origin and structure of the earth	Origin of the universe- Big bang theory Origin of the earth- Nebular hypothesis Shape of the earth (geoid) and size of the earth (equatorial and polar radii of the earth) Concept of geologic time-the Geologic Time Scale *(basics only)* Internal structure of the earth- Chemical layers of the earth (crust, mantle and core). Basic components of the earth system- Atmosphere, hydrosphere, lithosphere (*lithosphere and asthenosphere*) and biosphere *(basics only)* Thermal layers of the atmosphere Hydrologic cycle
3. Earth processes	External processes and internal earth processes Degradation (weathering and erosion) and aggradation (deposition) *Agents of erosion such as running water, groundwater, wind, glacier, waves and gravity (basics only)* Types of weathering- Physical weathering (thermal expansion and contraction, frost wedging) Chemical weathering (dissolution, oxidation, hydrolysis, hydration and carbonation) Biological weathering (root wedging) Residual and transported soils Soil profile
6. Streams	Drainage basin (definition) Fluvial erosion (hydraulic action, abrasion, attrition and corrosion) Landforms of fluvial erosion: stream valleys, gorges/canyons, pot holes and water falls *(basics only)* Fluvial depositional landforms: alluvial fans, floodplain deposits, meanders, oxbow lakes, natural levees and delta *(basics only)*
12. Minerals	Minerals-definition Physical properties of minerals- Crystal forms, colour, streak, lustre, hardness, cleavage, fracture, specific gravity and magnetism Minerals in daily life- Different areas in which minerals are used in daily life. Gemstones- names of popular gem varieties of material

STATISTICS

1 Statistics - Scope and Development

History of Statistics. Definition of Statistics. Scope and importance of Statistics. Some applied areas of Statistics-Actuarial science, biostatistics and agricultural statistics. Official Statistics-CSO and NSSO,ISI.

2 Collection of Data

Data Collection-statistical investigation, population and sample and statistical survey. Types of variables - Qualitative and quantitative, discrete and continuous variables, Types of Data: - Primary, Secondary. Questionnaire and Schedule – drafting and requisites. Methods of Primary Data collection - Direct personal interview, sending questionnaire through post or email, telephone interview, indirect investigation, direct observation, focus group discussion. Sources of secondary data.

3. Classification and Tabulation

Types of classification - Qualitative, Quantitative, Chronological and Geographical. Tabulation of data, Objective of classification and tabulation, one Way and two Way classification, classification according to attributes. Construction of frequency tables- discrete and continuous (univariate only), Inclusive and Exclusive Classes, Percentage Frequency Tables,Cumulative frequency table, Relative frequency table.

4. Diagrams and Graphs

Significance of diagrams and graphs. Difference between diagrams and graphs. Bar Diagrams – Simple bar diagram, multiple bar diagram, sub-divided bar diagram, percentage bar diagram, pie diagram, histogram, frequency polygon and frequency curve, ogives

5. Central Tendency

Average, requisites of good average, various measures of central tendencies. Arithmetic Mean- raw, discrete and continuous,. Mathematical properties of arithmetic mean, weighted arithmetic mean, combined arithmetic mean. Median - raw, discrete and continuous. Mode - raw, discrete and continuous. Empirical relationship between mean, median and mode. Geometric Mean - raw data. Harmonic mean – raw data. Quartiles- raw data.

6. Dispersion

Meaning, characteristics and properties of Dispersion. Various measures of dispersion. Range – raw data. Quartile deviation- raw data. Mean Deviation- raw data . Standard deviation & variance - raw, discrete and continuous. Properties and characteristics of Standard Deviation. Relative measures of dispersion -Coefficient of variation

7. Skewness and Kurtosis

Meaning of skewness. Types of skewness. Measure of skewness-Karl Pearson's coefficient of skewness.. Meaning of Kurtosis, Types of Kurtosis.

8. Probability

Probability- random experiment, sample point, sample space, events, simple and compound events, algebra of events, mutually exclusive events, exhaustive events and equally likely events. Mathematical definition of probability and axiomatic approach to probability. Addition theorem and its applications.

9. Conditional Probability.

Meaning of conditional probability. Definition of conditional probability . Multiplication theorem. Independent and dependent events and its applications.

10. Sampling techniques

Census and sampling - advantages and disadvantages. Need and importance of sampling. Sampling and non sampling errors. Methods of sampling- probability sampling and non probability sampling. Methods of non probability sampling- convenience sampling, judgment sampling, quota sampling. Method of probability sampling- simple random sampling (wor & wr)

ACCOUNTANCY WITH ANALYSIS OF FINANCIAL STATEMENTS

Sl No	Name of Chapter	Focus Area
1	**Introduction to Accounting**	1. Meaning of Accounting 2. Qualitative Characteristics of Accounting information 3. Objectives of Accounting 4. Basic Terms in Accounting
2	**Theory Base of Accounting**	1. Basic Accounting Concepts 1.1 Business Entity Concept 1.2 Money Measurement Concept 1.3 Going Concern Concept 1.4 Accounting Period Concept 1.5 Dual Aspect Concept 1.6 Matching concept 1.7 Conservatism concept
3	**Recording of Transactions -I**	1. Accounting Equation 2. Rules of Debit and Credit 3. Books of original Entry 3.1 Journal 4 Ledger 5. Distinction between Journal and Ledger 6. Posting from Journal
4	**Recording of Transactions -II**	1. Special Journals 2. Single Column Cash Book 3. Double Column Cash Book 4. Petty Cash Book 5. Purchases Book 6. Sales Book
5	**Bank Reconciliation Statement**	1. Concept of Bank Reconciliation Statement 2. Causes of differences between the cash book and the bank passbook balances
6	**Trial Balance and Rectification of Errors**	1. Meaning of Trial Balance 2. Objectives of Preparing the Trial Balance 3. Preparation of Trial Balance - Balances Method
7	**Financial Statements - I**	1. Trading & Profit and Loss Account 1.1 Relevant items in Trading and Profit and Loss Account 1.2 Concept of Gross Profit and Net profit 2. Balance Sheet 3. Preparation of Trading and Profit and Loss Account and Balance Sheet (Simple problems)
8	**Financial Statements - II**	1. Treatment of the following adjustments in the Preparation of Financial Statements 1.1 Closing Stock 1.2 Outstanding Expenses 1.3 Prepaid Expenses

		1.4 Accrued Income 1.5 Income received in advance 1.6 Depreciation 2. Preparation of trading and profit and Loss Account and Balance Sheet with the above adjustments
9	**Computerised Accounting System**	1. Concept of Computerised Accounting System 2. Comparison between Manual and Computerised Accounting 3. Advantages of Computerised Accounting System

ACCOUNTANCY WITH COMPUTERISED ACCOUNTING

Sl No	Name of Chapter	Focus Area
1	**Introduction to Accounting**	1. Meaning of Accounting 2. Qualitative Characteristics of Accounting information 3. Objectives of Accounting 4. Basic Terms in Accounting
2	**Theory Base of Accounting**	1. Basic Accounting Concepts 1.1 Business Entity Concept 1.2 Money Measurement Concept 1.3 Going Concern Concept 1.4 Accounting Period Concept 1.5 Dual Aspect Concept 1.6 Matching concept 1.7 Conservatism concept
3	**Recording of Transactions -I**	1. Accounting Equation 2. Rules of Debit and Credit 3. Books of original Entry 3.1 Journal 4 Ledger 5. Distinction between Journal and Ledger 6. Posting from Journal
4	**Recording of Transactions -II**	1. Special Journals 2. Single Column Cash Book 3. Double Column Cash Book 4. Petty Cash Book 5. Purchases Book 6. Sales Book
5	**Bank Reconciliation Statement**	1. Concept of Bank Reconciliation Statement 2. Causes of differences between the cash book and the bank passbook balances
6	**Trial Balance and Rectification of Errors**	1. Meaning of Trial Balance 2. Objectives of Preparing the Trial Balance 3. Preparation of Trial Balance - Balances Method
7	**Financial Statements - I**	1. Trading & Profit and Loss Account 1.1 Relevant items in Trading and Profit and Loss Account 1.2 Concept of Gross Profit and Net profit 2. Balance Sheet 3. Preparation of Trading and Profit and Loss Account and Balance Sheet (Simple problems)
8	**Financial Statements - II**	1. Treatment of the following adjustments in the Preparation of Financial Statements 1.1 Closing Stock 1.2 Outstanding Expenses 1.3 Prepaid Expenses

		1.4 Accrued Income 1.5 Income received in advance 1.6 Depreciation 2. Preparation of trading and profit and Loss Account and Balance Sheet with the above adjustments
9	**Computerised Accounting System**	1. Concept of Computerised Accounting System 2. Comparison between Manual and Computerised Accounting 3. Advantages of Computerised Accounting System

BUSINESS STUDIES

Sl No	Name of Chapter	Focus Area
1	**Business, Trade and Commerce**	1. Concept of Business 2. Characteristics of Business Activities 3. Classification of Business Activities 4. Industry and its Categories 5. Commerce 5.1 Trade and Auxiliaries to Trade
2	**Forms of Business Organisation**	1. Sole Proprietorship – Features, Merits and demerits 2. Partnership - Features 3. Partnership Deed and its Contents 4. Cooperative Societies - Features 5. Joint Stock Company – Features 6. Public Company and Private Company
3	**Business Services**	1. Commercial Banks and its Functions 2. e-Banking 3. Insurance - Principles 4 Warehousing - Types
4	**Emerging Modes of Business**	1. Concept of e-Business 2. Difference between e-business and traditional business 3. Concept of Outsourcing
5	**Social Responsibility of Business and Business Ethics**	1. Concept of Social Responsibility 2. Kinds of Social Responsibility 3. Social Responsibility towards different Interest Groups 4. Environmental Protection- Types of Pollution
6	**Formation of a Company**	1. Functions of a Promoter 2. Memorandum of Association and its Contents 3. Articles of Association 4. Differences between Memorandum of Association and Articles of Association 5. Prospectus
7	**Sources of Business Finance**	1. Sources of Finance 1.1 Retained Earnings 1.2 Issue of Shares - Equity shares - Preference Shares 1.3 Debentures
8	**Internal Trade**	1. Retail Trade 2. Fixed Shop Retailers 3. Large Retailers 3.1 Departmental Stores and its Features 3.2 Multiple shops – Merits and Limitations 3.3 Super Markets – Features 4. Vending machines

COMPUTER SCIENCE

Chapter	Focus Area
1. The Discipline of Computing	Evolution of Computing machines (Abacus, Difference engine, Analytical engine), Generations of computers
2. Data Representation and Boolean Algebra	Number systems, Number conversions – Decimal to non decimal and reverse, Shortcut methods (avoid fractional conversion) Representation of integers (Sign & Magnitude, 1's and 2's compliments) and characters (ASCII & Unicode), Boolean operators (AND, OR, NOT) and logic gates, Simple circuit designing.
3. Components of the Computer System	Processor, Ports, Memory (RAM only with measuring units), e-Waste and disposal methods, System software (OS, Language processors – compiler and interpreter), Free and open source software.
4. Principles of Programming and Problem Solving	Phases in programming (Listing only), Debugging (Types of errors), Flowchart symbols, Development of algorithms and flowcharts to solve simple problems only (except looping).
5. Introduction to C++ Programming	Tokens and classification with examples
6. Data types and Operators	Fundamental data types, Variables, Operators and classifications, Type conversion, Various types of statements, Structure of C++ program.
7. Control Statements	Decision making statements (if, if – else, if – else if, switch), Iteration statements (while, for, do – while) – syntax and working, (Nesting not required), Jump statements (break, continue). (No programming)
8. Arrays	Declaration, Initialisation, Accessing elements, Operations (listing only with concept), Traversal operation with simple program.
9. String Handling and I/O Functions	Array declaration for string and initialisation, Input/Output operations, Use of get(), getline(), put(), write() functions. (No programming)
10. Functions	Modular programming and merits, Predefined functions (string, mathematical, character), User-defined functions (Syntax, Concept of arguments and return value). (No programming)
11. Computer Networks	Advantages of network, Key terms (Bandwidth, noise, node), Communication devices (switch, router, gateway, bridge, modem), Network topologies, Identification of computers over network (MAC, IP)
12. Internet and Mobile Computing	Services on Internet (Working procedure is not required), Cyber security (Computer virus, Trojan horse, hacking, phishing).

COMPUTER APPLICATIONS (HUMANITIES)

Chapter	Focus Area
1. FUNDAMENTALS OF COMPUTER	Data and Information, Data processing(Listing of stages), Functional units of a computer(Diagram and brief explanation of units),Characteristics of computers(Listing only), Number systems, Representation of numbers and characters (Names only)
2. COMPONENTS OF THE COMPUTER SYSTEM	Primary memory (RAM and measuring units), Input - Output devices, e-Waste and disposal methods, System software (OS, Language processors – compiler and interpreter), Free and open source software.
3.DATA PROCESSING WITH ELECTRONIC SPREADSHEET	Spreadsheet software-Features and Examples, Rows-Columns-Cell-Range, Components of a spreadsheet window(Names only), Entering data in a cell(Data types only), Saving a spreadsheet, Inserting and deleting cells, rows, columns and worksheets(Methods only), Freezing, Headers and footers, Printing a spreadsheet, Export as PDF command
4.DATA ANALYSIS USING SPREADSHEET	Name, Syntax and use of Mathematical functions, Data manipulations(Names only), Charts- Chart elements(List), Chart types (Names only)
5.PRESENTATION SOFTWARE	Use and examples of presentation software, IDE components of presentation software(List only), Creating, Saving and Opening a presentation, Adding, deleting, duplicating slides (commands only), Inserting audio, video, image, hyperlinks in a slide(commands only), Views of the slides(List only)
6.GETTING STARTED WITH GIMP	Image editing software-Use and examples, Comparison of Raster and Vector, GIMP-features, Canvas creation, Saving images, Selection tools(Names only), Transform tools(list only)
7.ADVANCED TOOLS FOR IMAGE EDITING	Use of Paths tool, Comparison of subtractive and additive colour schemes, Filters (List only), Types of Blur, Distorts, Light and Shadow, Artistic filters (Names only)
8.COMPUTER NETWORK	Advantages of network, Key terms (Bandwidth, noise, node), Data communication devices(switch, router, gateway, bridge, modem), Types of network (PAN, LAN, MAN, WAN), Network topologies, Identification of computers over network (MAC, IP)
9.INTERNET	Services on Internet (Working procedure is not required), Cyber security (Computer virus, Trojan horse, hacking, phishing).
10.IT APPLICATIONS	e-Governance (Types, infrastructure), e-Business, e-Learning (Including benefits and challenges)

COMPUTER APPLICATIONS (COMMERCE)

Chapter	Focus Area
1. Fundamentals of Computer	Data and information, Functional units of computer, Computer and its characteristics, Number conversions – Decimal to non decimal and reverse, Shortcut methods (avoid fractional conversion), Representation of integers (Sign & Magnitude, 1's and 2's compliments) and characters (ASCII & Unicode).
2. Components of the Computer System	Primary memory (RAM and measuring units), Input - Output devices, e-Waste and disposal methods, System software (OS, Language processors – compiler and interpreter), Free and open source software.
3. Principles of Programming and Problem Solving	Phases in programming (Listing only), Debugging (Types of errors), Development of algorithms and flowcharts to solve simple problems only (except looping).
4. Getting started with C++	Tokens and classification with examples
5. Data Types and Operators	Fundamental data types, Variables, Operators and classifications, Types of expressions, Types of statements.
6. Introduction to Programming	Structure of C++ program, Variable initialization, Arithmetic assignment operators, Increment – decrement operators, Type conversion. (No programming).
7. Control Statements	Decision making statements (if, if – else, if – else if, switch), Iteration statements (while, for, do – while) – syntax and working, (No programming). (Nesting not required)
8. Computer Networks	Advantages of network, Key terms (Bandwidth, noise, node), Data communication devices(switch, router, gateway, bridge, modem), Types of network (PAN, LAN, MAN, WAN), Network topologies, Identification of computers over network (MAC, IP)
9. Internet	Services on Internet (Working procedure is not required), Cyber security (Computer virus, Trojan horse, hacking, phishing).
10. IT Application	e-Governance (Types, infrastructure), e-Business, e-Learning (Including benefits and challenges)

MUSIC

Sl.No	UNIT	FOUCS AREA
1.	INTRODUCTION TO MUSIC	1.1 Integral part 1.2 Divine Art 1.3 music as an accompaniment 1.4 Therapeutic Value 1.5 Music for relaxation 1.2.3 Emotional Value 1.3.1 Nada 1.3.2 Sruthi 1.3.3 Svara Nomenclature 1.3.4 Sthayi 1.3.5 Arohana 1.3.6 Avarohana 1.3.7 Raga 1.3.9 Dhatu 1.3.10 Matu
2.	INDIAN MUSIC	2.1 Introduction 2.2 Hindustani and Carnatic Music 2.3 Melodic and Harmonic Systems 2.4 Raga System 2.5 Concept of Drone or Sruti 2.6 Tala System 2.7 Gamakas 2.8 Manodharma Sangita 2.9 Divinity and variety of Indian Music 2.10 Musical Instruments 2.11 Languages used in the compositions 2.12 Folk tradition
3.	MELAKARTA SCHEME	3.1 Raga 3.2 Classification 3.3 Melakartas and the scheme 3.4 Chakras 3.6 Katapayadi Sutra
4.	TALA	4.2 Shadangas 4.3 Sapta Talas 4.6 Adi Tala
5.	MUSICAL FORMS	5.2 Technical and Melodious Forms
6.	COMPOSERS	6.1.3 Contribution to music 6.1.4 Karnataka Sangita Pitamaha or Adiguru 6.2.1 Birth and Education 6.2.3 Contributions

GANDHIAN STUDIES

No.	Chapter Name	Focus Areas
2	**The Transformation of M. K. Gandhi- Phase I**	Full
3	**The Transformation of M. K. Gandhi- Phase I**	Full
4	**Role of Mahatma Gandhi in the Freedom Movement**	Champaran Satyagraha, Ahmedabad Mill Strike, Kheda satyagraha, Rowlatt Act and Jallianwala Bagh Massacre, Non-cooperation Movement, Chauri-chaura, Civil Disobedience Movement, Anti-war Satyagraha, Quit India Movement, Divide and Quit policy, Communal Riots at Naokhali, Vaikom Satyagraha, Guruvayur satyagraha, Gandhi's contribution to Indian Politics.
5	**Central Philosophy of Mahatma Gandhi**	Gandhi's views on Ends and Means, 11 Ashram vows (in brief)
6	**The Praxis of Satyagraha**	Aim of Satyagraha, Basic components, Qualifications of a Satyagrahi, Forms of Satyagraha, Satyagraha and Passive resistance.
7	**Political Ideas of Mahatma Gandhi**	Gandhi's views on state and democracy, Gandhi's views on political decentralisation, Ramrajya (concept only), Gram Swaraj and principles of village swaraj.
8	**EconomicIdeas of Mahatma Gandhi**	Economic concepts of Mahatma Gandhi.Economics and Ethics, Plain living and high thinking, Bread labour, Swadeshi, Khadi, Mechanisation and Industrialisation, Decentralisation, Economic Equality, Trusteeship (excluding formula).
9	**Social Ideas of Mahatma Gandhi**	Sarvodaya: Meaning, origin and guiding principles. Gandhi's views on women, Social evils and alcoholism. Strategies towards Sarvodaya: Constructive programme and satyagraha. Total revolution.

JOURNALISM

Unit	Focus Area
1. Introduction to Communication	Definition of Communication Ex communication Aristotle's Concept of Communication Lasswell's Communication Model Elements of Communication Levels of Communication Gatekeeping
2. Mass Media and Society	Characteristics of Traditional, Print and Electronic Media Functions of Mass Media Media Literacy
3. History of Newspapers	The Bengal Gazette James Silk Buckingham Rajaram Mohun Roy Kesari and Maratta The Gandhian Era
4. Origin and Growth of Malayalam Journalism	Rajyasamacharam Paschimodayam Jnanankshepam Vidyasamgraham Nazrani Deepika Malayala Manorama Swadesabhimani Ramakrishna Pillai Kesari Balakrishna Pillai Mathrubhumi Kerala Kaumudi Sahodaran Al-Ameen
5. Media Organizations in India	RNI PIB PCI DAVP ABC Prasar Bharathi CBFC IIMC PII FTII SRFTI Kerala Media Academy

6. Press Codes, Ethics & Laws in Indian Journalism	Newspaper Ombudsman Media and Indian Constitution Defamation - Slander and Libel Contempt of Court Copyright Act Information Technology Act Cyber Crimes Right to Information Act
7. Newspaper Organisation	Role of Chief Editor News Editor Chief Sub Editor Sub Editor Reporter Stringer News Bureau and Newsroom Qualities of a Journalist Photojournalist
8. Reporting News	Define News News Values Types of News Elements of News Inverted Pyramid Style News Sources News Agencies Developmental Reporting Scoop Reporting Trends in journalism (Armchair Journalism, Penny Press, Citizen Journalism, Advocacy Journalism, Embedded journalism, Sting Operation, Yellow Journalism, Advertorial & Paid News)
9. News Editing	Principles of News Editing Headline Writing Types of Headlines Style Book Priniples of Layout Elements of Front Page Editorial Page Op-Ed Page

SOCIOLOGY

Unit	Focus Area
1.Sociology and society	CW Mills -Sociological imagination Sociology and common sense knowledge Scope of sociology Relationship between sociology and other social sciences (**Anthropology, Psychology**)
2. Terms,Concepts and their use in Sociology	Aggregates(Quasi group) and social groups-Characteristic of Social groups-**Types of social groups**-primary and secondary-Community and association-In group and out group-Reference group- Peer group **Social stratification**- Caste and Class- Conflicts and functionalists view on class **Status and Role**- Ascribed and Achieved status-Role conflict-Role stereotyping **Types of Social control** -Conflicts and functionalists view on **Social control**
3. Social Institutions	**Social Institutions**-Meaning- **Functionalists and Conflicts** perspectives on **Family**-Forms of Family-Forms of **Marriage**-Rules of marriage-**Kinship** –Types of kinship-**Religious institution-Educational institution**
4. Culture and Socialisation	**Culture**-Definition-Dimensions(Cognitive,Normative and Material)-**Cultural lag-Ethnocentrism-cosmopolitanism** **Cultural Change**- causes and types of Change. **Socialisation**-Meaning and Agencies of Socialisation
5. Doing sociology the Research methods.	**Objectivity and subjectivity** Qualitative method and quantitative method Primary and secondary data -micro and macro methods -Triangulation Different types of Social research methods-(**Basic knowledge in each type of method)** **participant observation -Field work** (Field work in Social anthropology and sociology)-**Survey -Interview** (Structured and unstructured)
6.Social Structure, Stratification and Social Processes in Society	**Social structure**-definition **Social stratification**-Different advantages that are distributed uneqality-life chances, social status, Political influences. **Social processes**-Cooperation, Competition,Conflict
7.Social Change and Social order in Rural and Urban Society	**Socialchange**-Types and sources social change **Social order and change in villages and cities-Domination,Authority and Law-Ghettoisation-Gated communities-Gentrification-legitimation**
8.Environment and Society	**Relationship between environment and Society** -ecology -social environment -social organization -social values and norms-risk societies. **Major environmental problems and risks -resource depletion** – **pollution** (air pollution, water pollution, noise pollution), **global warming** -genetically modified organisms-natural and man made disasters.

	Environmental problems are also social problems. -social inequality - public interest of politically and economically powerful groups hurt the interests of the poor and politically weak. (4)**Social ecology,** Murray Bookchin
9. Introducing Western Sociologists	**Context of Sociology**-The Enlightenment-The French Revolution-The Industrial Revolution ***Karl Marx*** Contributions-The Class Struggle ***Emile Durkheim*** Contributions Division of Labour and Concept of Social Solidarity-Mechanical and Organic ***Max Weber*** Contributions-**Bureaucracy**
10.Indian Sociologists	**G S Ghurye** –**Major work**- 'Class and Caste in India' - Six features of Caste **DP Mukherjee** - Living Tradition -Three principles of change recognised in Indian tradition. Sruthi,Smridhi,Anubhava **AR Desai – Major works** -'The Social background of Indian Nationalism','The myth of welfare state' - Features of Welfare State **MN Srinivas - Major work**-'Religion and Society among the Coorgs of South India'-Two types of Srinivas' writing on Indian Village.

ISLAMIC HISTORY AND CULTURE

Unit	Lessons
1.	Introduction to Islamic History and Culture
2.	Arabia: The Cradle of Islam
3.	The Prophetic Period: Makkah
4.	The Prophetic Period: Madina
5.	The Khilafat(632-661 CE)

PHILOSOPHY

No	Unit and Focus Area (FA)
1	**Introducing Logic** Philosophy: Meaning and Definition, Branches of Philosophy. Logic: Meaning and Definition .Utility of logic.
2	**Proposition** Sentences in language. Logical propositions and grammatical sentences. Kinds of propositions. Traditional classification of propositions. Distribution of terms in categorical proposition. Euler's circles.
3	**Inference** Media and Immediate inferences. The opposition of proposition: Square of opposition.
4	**Syllogism** Syllogism: Meaning and Definition .Structure of Syllogism. Kinds of Syllogism. Categorical Syllogism: Standard form of categorical syllogism.
5	**Observation and Experiment** Observation: Meaning and Definition. Characteristics of scientific observation. Experiment: Meaning and Definition.
6	**Scientific Method** Scientific method. Deduction. Induction. The problem of induction. Postulates of induction. Steps of scientific method.
7	**Causality**Meaning of Causality. Aristotelian view of cause.
8	**Hypothesis** The definition and meaning of hypothesis. Different types of hypothesis
9	**Symbolic Logic** Truth'table- Conjunction, Disjunction, Implication and Negation
10	**The Logic of Research** Meaning and Definition of Research. Stages of Research.

HOME SCIENCE

Chapter-1 Introduction to home Science

- Areas of Home Science

Chapter-2 Introduction to Human development

- Pre-natal stages
- Difference between growth and development
- Hereditary disorder

Chapter-3 Infancy and Early Childhood

- Pre-speech forms of communication
- Objectives of ECCE
- Importance and need of ECCE
- Montessori schools
- ICDS
- Types and significance of play

Chapter-4 Early Childhood

- Motor Development
- Social Development
- Disciplinary techniques
- Principles of habit formation
- Causes of emotional problems

Measures to overcome emotional problems.

Chapter 5. Adolescence – Charms and Challenges

Characteristics of adolescence
Social Development
Identity formation
Adolescent disorders
Anorexia Nervosa
Adolescent obesity
Adolescent stress

Chapter 6. Adulthood and Old age

Responsibilities of Adulthood
Characteristics of old age
Merits and demerits of living in an institution (Home outside)

Chapter 7. Childhood diseases and prevention

Immunity - concept and types
Importance of breast feeding
Importance of immunisation
Polio
Tuberculosis
Hepatitis B

Chapter 8. Concern and issues in Human Development

Discrimination Against the Girl Child
Child labour
causes
Consequences of child labour
Juvenile delinquency
causes
Characteristics of juvenile delinquents

Visually impaired
Mental Retardation
Classification
Characteristics of Mental Retardation
Causes of Mental Retardation
Sexually transmitted diseases(STD)
AIDS

Chapter 9 : Resource Management

- Types of resources
- Characteristics of resources
- Significance of management
- Motivating factors in management

Chapter 10 : Management of time, energy, money and space

- Management of time

Time plan – definition

- Management of energy

Fatigue - Types and Ways to reduce fatigue
Work simplification

- Management of money

Family income – classification
Importance and need for supplementing family income
Importance of savings

- Management of space

Guidelines for making work centres more effective
Expanding space by furniture arrangement

Chapter 11 : Design

- Types of Design
- Structural design
- Decorative design
- Naturalistic design
- Geometric design
- Principles of design
- Colour
- Dimensions of colour
- Prang colour wheel and classification of colours
- Colour combinations or harmony

Chapter 12 : Consumer education

- Importance of consumer education
- Problems faced by consumers
- Food adulteration
- Definition and types
- Safety against food adulteration
- Types of adulterants
- Intentional adulterants and health hazards
- Consumer aids
- Standard/Certification mark
- Labels and price lists
- Advertisements
- Salient features of consumer protection act

ELECTRONICS

Chapter 1

1.1 Applications of Electronics
1.2 Active and Passive components -examples
1.3 Resisors -Symbols of fixed and variable resistors
1.4 Colour coding of resistors
1.5 Capacitors -Principle, Equations of Charge stored and capacitance of parallel plate capacitor, equation for capacitive reactance
1.6 Inductors -Principle, symbol, unit, Equation for inductive reactance

Chapter 2

2.1 Definitions and units ofvoltage, current and electric power
2.2 Ohms's law
2.3 Series and parallel combinations of resistors -simple problems
2.4 Series and parallel combinations of capacitors -equation only
2.5 AC waveform equation, definitions of frequency, time period and phase
2.6 Equations of rms values of voltage and current

Chapter 3

3.1 Energy bands -Definitions of valence band, conduction band and forbidden energy gap
3.2 Classifications of solids based on energy band diagram
3.3 Commonly used semiconductors -Forbidden energy gaos of Si and Ge
3.4 Definitions of intrinsic and extrinsic semiconductors
3.5 Formations of P type and N type semiconductors

Chapter 4

4.1 PN junction formation -depletion layer, symbol of diode
4.2 Forward and reverse biasing of PN junction
4.3 Forward and reverse characteristics of PN junction diode -characteristic curves, Knee voltage and breakdown voltage
4.4 Zener diode-definition , symbol and use
4.5 Reverse characteristics of Zener diode

Chapter 5

5.1 BJT -Structure of NPN transistor , symbols of NPN and PNP transistors
5.2 Features of emitter, base and collector regions
5.3 Concepts of active, saturation and cut off modes based on transistor biasing
5.4 Working of NPN transistor
5.5 Methods of connections , input and output parameters of CB, CE and CC configurations
5.6 Definitions and equations of alpha, beta and gamma
5.7 Relation between alpha and beta
Input and output characteristics of CE Transistor configuration -curves and their explanations only

Chapter -6

6.1 Construction of FET, symbol comparison between BJT and FET.
6.2 MOSFET symbol and structure.
6.3 SCR-symbol and structure.
6.4 LED-symbol, basic principle and application.
6.5 LDR, photodiode, phototransistor, and solar cell -symbol and familiarisation.

Chapter -7

7.1 Half wave rectifier-circuit, principle, output waveform.
7.2 Centre tap and bridge FWR-circuit, principle, output waveform.
7.3 Ripple factor-equation and values.
7.4 Efficiency -values.

Chapter -8

8.1 Concept of amplification.
8.2 Transistor as an amplifier.
8.3 Basic idea of biasing.
8.4 Voltage divider biasing -circuit and equations.
8.5 Single stage RC coupled amplifier -circuit and basic idea.
8.6 Operational amplifier –inverting and non inverting(circuit and gain equation).

Chapter -9

9.1 Damped and undamped oscillations.
9.2 Tank circuit –generation of sine waves
9.3 Positive and negative feedbacks –basic concept.
9.4 Barkhausen criterion –two conditions for oscillation only.
9.5 RC oscillator –phase shift oscillator only.

Chapter -10

10.1 Binary number system conversion from binary to decimal and from decimal to binary. Conversion of fractions.
10.2 Logic gates –OR, AND, NOT, NAND, NOR and XOR gates. (symbol, circuit and truth table)

PSYCHOLOGY

Unit no.	Name of unit	Focus area
1	What is Psychology?	What is Psychology? Evolution of Psychology Branches of Psychology Psychologists at work : Clinical Psychologists, Counselling Psychologists, Community Psychologists, School Psychologists, Organisational Psychologists
2	Methods of Enquiry in Psychology	Goals of Psychological Enquiry Steps in conducting Scientific Research Observational method : Types of observation, Interview, Case study.
3	The Bases of Human Behaviour	Neurons The Central Nervous system Structure of the brain The Endocrine system – Pancreas, Pituitary gland, Thyroid gland, Adrenal gland, Gonads Socialisation – Socialisation agents
4	Human Development	Life- Span Perspective on Development Prenatal stage Childhood – Physical development, Motor development, Cognitive development, Socio-emotional development. Adolescence- Some major concerns
5	Sensory, Attentional and Perceptual Processes	The Human eye – Structure of the Human eye Attentional Processes – Selective attention, Factors affecting selective attention Principles of perceptual organisation
6	Learning	Classical conditioning – Determinants of classical conditioning Observational learning Factors facilitating learning- Continuous Vs Partial Reinforcement, Motivation, Preparedness for Learning
7	Human Memory	Nature of Human memory Information processing approach – The stage model Memory Systems: Sensory, Short-term and Long-term Memories Enhancing memory : Mnemonics using images, The keyword method, The method of loci Mnemonics using Organisation – Chunking, First letter technique, Engage in deep level processing, Minimise interference, Retrieval cues
8	Thinking	Problem solving and Obstacles to solving problems – Mental Set, Functional fixedness, Lack of motivation
9	Motivation and Emotion	Types of Motives – Biological motives, Psychosocial motives, Enhancing Positive Emotions

SOCIAL WORK

Unit .No	Unit Name	Focus Area
1	SOCIAL WORK: THE ART AND SCIENCE OF PROBLEM SOLVING	1.1 Psycho-Social Problems 1.2 Social Work as a Problem Solving Profession 1.3 Misconceptions about Social Work 1.4 (C) Objectives of Social Work 1.4(D). Principles of Social Work 1.4 (E). Methods of Social Work 1.5 Social Work as a Profession 1.6 Skills and Qualities of a Social worker
1. 2	ORIGIN AND DEVELOPMENT OF SOCIAL WORK	2.1Concepts Related to Social Work- Social Service & Social Welfare 2,2 (A.)The evolution of social work in the United Kingdom 2.2 (B)Development of Professional Social Work Education in the USA-Columbia University- Mary E Richmond 2.2(C) c-Modern Social Work In India 2.3 Disciplines Related to Social Work
3	FIELDS OF SOCIAL WORK	3.1 Health Social Work A.Medical Social Work B Psychiatric Social Work 3.2 Social Work in School, Industry and Correctional Settings
4	HUMAN RIGHTS AND SOCIAL LEGISLATIONS	4.3 Human Rights 4.4 Empowerment 4.4 (a) Women empowerment 4.6 Social Legislation -Meaning 4.6(c) Right To Education (RTE)
5	FUNDAMENTALS OF SOCIAL LIFE	5.1. Society 5.2. Community 5.7. Socialization
6	CONTEMPORARY SOCIAL CONCERNS	6.1. Social Problem 6.3. Social Analysis- Concept 6.3(d.)Problem Tree Analysis. 6.4. Contemporary Social Issues-(A) Poverty
7	HUMAN BEHAVIOUR	7.7. Human Needs 7.13. Growth and Development
8	SELF DEVELOPMENT	8.1Personality 8.2 Determinants of Personality 8.3(A) Psycho Analytic Theory of Personality - Sigmund Freud
9	LIFE SKILL EDUCATION	9 Familiarization of Ten core life Skill 9.1 Self Awareness 9.8 Empathy 9.10 Coping with Stress