

പൊതുപരീക്ഷയ്ക്കായി കൂടുതൽ ശ്രദ്ധ നൽകേണ്ട
പാഠഭാഗങ്ങൾ

സ്റ്റാൻഡേർഡ്

XII



കേരളസർക്കാർ
പൊതുവിദ്യാഭ്യാസവകുപ്പ്

സംസ്ഥാന വിദ്യാഭ്യാസ ഗവേഷണ പരിശീലന സമിതി (SCERT), കേരളം

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കേരളം

കോവിഡ് മഹാമാരി കാരണം നമ്മുടെ വിദ്യാർത്ഥികൾക്ക് സ്വാഭാവിക സ്കൂൾ അനുഭവങ്ങളും ക്ലാസ്സ്മുറിപഠനവും ഈ വർഷം സാധ്യമായിട്ടില്ല. വീഡിയോ ക്ലാസ്സുകളിലൂടെയാണ് അവർ എല്ലാ പാഠങ്ങളും പരിചയപ്പെടുന്നത്. ഇതിന്റെ തുടർച്ചയായി അധ്യാപകരുടെ സഹായത്തോടെ അസൈൻമെന്റുകൾ പൂർത്തിയാക്കുകയും സംശയ നിവാരണം നടത്തുകയും ചെയ്തുവരുന്നു. ഇനി അവർ സ്കൂൾതല സംശയ നിവാരണത്തിലേക്കും തുടർപഠനത്തിലേക്കും പിന്നീട് പൊതുപരീക്ഷയിലേക്കും നീങ്ങുകയാണ്. ആത്മവിശ്വാസത്തോടെ പരീക്ഷ എഴുതാൻ നമുക്ക് അവരെ സഹായിക്കേണ്ടതുണ്ട്. സംശയ നിവാരണത്തിനും റിവിഷൻ പ്രവർത്തനങ്ങൾക്കുമായി വിദ്യാർത്ഥികൾ 2021 ജനുവരി 1 മുതൽ സ്കൂളിലെത്തും. വ്യത്യസ്ത നിലവാരത്തിലുള്ള വിദ്യാർത്ഥികളെ അവരുടെ സാധ്യതകൾക്കനുസരിച്ച് നമുക്ക് സഹായിക്കേണ്ടതുണ്ട്.

കുട്ടികളുടെ അഭിരുചി മേഖലകൾ ഭിന്നമായതിനാൽ അവയെല്ലാം ഉൾക്കൊള്ളുന്നതിനായി പാഠഭാഗങ്ങൾ ഒന്നുതന്നെ ഒഴിവാക്കേണ്ടതില്ല എന്നാണ് തീരുമാനിച്ചിട്ടുള്ളത്. എന്നിരുന്നാലും ക്ലാസ്സും ചർച്ചയ്ക്കും വിശകലനത്തിനുമായി കൂടുതൽ ശ്രദ്ധ നൽകേണ്ട പാഠഭാഗങ്ങളാണ് ഇതോടൊപ്പമുള്ളത്. ഈ പാഠഭാഗങ്ങൾ അർഥപൂർണ്ണമായി സ്വാംശീകരിക്കുന്നതിന് ആവശ്യമായ പഠനപ്രവർത്തനങ്ങളും പഠനപിന്തുണയും നൽകാൻ അധ്യാപകർ പ്രത്യേകം ശ്രദ്ധിക്കേണ്ടതാണ്. ഇങ്ങനെ ചെയ്യുമ്പോൾ മറ്റ് പാഠഭാഗങ്ങളുമായി ബന്ധപ്പെട്ട് ഉയർന്നുവരുന്ന സംശയങ്ങൾക്ക് അതത് സമയം തന്നെ അധ്യാപകർ നിവാരണം വരുത്തേണ്ടതാണ്. വീഡിയോ ക്ലാസ്സിലൂടെയും സ്വയംപഠനത്തിലൂടെയും എത്രമാത്രമാണ് ആശയഗ്രഹണം നടന്നത് എന്ന് വിലയിരുത്തിവേണം പഠനപ്രവർത്തനങ്ങൾ ആസൂത്രണം ചെയ്യാൻ.

കൂടുതൽ ശ്രദ്ധിക്കേണ്ട മേഖലകൾ വിഷയാടിസ്ഥാനത്തിൽ

ഹയർ സെക്കണ്ടറി മലയാളം

നമ്പർ	യൂണിറ്റ്	പാഠങ്ങൾ
1	ഏഴുത്തകം	1. പ്രവേശകം
		2. കണ്ണാടി കാൺമോളവും
		3. പ്രകാശം ജലം പോലെയാണ്
		4. കിരാതവൃത്തം
		5. അവകാശങ്ങളുടെ പ്രശ്നം
2	തനതിടം	1. കാക്കാരശ്ശിപ്പാട്ട്
		2. കേശിനീമൊഴി
		3. അഗ്നിവർണ്ണന്റെ കാലുകൾ
		4. പദത്തിന്റെ പഥത്തിൽ

**ഹയർ സെക്കണ്ടറി മലയാളം
(ഐച്ഛികം)**

യൂണിറ്റ്	ക്രമ നമ്പർ	പാഠങ്ങൾ
I കാവ്യപർവം	1	വിഭീഷണഹിതോപദേശം
	2	മുത്തുമണികൾ
	3	ശാന്തം കരുണം
	4	മലയാളഗദ്യപരിണാമം
II രംഗപർവം	1	മധുരിക്കും ഓർമ്മകൾ
	2	ഒരു കൂട്ടം ഉറുമ്പുകൾ
	3	ഊരുഭംഗം

ENGLISH

Lesson	Focus Area
1	The 3Ls of Empowerment (<i>Speech</i>)
2	Matchbox (<i>Story</i>)
3	Any Woman (<i>Poem</i>)
4	Horegallu (<i>Anecdote</i>)
5	The Hour of Truth (<i>One-act Play</i>)
6	A Three Wheeled Revolution (<i>Interview</i>)
7	Rice (<i>Poem</i>)

എസ്.സി.ഇ.ആർ.ടി കേരളം

HINDI (SECOND LANGUAGE)

യൂണിറ്റ്	പാഠം
ഇകാई 1	1. मातृभूमि 2. बेटी के नाम 3. मेरे भारतवासियो...
ഇകാई 2	4. सूरीनाम में पहला दिन 5. मेरे लाल 6. दोस्ती

HINDI (OPTIONAL)

യൂണിറ്റ്	പാഠം
ഇകാई 1	1. अलबम 2. सरोज-स्मृति 3. खोई हुई वस्तु की खोज 4. क्रिया विशेषण 5. साहित्य का इतिहास
ഇകാई 2	6. राजभाषा और राष्ट्रभाषा 7. अनुवाद : कला और कौशल

ARABIC

Part II - Arabic

Lessons	Unit
1. خير الله 2. عبقرى من أبناء كيرالا 3. كيرالا ونعم الله التي لا تحصى	لغة الله في بلد الله
1. ناموا ولا تستيقضوا 2. شرطي المرور 3. كيمياء السعادة	إلى السعادة
1. لغة الضاد 2. لا تلمني 3. لآلي لغوية	حلاوة العربية

Part II - Arabic Optional

Lessons	Unit
1. لست ابني أنا لا أعرفك 2. أنا لغة الضاد 3. زوجة بتفاحة 4. الإنتظار	روعة الأدب العربي الحديث
1. الأخوة الإنسانية 2. هموم دارس	من أجمل الأدب الكلاسيكي
1. روعة لغة القرآن الكريم والحديث الشريف 2. ندوة أدبية	نظرة إلى مؤثرات الأدب العربي

സംസ്കൃതം - രണ്ടാം ഭാഷ

एककम्		पाठस्य नाम
I	आर्द्रता	१. तव विरहे । २. ब्रज हरितम् । ३. भविष्ये तव ।
II	मानविकता	४. चिन्तारतो बालकः । ५. को हेतुः ?

സംസ്കൃതം ഓപ്ഷണൽ-സാഹിത്യ

एककम्		पाठस्य नाम
I	आशीर्वादः	१. विचित्ररूपोऽनुग्रहः । २. सन्तानगोपालम् ३. बृहत्रयी ।
II	विवेकिता	४. ज्ञानोदयः ।

സംസ്കൃതം ഓപ്ഷണൽ - ശാസ്ത്ര

एककम्		पाठस्य नाम
I.	व्याकरणशास्त्रम्	१. अजन्तपुल्लिङ्गप्रकरणम् । २. केवलसमासः । ३. अव्ययीभावसमासः ।
II.	तर्कशास्त्रम्	४. तर्कसङ्ग्रहदीപिका ।
III.	दर्शनपरिचयः ।	५. कतिपयाः केरलीयदार्शनिकाः ।
IV.	ज्योतिशास्त्रम् ।	६. ज्योतिषामयनं चक्षुः ।

PART - II - TAMIL (SECOND LANGUAGE)

Sl.No	അലകു	കരുത്തലകു
1	I. വയലും വാഴ്വുമ്പും	<ul style="list-style-type: none"> • എരുപുറ്റി • നമ്മ് നിലം • പടം പൂമി
2	II. കലെയും പണ്ണാറും	<ul style="list-style-type: none"> • നാട്ടാർ പണ്ണാറു • ശെവ്വിലക്കിയപ് പണ്ണാറു • കുത്തുക്കലൈ

PART - III - TAMIL (OPTIONAL)

Sl.No	അലകു	കരുത്തലകു
1	I. ഇയർകെയും കുറുപ്പുമാലും	<ul style="list-style-type: none"> • അഴകേ അനന്തം • ശിതെന്ത ഓവിയം • വരുമുൻ
2	II. വേർവെത്തുലികൾ	<ul style="list-style-type: none"> • ഇന്നുവരൈ • ഉയരപ് പறക്ക • മലരും മനം

PART - II - KANNADA (SECOND LANGUAGE)

Sl.No	UNIT	LESSON
1	I. ಸಿರಿಬೆಳಸು	<ul style="list-style-type: none"> • ಕೆರೆೆಯ ದಡದಲ್ಲಿ - ಕೆ.ಪಿ. ಪೂರ್ಣಚಂದ್ರ ತೇಜಸ್ವಿ • ಅವರವರ ದಾರಿ - ಜಿ.ಎಸ್. ಶಿವರುದ್ರಪ್ಪ • ನೆರೆ - ತಗಳಿ ಶಿವಶಂಕರ ಪಿಳ್ಳೆ
2	II. ನವಪಲ್ಲವ	<ul style="list-style-type: none"> • ಅಪ್ಪನೂ ಒಲೆಯುರಿಯೂ - ರೂಪ ಹಾಸನ • ತಾಯಿ - ಡಾ. ಯು.ಆರ್. ಅನಂತಮೂರ್ತಿ
3	III. ಸಂಸ್ಕೃತಿ ಸುಮ	<ul style="list-style-type: none"> • ಜಾಲಿಯ ಮರದಂತೆ - ಪುರಂದರದಾಸರು • ನಡೆವುದೊಂದೇ ಭೂಮಿ - ಸರ್ವಜ್ಞ • ಸುಬ್ಬಣ್ಣ - ಡಾ. ಮಾಸ್ತಿ ವೆಂಕಟೇಶ ಅಯ್ಯಂಗಾರ್

PART- III - KANNADA (OPTIONAL)

Sl.No	UNIT	LESSON
1	I. ಹಳೆಗನ್ನಡ ನುಡಿಬಿಡಗು	<ul style="list-style-type: none"> • ಸಲಿಸುವೆಂ ನೂರುವರಂ - ಪಂಪ • ಶ್ರೀಮತಿ ಸ್ವಯಂವರ - ಮುದ್ದಣ
2	II. ನವಪಲ್ಲವ	<ul style="list-style-type: none"> • ಇಳೆಯಾಂಡಗುಡಿಮಾರ - ಹರಿಹರ • ಧರೆಮೆಚ ದಣ್ಣ ಸೋದರರ ಕಾಳಗಕೆ - ರತ್ನಾಕರವರ್ಣಿ • ಉಲ್ಲಂಘಿಸುವರುಂಟೆ ವಿಧಿಕ್ರತವನು - ಲಕ್ಷ್ಮೀಶ

RUSSIAN

Sl.No	LESSON
1	A.C.Pushkin
2	Lion and Rat
3	Kachyusha
4	Birthday

FRENCH

Sl.No	UNIT	LESSON
1	I. La communication	1. Un Voyage en avion 2. Le courrier electronique
2	II. Un Rendez - Vous	3. Quoi de neuf? 4. Remettez - vous Vite!

LATIN

Sl.No	UNIT	LESSON
1	I. BONITATIS MUNDUS	1. Prex Pro India 2. Samaritanus Bonus 3. Noemi Et Ruth
2	II. AMORIS MUNDUS	1. Caritas Numquam Excidit 2. Adeste Fideles 3. Cantica Cyceni

SYRIAC

Unit 1

ܐܘܘܪܝܢܐ - ܕܘܪܝܢܐ

Unit 2

ܩܘܪܝܢܐ - ܩܘܪܝܢܐ

Unit 3

ܕܘܪܝܢܐ - ܕܘܪܝܢܐ

Unit 7

Development of Syriac tradition in India

GERMAN

Unit	Title
Lektion 1	Wiederholung
Lektion 2	Susan in der Stadt
Lektion 3	Zahlen

Part II URDU

UNIT	LESSONS
1-ستاروں سے آگے	(1) ستاروں سے آگے (2) ہیلن کیڈ (3) رباعی
2-افسانہ حقیقت میں بدل جاتا ہے	(4) مغل اعظم فلمستان کا اسم اعظم (5) غزل (6) مرزا غالب
3-خوابوں کی تعبیر	(8) وہ تو کوئی اور ہے
4-پاؤں کے نیچے جنت ہے	(10) آہ! ہاں

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Part III URDU(Optional)

UNIT	LESSONS
1-زندگی بندگی نہیں	(1) عجمی غلام (2) زندہ رہے تو کیا ہے (3) چمھر (4) کرتے نہیں (5) نصیب نصیب کی بات
2-انسانیت سے بڑھ کر کچھ نہیں	(6) الالمین (7) غالب کی شخصیت (8) ہر وقت زمانے کا
3-ایک گلستان ہے ہندوستان	(11) اتحاد
4-الفت۔ دنیا سے، دنیا والوں سے	(15) خواہشیں (16) ہزاروں خواہشیں

എസ്.സി.ഇ.ആർ.ടി

ENGLISH LITERATURE

Poetry

1. The Wild Swans at Coole
2. The Unknown Citizen
3. No More Hiroshimas
4. The Journey of the Magi
5. Ecology
6. Bicycle
7. The Million March

Short Story

8. Doves on the Wing
9. We too are Human Being
10. My Old Home

Non-Fiction

11. Excerpts from The Sixth Sense
12. In Memory of Azores

Drama

13. Pygmalion Act 1
14. Pygmalion Act 2

Novella

15. Metamorphosis Chapter 1

COMMUNICATIVE ENGLISH

Lesson	Focus Area
Unit I	Learning with Technology
Unit II	Make A Difference
Unit III	Say What You Mean

MATHEMATICS (Science and Commerce)

Sl No.	Chapter	Focus area
1	RELATIONS AND FUNCTIONS	1.3 Types of Functions
		1.4 Composition of Functions and Invertible Function
2	INVERSE TRIGONOMETRIC FUNCTIONS	2.3 Properties of Inverse Trigonometric Functions
3	MATRICES	3.2 Matrix
		3.3 Types of Matrices
		3.4 Operations on Matrices
		3.5 Transpose of a Matrix
		3.6 Symmetric and Skew Symmetric Matrices
4	DETERMINANTS	4.2 Determinant
		4.5 Minors and Cofactors
		4.6 Adjoint and Inverse of a Matrix
		4.7 Applications of Determinants and Matrices
5	CONTINUITY AND DIFFERENTIABILITY	5.2 Continuity
		5.3 Differentiability
		5.8 Mean Value Theorem
6	APPLICATION OF DERIVATIVES	6.2 Rate of Change of Quantities
		6.3 Increasing and Decreasing Functions
		6.4 Tangents and Normals
7	INTEGRALS	7.3.1 Integration by substitution
		7.4 Integrals of Some Particular Functions
		7.9 Evaluation of Definite Integrals by Substitution

8	APPLICATION OF INTEGRALS	8.2 Area under Simple Curves
9	DIFFERENTIAL EQUATIONS	9.2 Basic Concepts
		9.5.1 Differential equations with variables separable
10	VECTOR ALGEBRA	10.4 Addition of Vectors
		10.5 Multiplication of a Vector by a Scalar
		10.6 Product of Two Vectors
11	THREE DIMENSIONAL GEOMETRY	11.3 Equation of a Line in Space
		11.5.1 Distance between skew lines
		11.6.2 Equation of a plane perpendicular to a given vector and passing through a given point
		11.6.3 Equation of a plane passing through three non collinear points
12	LINEAR PROGRAMMING	12.2.2 Graphical method of solving linear programming problems
13	PROBABILITY	13.2 Conditional Probability
		13.4 Independent Events

CHEMISTRY

Unit no.	Name of unit	Focus area
1	The solid state	1.2 Amorphous and crystalline solids 1.4 Crystal lattices and unit cells 1.5 Number of atoms in a unit cell 1.6 Close packed structures 1.9 Imperfections in solids 1.10 Electrical properties 1.11 Magnetic properties
2	Solutions	2.3.2 Solubility of gas in liquids 2.4 Vapour pressure of liquid solutions 2.5 Ideal and non ideal solutions 2.6 Colligative properties and determination of molar mass
3	Electrochemistry	3.3 Nernst equation 3.4.2. Variation of conductivity and molar conductivity with concentration 3.6 Batteries 3.7 Fuel cells 3.8 Corrosion
4	Chemical kinetics	4.2 Factors influencing rate of a reaction 4.3.2 First order reactions and its half life period 4.4 Pseudo first order reaction 4.5 Temperature dependence of the rate of reaction- Arrhenius equation
5	Surface chemistry	5.1 Adsorption 5.2 Catalysis 5.4 Classification of colloids 5.5 Emulsions
6	General principles and Process of Isolation of elements	6.2 Concentration of ores 6.3 Extraction of crude metal from concentrated ore 6.4.1 Ellingham diagram - extraction of Iron 6.5 Hall Heroult process (extraction of Al) 6.7 Refining
7	The P-block elements	7.3 Ammonia 7.5 Nitric acid 7.8 Phosphorus halides 7.17 Sulphuric acid 7.22 Inter halogen compounds 7.23 Group 18 elements- Xenon halides
8	The d-and f-block elements	8.3 Magnetic properties, formation coloured ions, formation complexes, catalytic property 8.4 Potassium permanganate and potassium dichromate 8.5.2 Atomic and ionic sizes 8.7 Some applications of d- and f-block elements

9	Coordination compounds	9.3 Nomenclature of coordination compounds 9.4 Isomerism in coordination compounds 9.5.2 Magnetic properties of coordination compounds 9.8 Importance and applications of coordination compounds
10	Haloalkanes and haloarenes	10.4.1 Preparation from alcohols 10.4.2 Preparation from hydrocarbons 10.6.1 Reactions of haloalkanes (Nucleophilic substitution) 10.6.2 Reactions of haloarenes (Electrophilic substitution) 10.7.2 Trichloro methane
11	Alcohols, phenols and ethers	11.4.1 Preparation of alcohols(from alkenes, carbonyl compounds and Grignard reagent 11.4.2 Preparation of phenol (from haloarenes and diazonium salts) 11.4.4 Chemical reactions (Lucas test, dehydration, nitration of phenol, Reimer Tiemann reaction) 11.5 Commercially important alcohols- ethanol 11.6.1 Preparation of ethers-Williamson synthesis 11.6.3 Chemical reactions (Friedel Crafts reaction)
12	Aldehydes, ketones and carboxylic acids	12.2 Preparation of aldehydes and ketones (By oxidation of alcohols, by dehydrogenation of alcohols, Rosenmund reduction, Etard reaction, Gatterman-Koch reaction, Friedel Craft's reaction) 12.4 Chemical reactions (Reduction, Oxidation, Aldol reaction, Cannizzaro reaction) 12.7 Preparation of Carboxylic acid (from aldehydes and ketones, from alkyl benzene) 12.9 Chemical reactions (acidity, reaction with ammonia, Kolbe electrolysis, Hell-Volhard Zelinsky reaction, Ring substitution)
13	Amines	13.4 Preparation of amines (Reduction of nitriles, amides, Hoffmann Bromamide reaction) 13.6 Chemical reactions (carbylamine reaction, Hinsberg test, Electrophilic substitution) 13.9 Chemical reactions of diazonium salts- sandmaeyer reaction, coupling reaction
14	Biomolecules	14.1.1 Classification of carbohydrates 14.1.2 Monosaccharides (Preparation of glucose from sucrose) 14.1.3 Disaccharides (glycosidic linkage, invert sugar) 14.1.4 Starch, glycogen 14.2.4 Denaturation of protein 14.5.1 Chemical composition of nucleic acids
15	Polymers	15.1 Classification of polymers Addition and condensation polymers (Teflon, Nylon6,6, Nylon 6, PVC, polystyrene, Polyethene) 15.2.4 Rubber (Natural rubber, vulcanisation) 15.4 Biodegradable polymers
16	Chemistry in Everyday life	16.3.1 Antacid 16.3.3 Neurologically active drugs 16.3.4 Anti microbials(antiseptics, disinfectants)

PHYSICS

No	Chapter	Focus Area Topics
1	ELECTRIC CHARGES AND FIELDS	1.2 ELECTRIC CHARGE
		1.6 COULOMB ' S LAW
		1.8 ELECTRIC FIELD
		1.9 ELECTRIC FIELD LINES
		1.10 ELECTRIC FLUX
		1.11 ELECTRIC DIPOLE
		1.14 GAUSS ' S LAW
		1.15 APPLICATIONS OF GAUSS' S LAW
2	ELECTROSTATIC POTENTIAL AND CAPACITANCE	2.2 ELECTROSTATIC POTENTIAL
		2.3 POTENTIAL DUE TO A POINT CHARGE
		2.11 CAPACITORS AND CAPACITANCE
		2.12 THE PARALLEL PLATE CAPACITOR
		2.14 COMBINATION OF CAPACITORS
		2.15 ENERGY STORED IN A CAPACITOR
3	CURRENT ELECTRICITY	3.4 OHM 'S LAW
		3.9 ELECTRICAL ENERGY, POWER
		3.10 COMBINATION OF RESISTORS – SERIES AND PARALLEL
		3.11 CELLS, EMF, INTERNAL RESISTANCE
		3.13 KIRCHHOFF ' S RULES
		3.14 WHEATSTONE BRIDGE
		3.15 METER BRIDGE
		3.16 POTENTIOMETER
4	MOVING CHARGES AND MAGNETISM	4.2 MAGNETIC FORCE
		4.5 MAGNETIC FIELD DUE TO A CURRENT ELEMENT, BIOT -SAVART LAW
		4.6 MAGNETIC FIELD ON THE AXIS OF A CIRCULAR CURRENT LOOP
		4.7 AMPERE ' S CIRCUITAL LAW
		4.8 THE SOLENOID AND THE TOROID
5	MAGNETISM AND MATTER	5.3 MAGNETISM AND GAUSS'S LAW
		5.4 THE EARTH'S MAGNETISM
		5.5 MAGNETISATION AND MAGNETIC INTENSITY

No	Chapter	Focus Area Topics
6	ELECTROMAGNETIC INDUCTION	6.4 FARADAY' S LAW OF INDUCTION
		6.6 MOTIONAL ELECTROMOTIVE FORCE
		6.8 EDDY CURRENTS
		6.10 AC GENERATOR
7	ALTERNATING CURRENT	7.2 AC VOLTAGE APPLIED TO A RESISTOR
		7.3 REPRESENTATION OF AC CURRENT AND VOLTAGE BY ROTATING VECTORS — PHASORS
		7.4 AC VOLTAGE APPLIED TO AN INDUCTOR
		7.5 AC VOLTAGE APPLIED TO A CAPACITOR
		7.9 TRANSFORMERS
8	ELECTROMAGNETIC WAVES	8.2 DISPLACEMENT CURRENT
		8.3 ELECTROMAGNETIC WAVES
9	RAY OPTICS AND OPTICAL INSTRUMENTS	9.2 REFLECTION OF LIGHT BY SPHERICAL MIRRORS
		9.3 REFRACTION
		9.5 REFRACTION AT SPHERICAL SURFACES AND BY LENSES
		9.6 REFRACTION THROUGH A PRISM
10	WAVE OPTICS	10.2 HUYGENS PRINCIPLE
		10.3 REFRACTION AND REFLECTION OF PLANE WAVES USING HUYGENS PRINCIPLE
		10.7 POLARISATION
11	DUAL NATURE OF RADIATION AND MATTER	11.3 PHOTOELECTRIC EFFECT
		11.6 EINSTEIN' S PHOTOELECTRIC EQUATION: ENERGY QUANTUM OF RADIATION
		11.7 P ARTICLE NATURE OF LIGHT : THE PHOTON
12	ATOMS	12.4 BOHR MODEL OF THE HYDROGEN ATOM
		12.6 DE BROGLIE' S EXPLANATION OF BOHR' S SECOND POSTULATE OF QUANTISATION
13	NUCLEI	13.6 RADIOACTIVITY
		13.7 NUCLEAR ENERGY
14	SEMICONDUCTOR ELECTRONICS: MATERIALS, DEVICES AND SIMPLE CIRCUITS	14.7 APPLICATION OF JUNCTION DIODE AS A RECTIFIER
		14.9 DIGITAL ELECTRONICS AND LOGIC GATES

BOTANY

Sl.No	Name of chapter	Focus area
1	Reproduction in organisms	1.1.Asexual reproduction 1.2.1.1.Gametogenesis 1.2.2.Fertilisation.
2	Sexual reproduction in flowering plants	2.2.1.Structure of microsporangium, Structure of pollen grain 2.2.2.Megasporangium-structure, megasporogenesis, Female gametophyte 2.2.3.Pollination-Classification based on source of pollen (Autogamy, geitonogamy and xenogamy) and agents of pollination (wind, water and insects -peculiarities with examples) and artificial hybridisation 2.3.Double fertilisation 2.4.2.Embryo- structure 2.4.3. False fruit, True fruit and Parthenocarpic fruit
3	Strategies for enhancement in food production	9.1.1.1.Dairy farm management 9.1.3.Bee keeping 9.2.Plant breeding- main steps 9.2.4.Plant breeding for improved food quality 9.3. S.C.P 9.4.Tissue culture
4	Biotechnology- Principles and processes	11.2.Tools of recombinant DNA technology 11.2.1.Restriction enzymes,Gel electrophoresis. 11.3.Processes of rDNA technology. 11.3.3.Amplification of gene of interest using PCR, 11.3.5.Obtaining the foreign gene product
5	Biotechnology and its applications	12.1. Biotechnological applications in agriculture-Uses of GMOs and Bt cotton 12.2.1.Genetically engineered insulin. 12.2.2. Gene therapy.
6	Organisms and Populations	13.1.3.Adaptations -In organisms of deserts, polar regions and high altitudes 13.2.1.Population attributes- Age pyramids and population density 13.2.2. Population growth (Up to population growth equation) 13.2.4.Population interactions – Parasitism, Commensalism and Mutualism
7	Ecosystem	14.2.Productivity 14.3.Decomposition 14.4.Energy flow -Food chain, Food web and Trophic levels 14.5.Ecological pyramids. 14.7. Nutrient cycling -Phosphorus cycle
8	Environmental issues	16.2.Water pollution and its control,BOD, Algal bloom and Eutrophication 16.6.Greenhouse effect and global warming 16.7. Ozone depletion in the stratosphere 16.9. Deforestation

ZOOLOGY

Sl. No	Name of the Chapter	Focus Area
1	Human reproduction	3.1 Male reproductive system (Location of testes & its significance ; Cells lining Seminiferous tubules & their function;Duct System)
		3.2 The female reproductive system (Oviduct, Uterus, Significance of Hymen)
		3.3 Gametogenesis (Spermatogenesis ,Oogenesis,Role of Hormones -FSH & LH in Spermatogenesis; Structure of Sperm)
		3.4 Menstrual cycle (Hormones involved)
		3.5 Fertilization and implantation (Site of fertilisation;Morula; Structure of Blastocyst)
		3.6 Pregnancy and embryonic development (Placenta, hCG, hPL, Relaxin)
		3.7 Parturition & Lactation (Colostrum)
2	Reproductive health	4.1 Reproductive health problems and strategies (Amniocentesis)
		4.2 Population explosion and birth control (IMR;MMR; Birth Control Measures - Natural, Barrier, IUD's, Oral Contraceptives, Surgical methods.)
		4.3 Medical Termination of Pregnancy (What is MTP;Why MTP)
		4.4 Sexually transmitted diseases (Examples of STD; Measures to avoid STD's)
		4.5 Infertility(Assisted Reproductive Technologies in detail)
3	Principles of inheritance and variation	5.1 Mendel's Laws of Inheritance(Table 5.1 Contrasting Traits studied by Mendel in Pea
		5.2 Inheritance of one gene (Allele,Genotype, Phenotype)
		5.2.2.1 Incomplete dominance (Definition,Ratio & Cross only)
		5.2.2.2 Co-dominance (Blood Grouping in man, Table 5.3)
		5.3.2 Chromosomal Theory of Inheritance (Reasons for selecting Drosophila as the experimental material by Morgan)
		5.4.1 Sex determination in Humans
		5.6.1 Pedigree analysis
		5.6.2 Mendelian disorders (Sickle Cell Anaemia, Haemophilia)
5.6.3 Chromosomal disorders (Down's Syndrome, Klinefelter's Syndrome, Turner's Syndrome)		

4	Molecular basis of inheritance	6.1.1 Structure of polynucleotide chain (Salient Features of Double Helix structure of DNA; Central Dogma)
		6.1.2 Packaging of DNA helix - (Structure of Nucleosome - Diagram & Explanation alone; Euchromatin; Heterochromatin)
		6.2 The Search For Genetic Material (Transforming Principle)
		6.2.1 The Genetic Material is DNA (Hershey-Chase Experiment)
		6.4.2 The Machinery and the Enzymes (DNA dependent DNA polymerase; Replication fork; DNA Ligase)
		6.5.1 Transcription unit(Promoter, Terminator, Structural Gene)
		6.5.2 Transcription unit & the Gene (Introns, Exons)
		6.6 Genetic code - Salient Features
		6.8.1 The Lac Operon
		6.9 Human Genome Project(Expansion of HGP,BAC & YAC)
6.10 DNA fingerprinting (Steps;Application)		
5	Evolution	7.1 Origin of life (Urey-Miller experiment)
		7.3 What are the evidences of evolution? (Homologous organs & Analogous organs with eggs; Observation supporting natural selection - Moths in unpolluted area and polluted areas in England)
		7.7 Hardy Weinberg principle (Equation; 5 factors affecting Hardy Weinberg equilibrium)
		7.9 Origin and Evolution of man (Names alone in sequential order upto Homo sapiens)
6	Human health and disease	8.1 Common diseases in humans (Typhoid, Malaria)
		8.2.1 Innate Immunity (Four types of Barriers)
		8.2.2 Acquired Immunity (Structure of an Antibody molecule Diagram)
		8.3 AIDS (Transmission; Test for AIDS; Prevention)
		8.4 Cancer(Benign tumour, Malignant Tumour; Treatment of cancer)
8.5.3 Effects of drug/alcohol abuse		
7	Microbes in human welfare	10.1 Microbes in Household Products (LAB)
		10.2.3 Chemicals enzymes and other bioactive molecules
		10.5 Microbes as biocontrol agents - Bacillus thuringiensis, Trichoderma
8	Biodiversity and Conservation	15.1.2 (ii) Species- area relationship (graph and equation)
		15.1.3 the importance of species diversity to the ecosystem (Rivet Popper Hypothesis)
		15.1.4 Loss of biodiversity- (Causes of biodiversity losses/Evil Quartet)
		15.2.2 How do we conserve biodiversity (In situ conservation, Ex situ conservation)

HISTORY

Sl. No.	Name of the Themes	Focus Area
1	Bricks, Beads and Bones	Subsistence Strategies - Mohenjodaro - A planned urban centre - Social differences - Craft production - Procuring materials - Seals, script and weights - Decline
2	Kings, Farmers and Towns	Rise of Magadha - Mauryan empire - New notions of kingship - Towns and trade - Limitations of inscriptional evidences
3	Thinkers, Beliefs and Buildings	Sacrifices and debate - Buddha - Mahavira - Stupas - Mahayana Buddhism.
4	Through the Eyes of Travellers	Al-Biruni - Ibn Battuta - Francois Bernier
5	An Imperial Capital – Vijayanagara	Capital and its environs - Royal Centre - Sacred Centre
6	Rebels and the Raj	Leaders and followers - Rumours and prophecies - Images of the revolt
7	Mahatma Gandhi and the Nationalist Movement	Early struggles - Non co-operation - Salt Satyagraha - Quit India
8	Kerala Towards Modernity	Early resistance - Social reform - Struggle for a Democratic Society

POLITICAL SCIENCE

Sl. No.	Name of the Chapters	Focus Area
1.	Challenges of Nation Building	<ol style="list-style-type: none"> 1. Challenges for the new Nation 2. Three Challenges 3. Partition - process and consequences 4. Integration of Princely States 5. Reorganization of States
2	Era of One-Party Dominance	<ol style="list-style-type: none"> 1. Challenges of Building Democracy 2. Congress Dominance in the first three general elections 3. Nature of Congress Dominance 4. Congress as Social and Ideological coalition 5. Opposition Parties - Socialist Party, Communist Party of India, Swatantra Party, Bharatiya Jana Sangh
3	India's External Relations	<ol style="list-style-type: none"> 1. Policy of Non Alignment - Nehru's Role, Distance from two blocs Afro-Asian Unity 2. Peace and Conflict with China 3. Wars and Peace with Pakistan 4. India's Nuclear Policy
4	The Crisis of Democratic Order	<ol style="list-style-type: none"> 1. Background to Emergency <ul style="list-style-type: none"> - Economic Context - Gujarat and Bihar Movements - Conflict with Judiciary - Declaration of Emergency 2. Consequences of Emergency 3. Controversies regarding emergency - What happened during emergency? 4. Lessons of Emergency 5. Loksabha Elections 1977 - Janata Government

5	Rise of Popular Movements	<ol style="list-style-type: none"> 1. Chipko Movement 2. Dalit Panthers 3. Bharathiya Kisan Union 4. Anti - Arrack Movement 5. Narmada Bachao Aandolan 6. Lessons of Popular Movements
6	Regional Aspirations	<ol style="list-style-type: none"> 1. Jammu and Kashmir 2. Punjab 3. The North East 4. Dravidian Movement 5. Lessons of Regional Aspirations
7	End of Bipolarity	<ol style="list-style-type: none"> 1. Soviet System 2. Why did the Soviet System disintegrate? 3. Consequences of disintegration 4. Shock Therapy - Consequences

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GEOGRAPHY

Name of the text book: FUNDAMENTALS OF HUMAN GEOGRAPHY

1. The World Population: Distribution, Density and Growth
2. Human Development
3. Primary Activities
4. Transport and Communication

Name of the text book: INDIA : PEOPLE AND ECONOMY

5. Migration- Types, Causes and Consequences
6. Human Settlements
7. Mineral and Energy Resources

ANTHROPOLOGY

1. Anthropological research methods and techniques
2. Anthropological theories of culture
3. Civilisational and village studies in anthropology
4. Medical anthropology

GEOLOGY

Chapter No & Name	FOCUS AREAS
1.The world of rocks	Igneous rocks – magma and lava, plutons Classification of igneous rocks. Textures of igneous rocks. Compositional classification of igneous rocks. Common igneous rocks. Formation of sedimentary rocks. Textures of sedimentary rocks. Common sedimentary rocks. Agents and types of metamorphism. Common metamorphic rocks. The concept of rock cycle
6.Geology and environment	Lithosphere, hydrosphere, atmosphere and biosphere interaction Effects of mining on different spheres of the Earth. Impacts of sand mining on environment. Major sources of contamination of ground water. Consequences of green house effect and global warming. Needs and methods of conservation of natural resources for sustainable development.
8.Geological hazards and disaster management	Terms associated with disaster management such as hazard, disaster, vulnerability, risk and capacity. Tsunami-safety measures. Types of volcanoes Effects, and mitigation of volcanic disasters. Causes and mitigation of flood hazards. Controlling factors and mitigation strategies of landslides. causative factors of coastal erosion and strategies of coastal zone management.

STATISTICS

1. Correlation Analysis

Meaning of Correlation, Types of Correlation - Positive, Negative, Zero. Methods of studying Correlation – Scatter diagram, coefficient of correlation, Karl Pearson's coefficient of correlation, Spearman's Rank correlation (non repeated only).

2. Regression Analysis

Concept of Regression, Regression Lines, Equation of Regression lines, Properties of regression coefficients, Identification of Regression Lines.

3. Elementary Calculus

First derivative and Second derivative of simple linear functions. Maxima and Minima (problems). Integration of simple functions. Definite integrals.

4. Random Variables

Random Variables- Discrete and Continuous. Discrete Random Variables -Probability mass function (pmf), Cumulative Distribution Function (cdf). Mean, Variance and their properties. Continuous Random Variables - Probability density function (pdf), problems based on properties of pdf.

5. Discrete Probability Distributions

Binomial Distribution-pmf, mean and variance, problems.

Poisson Distribution- pmf, mean and variance, problems.

6. Normal distribution

Normal Probability Density function , Mean and Variance, Normal curve and its properties. Standard Normal Distribution,Z – transformation and Z – score, Standard Normal Tables, simple problems based on std Normal tables.

7. Sampling Distributions

Parameter and Statistic, Sampling Distribution, Determination mean of sample mean (SRSWOR).

8. Estimation of parameters.

Statistical inference, Estimation of Parameters, Point Estimation, Properties of a Good Estimator -Unbiasedness, Consistency, Sufficiency and Efficiency.

9. Testing of Hypothesis

Statistical Hypothesis, Test statistic and Critical Region ,Type I and Type II Errors, Level of Significance and Power of Test, Test for significance of Single Mean (large sample only).

10. Analysis of Variance

Causes of variations, Assumptions underlying ANOVA, One way classification by using ANOVA Table.

11. Statistical Quality Control

Meaning of Quality, Causes of variations, Variable Control Charts (\bar{x} chart only)

12. Time Series Analysis

Components of Time series, Trend analysis- Method of semi averages, moving averages.

13. Index Numbers

Types of Index numbers- Simple Index Number (Simple AM) , Simple Aggregate Method, Weighted Index number (Laspayre's, Paasche's , Fisher's Index Numbers).Uses of Index Numbers.

ACCOUNTANCY

Part I ACCOUNTING

No.	Name of unit and Focus Areas
1	<p>Accounting for Not-for-Profit Organisation</p> <p>Meaning and Characteristics of Not-for-Profit Organisation</p> <p>Accounting Records of Not-for-Profit Organisations</p> <p>Receipt and Payment Account</p> <p>Income and Expenditure Account</p> <p>Distinction between Income and Expenditure A/c and Receipt and Payment A/c</p> <p>Treatment of Subscription in the financial statements of Not for profit organisation</p>
2	<p>Accounting for Partnership – Basic Concepts</p> <p>Nature of partnership</p> <p>Partnership deed</p> <p>Provisions of Partnership Act Relevant for Accounting</p> <p>Maintenance of Capital Accounts of Partners</p> <p>Distinction between Fixed and Fluctuating Capital Accounts</p> <p>Profit & Loss Appropriation Account</p> <p>Calculation of Interest on capital</p>
3	<p>Reconstitution of Partnership – Admission of a Partner</p> <p>Modes of Reconstitution of a Partnership Firm</p> <p>Admission of a New Partner</p> <p>New profit sharing ratio & Sacrificing ratio</p> <p>Goodwill – Factors Affecting the Value of Goodwill</p> <p>Methods of valuation of goodwill (Average Profit)</p> <p>Treatment of goodwill (When the new Partner brings goodwill in cash.)</p> <p>Adjustment for Accumulated Profits and Losses</p> <p>Revaluation of Assets and Reassessment of Liabilities</p> <p>Preparation of Revaluation account, Partners Capital Account & Balance sheet</p>
4	<p>Reconstitution of Partnership -Retirement & Death of a partner</p> <p>New profit sharing ratio & Gaining ratio</p> <p>Adjustment for Revaluation of Assets and Liabilities</p> <p>Adjustment of Accumulated Profits and Losses</p> <p>Disposal of Amount Due to Retiring Partner</p> <p>Preparation Partner's Loan Account</p> <p>Death of a partner – Calculation of amount due to the deceased partner</p>
5	<p>Dissolution of Partnership Firm</p> <p>Dissolution of Partnership</p> <p>Dissolution of a Firm</p> <p>Distinction between Dissolution of partnership and dissolution of firm</p> <p>Preparation of Realisation A/c</p>

Part II

COMPANY ACCOUNTS AND ANALYSIS OF FINANCIAL STATEMENTS

No. Name of unit and Focus Areas

1 Accounting for share capital

Features and types of companies
Share capital and its categories
Issue of shares – basic journal entries
Calls in arrears and calls in advance
Issue of shares at par and at premium
Over subscription of shares (Excluding pro-rata)
Forfeiture and Re-issue of shares

2 Issue and redemption of debentures

Meaning and types of debentures
Difference between shares and debentures
Issue of debentures for cash

3 Financial statements of a company

Types of financial statements
Balance sheet and P&L account
Limitation of financial statements

4 Analysis of financial statements

Objectives of Analysis of Financial Statements
Tools of Analysis of Financial Statements
Comparative statements
Common size statements
Limitation of AFS

5 Accounting Ratios

Meaning, advantages and limitations of ratio analysis
Liquidity ratio (Current ratio Liquid ratio)
Solvency ratio (Debt equity ratio and Proprietary ratio)
Activity ratio (Inventory turn over and Working capital turn over ratio)
Profitability ratio (Gross profit Ratio, Net Profit Ratio)

6 Cash flow statements

Meaning, objectives and benefits of Cash flow statements
Classification of activities for Cash flow statements
Limitation of Cash flow statements

Part III COMPUTERISED ACCOUNTING

No. Name of unit and Focused Areas

1 Overview of Computerised accounting system

Features of CAS
Components of CAS
Grouping of Accounts
Codification of Accounts
Merits and Demerits of CAS.

2 Spread Sheet

Features of LibreOffice Calc
Components of LibreOffice Calc
Spread Sheet Operations
Cell references
Functions (Date and Time, Statistical, Logical and Mathematical)

3 Use of spreadsheet in Business Applications

Payroll Accounting
Asset Accounting

4 Graphs and Charts for Business Data

Column chart, Bar chart, Pie Chart, Doughnut chart
Advantages of Graphs and Charts

5 Accounting Software Packge - GNUKhata

Creation of organisation
Ledger Creation
Voucher entry

6 Database Management System

Components of DBMS
Preparation of Table in design view

BUSINESS STUDIES

No. Name of unit and Focused Areas

1 Nature and significance of Management

Features of management
Nature of management
Levels of management
Co-ordination and elements

2 Principles of management

Fayol's management principles
Techniques of scientific management

3 Business Environment

Importance of environment
Dimensions of environment
Industrial Policy 1991
Liberalisation, Privatisation, Globalisation

4 Planning

Features of planning
Steps in planning
Types of plans

5 Organising

Importance of organising
Organisational structure and types
Formal and Informal organisation
Delegation and Decentralisation

6 Staffing

Steps in Staffing
Sources of recruitment
Selection Tests
Methods of training

7 Directing

Elements of directing – Supervision, Motivation, Leadership, Communication
Maslow's need hierarchy theory
Leadership – qualities of a good leader
Communication – process
Barriers of communication

8 Controlling

Steps in controlling
Control by exception
Span of control
Techniques of controlling

9 Financial Management

Financial decisions
Capital structure – Factors
Factors determining fixed capital
Factors determining working capital

10 Capital Market

Money market – instruments
Capital market – instruments
SEBI – Functions

11 Marketing Management

Marketing and selling
Functions of marketing
Marketing mix
Pricing – Factors
Promotion and advertising
Sales promotion

12 Consumer protection

Rights of consumers
Name of Acts for consumers
Redressal Forums under CPA

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COMPUTER SCIENCE

Chapter	Focus Area
1. Structures and Pointers	Concept of structure and example, Defn of Pointer, Use of & and * operators, Static V/s dynamic memory allocation, new and delete operators
2. Concept of Object Oriented Programming	POP V/s OOP, five concepts of OOP
3. Data Structures and Operations	Classification of data structures, Operations on data structures, Concept of stack, queue (linear only) and linked list. Push and Pop operations with algorithms.
4. Web Technology	Static and Dynamic web pages, Comparison of Client side and Server side scripts, Structure of HTML code, Container tags and empty tags, Common attributes of <BODY> tag, Use of important tags(Headings, , <P>, <HR>, text formatting tags, <MARQUEE>, ,), Only the essential attributes need to be considered.
5. Web Designing using HTML	List (Ordered, Unordered, Definition), <A> tag and HREF attribute, Definition of internal and external linking, Table tags, Listing and use of Input controls in Form, Coding questions may focus only on simple lists and simple tables.
6. Client side Scripting using JavaScript	<SCRIPT> tag, Data types, var keyword, Operators, Control structures and Built-in functions
7. Web Hosting	Types of web hosting, FTP client software, Free hosting
8. Database Management System	Advantages of database, Components of DBMS, Types of users, RDBMS terminologies , Relational operations (Select, Project, Union, Intersection)
9. Structured Query Language	SQL components, SQL data types, Constraints, Use of commands (DDL-CREATE TABLE, DROP TABLE; DML - SELECT, DELETE, UPDATEwith essential clauses only). SQL queries are to be avoided.
10. Server side Scripting using PHP	echo() V/s print, PHP data types, Operators and Control structures
11. Advances in Computing	Serial V/s Parallel computing, Cloud computing and three services, Applications of computational intelligence – listing only
12. ICT and Society	Applications of ICT – Education, Business, Governance. Cyber crimes against individuals.

COMPUTER APPLICATIONS (COMMERCE)

Chapter	Focus Area
1. Review of C++ Programming	Tokens, Data types, Control statements. Simple programs may be asked.
2. Arrays	Syntax to declare array, Accessing of elements, String handling, I/O functions to handle strings. No programs required
3. Functions	Built in functions (Name and use only), Call by value and Call by reference method. No programs required
4. Web Technology	Static and Dynamic web pages, Comparison of Client side and Server side scripts, Structure of HTML code, Container tags and empty tags, Common attributes of <BODY> tag, Use of important tags(Headings, , <P>, <HR>, text formatting tags, <MARQUEE>, ,), Only the essential attributes need to be considered.
5. Web Designing using HTML	List (Ordered, Unordered, Definition), <A> tag and HREF attribute, Definition of internal and external linking, Table tags, Listing and use of Input controls in Form, Coding questions may focus only on simple lists and simple tables.
6. Client side Scripting using JavaScript	<SCRIPT> tag, Data types, var keyword, Operators, Control structures and Built-in functions
7. Web Hosting	Types of web hosting, FTP client software, Free hosting
8. Database Management System	Advantages of database, Components of DBMS, Types of users, RDBMS terminologies , Relational operations (Select, Project, Union, Intersection)
9. Structured Query Language	SQL components, SQL data types, Constraints, Use of commands (DDL-CREATE TABLE, DROP TABLE; DML - SELECT, DELETE, UPDATEwith essential clauses only). SQL queries are to be avoided.
10. Enterprise Resource Planning	Functional units of ERP(listing only), Examples for ERP packages, Benefits of ERP.
11. Trends and Issues in ICT	Mobile communication services, Short note on mobile OS, Cyber crimes against individuals.

COMPUTER APPLICATION (HUMANITIES)

Chapter	Focus Area
1.Introduction to Publishing	DTP Software, Elements of design, Principles of design, Electronic publishing(Web based, Digital distribution)
2. Introduction to Word Processors	Features of a word processor, Libre Office Writer IDE Components, Short-cut keys(New, Save, Open, cut, copy, paste, undo, print),Navigation keys, Header and Footer, comparison of cut-paste and copy- paste, Drop Caps, Indents- Types only, Page orientation-Portrait,Landscape
3. Creating Professional Documents	Tables(Creating a table, Borders to tables, Managing tables), Inserting graphics(Adding an image, Using drawing tools, Inserting charts), Inserting page borders, Inserting watermarks, Converting text to table, Splitting text into columns, Mail merge(Definition and Steps only)
4. Web Technology	Static and Dynamic web pages, Comparison of Client side and Server side scripts, Structure of HTML code, Container tags and empty tags, Common attributes of <BODY> tag, Use of important tags(<P>, ,Heading Tags, text formatting tags,<MARQUEE>,,) covered in this chapter, Only the essential attributes need to be considered.
5. Web Designing using HTML	List (Ordered, Unordered and Definition), <A> tag and HREF attribute, Definition of internal and external linking, Table tags, Coding questions may focus only on simple lists and tables.
6. Cascading Style Sheet	Advantages of using CSS, Ways to add CSS to a web page(names only-Internal style sheet, External style sheet, Inline style)
7. Web Hosting	Types of web hosting, FTP client software, Free hosting
8. Database Management System	Advantages of DBMS, Components of DBMS, Users of Database, RDBMS terminologies
9. Structured Query Language	SQL components, SQL data types, Use of commands (DDL- CREATE TABLE, DROP TABLE, DML- INSERT,SELECT, UPDATE, DELETE-with essential clauses only).SQL queries are to be avoided.
10. Trends and Issues in ICT	Mobile communication services, Mobile Operating systems, Cyber crimes against Individuals

ECONOMICS

Part 1 INTRODUCTORY MICROECONOMICS

Chapter	Topics to be focused
Chapter 1 Introduction	1.1 A SIMPLE ECONOMY 1.2 CENTRAL PROBLEMS OF AN ECONOMY 1.3 ORGANISATION OF ECONOMIC ACTIVITIES 1.3.1 The Centrally Planned Economy 1.3.2 The Market Economy 1.5 MICROECONOMICS AND MACROECONOMICS
Chapter 2 Theory of consumer Behaviour	2.1 UTILITY 2.1.1 Cardinal Utility Analysis 2.1.2 Ordinal Utility Analysis 2.2 THE CONSUMER'S BUDGET 2.2.1 Budget Set and Budget Line 2.3 OPTIMAL CHOICE OF THE CONSUMER 2.4 DEMAND 2.4.1 Demand Curve and the Law of Demand 2.4.3 Normal and Inferior Goods 2.4.4 Substitutes and Complements
Chapter 3 Production and costs	3.1 PRODUCTION FUNCTION 3.2 THE SHORT RUN AND THE LONG RUN 3.3 TOTAL PRODUCT, AVERAGE PRODUCT AND MARGINAL PRODUCT 3.4 THE LAW OF DIMINISHING MARGINAL PRODUCT AND THE LAW OF VARIABLE PROPORTIONS 3.7 COSTS 3.7.1 Short Run Costs
Chapter 4 The Theory of the Firm under Perfect Competition	4.1 PERFECT COMPETITION: DEFINING FEATURES 4.2 REVENUE
Chapter 5 Market Equilibrium	5.1 EQUILIBRIUM, EXCESS DEMAND, EXCESS SUPPLY 5.2 APPLICATIONS
Chapter 6 Non-competitive Markets	6.1 SIMPLE MONOPOLY IN THE COMMODITY MARKET

Part 2 INTRODUCTORY MACROECONOMICS

Chapter	Topics to be focused
Chapter 1 Introduction	1.1 EMERGENCE OF MACROECONOMICS
Chapter 2 National Income accounting	2.1 SOME BASIC CONCEPTS OF MACROECONOMICS 2.2.1 The Product or Value Added Method 2.2.2 Expenditure Method 2.2.3 Income Method 2.2 CIRCULAR FLOW OF INCOME AND METHODS OF CALCULATING NATIONAL INCOME
Chapter 3 Money and Banking	3.1 FUNCTIONS OF MONEY 3.2 DEMAND FOR MONEY AND SUPPLY OF MONEY 3.2.1. Demand for Money 3.2.2. Supply of Money
Chapter. 4 Determination of Income and Employment	4.1 AGGREGATE DEMAND AND ITS COMPONENTS 4.1.1. Consumption 4.1.2. Investment 4.2 DETERMINATION OF INCOME IN TWO-SECTOR MODEL
Chapter 5 Government Budget and the Economy	5.1 GOVERNMENT BUDGET — MEANING AND ITS COMPONENTS 5.1.1 Objectives of Government Budget 5.1.2 Classification of Receipts 5.1.3. Classification of Expenditure 5.2 BALANCED, SURPLUS AND DEFICIT BUDGET
Chapter 6 Open Economy	6.1 THE BALANCE OF PAYMENTS 6.1.1 Current Account 6.1.2 Capital Account

MUSIC

Sl. No	UNIT	FOCUS AREA
1	CLASSIFICATION OF JANYA RAGAS	1.1 Introduction 1.2 Varjya ragas 1.3 Shadava, audava and svarantara ragas 1.4 Vakra ragas 1.6 Upanga ragas and Bhashanga ragas 1.8 Ghana-Naya-Desya ragas
2	MUSICAL FORMS	2.1 Introduction 2.2 Varnam 2.2.1 Tanavarnam 2.2.2 Padavarnam 2.3 Kirtana 2.4 Kritis
3	MUSIC OF KERALA	3.2 Sopana Sangita 3.2.1 Ragas employed in sopana sangeetha 3.2.2 Theme 3.2.3 Tala 3.2.4 Prominent musicians 3.6 Folk Music Of Kerala 3.6.1 Songs belonging to the rustic variety 3.7 Ceremonial Songs 3.8 Tiruvathira or Kaikottikkali Pattu 3.11 Margamkali Pattu 3.12 Mappila Pattu
4	MUSICAL INSTRUMENTS	4.1 Introduction 4.2 Stringed instruments 4.3 Wind instruments 4.4 Percussion instruments
5	MUSIC CONCERTS	5.2 Vocal concert 5.3 Instrumental concert 5.4 Format of a concert
6	COMPOSERSTRINITY	6.1 Introduction 6.2 Early life of Tyagaraja 6.3 Music Education 6.4 Compositions 6.2.1 Introduction 6.2.4 Dikshitar's Compositions 6.2.6 Tala and other elements featuring in his kritis 6.2.7 Group Kritis of Dikshitar 6.2.8 Panchalinga sthala kritis 6.3.2 Early life of Syama Sasthri 6.3.4 His contributions 6.3.6 His Svarajatis 6.3.7 His style 6.3.8 Navaratnamalika
7	RAGALAKSHNA	7.1 Mayamalavagaula 7.4 Mohanam 7.6 Bilahari

GANDHIAN STUDIES

Sl.No	Chaper Name	Focus Points
1	I. Hind Swaraj or Indian Home Rule	<p>Historical Background. Influences. Contents.</p> <p>Gandhi's concept of Swaraj and Parliamentary Democracy.</p> <p>Gandhi's views on Civilisation. Characteristics of True Civilisation. Gandhi's critique of Modern Civilisation.</p> <p>Education. Machinery Relevance of Hind swaraj.</p>
2	II. Educational Philosophy of Mahatma Gandhi	<p>Gandhi's New Scheme of Education and definition.</p> <p>Wardha Scheme of Education.</p> <p>Features of Wardha Scheme of Education. Content of Basic Education. Routine work. Place of teacher. Merits of Basic Education. Educational scenario after independence. Influences of Gandhi on Education Commissions.</p>
3	III. Gandhian Vision of Peace	<p>Peace and the need of studying peace studies.</p> <p>violence and its various forms.</p> <p>concept of Peace, negative peace and positive peace.</p> <p>Gandhian notion of peace. Pacifism. Culture of Peace.</p> <p>Conflict. Causes and types of conflict. Conflict resolution and various methods of conflict Resolution.</p> <p>Gandhian method of conflict resolution.</p>
4	IV. Non-violent Social Movements and Social Change	<p>Social movements and different types.</p> <p>concept and definition of social change.</p> <p>Gandhi's views and methods of social change.</p> <p>Gandhian Social action in India</p>
5.	V. Rural Development	<p>Concept, elements and dimensions of rural development.</p> <p>Gandhiji's views and strategies of rural reconstruction.</p> <p>Rural development strategies of India in the initial phase. (Sporadic approaches)</p> <p>MGNREGA and Kudumbasree</p>

JOURNALISM

No.	Unit	Focus Area
1	Writing for Magazines	Difference between newspaper and magazine General interest magazines & Special interest magazines Structure of a feature Types of features
2	Magazine Editing and Production	Principles of magazine Editing Principles of magazine design Elements of magazine design Functions of layout
3	Writing and Production for Radio	Broadcast technologies Types of radio broadcasting News Bulletin Types of Radio Programmes Digital recording Qualities of a good radio presenter Radio news reader
4	Television news And video Production	1. Television in India 2. Making of a television or video programme (Stages of Production) 3. Writing for television news cast.
5	Film Appreciation	Famous personalities behind the film such as Eadweard Muybridge, Lumiere Brothers, David W. Griffith , Charlie Chaplin...Etc.

SOCIOLOGY

CHAPTER	FOCUS
1.INTRODUCING INDIAN SOCIETY	<ol style="list-style-type: none"> 1. Advantages and Disadvantages of prior knowledge in sociology 2. Social Issues and Personal troubles <ol style="list-style-type: none"> 1.Colonisation and Nationalism 2. Arise of new classes and communities 3. Structure and social change of Indian society introduction .
2.THE DEMOGRAPHIC STRUCTURE OF THE INDIAN SOCIETY	<ol style="list-style-type: none"> 1.Demography. 2.Malthusian theory 3.Demographic Transition theory 4.Common concepts used in Sociology 5.Age structure 6.Size and Growth of Indian populations 7.Age structure of Indian population 8.Decline of sex ratio in India-Reason 9.Literacy and population 10.Rural -Urban difference 11.Population policy in India
3.SOCIAL INSTITUTIONS COMMUNITY AND CHANGE	<ol style="list-style-type: none"> 1.Caste and the caste system 2.Tribal community 3.Family and kinship
4.THE MARKET AS A SOCIAL INSTITUTION	<ol style="list-style-type: none"> 1.Sociological perspectives on markets and the economy 2.Caste based market and trading networks in pre colonial and colonial India 3.Social organisations of market and traditional business communities 3.Colonialism and the emergence of New markets 4.Understanding Capitalism as a social system
5.PATTERNS OF SOCIAL INEQUALITY AD EXCLUSION	<ol style="list-style-type: none"> 1.What is social about social inequality and exclusion 2.Social Exclusion <p style="margin-left: 20px;">Caste and tribe a system of justifying and perpetuating inequality</p> 3.State and non state Initiative addressing 4.caste and tribe discrimination. 5.OBC 6.Devadasi struggle Struggles for women’s equality and rights 7.The struggles of the disabled
6.THE CHALLENGES OF CULTURAL DIVERSITY	<ol style="list-style-type: none"> 1.Diversity emphasises difference rather than inequalities 2.Importance of community identity

	<ul style="list-style-type: none"> 3.Assimilation, integration 4.Cultural diversity and the India 5.Regionalism in the Indian context 6.Nation -state and issues 7.communalism 8.secularism 9.State and civil society
7.STRUCTURAL CHANGES	<ul style="list-style-type: none"> 1.Impact of colonialism Understanding 2.colonialism Capitalism become dominant economic system nation state become dominant political form 3.The colonial experience Decline of old urban centre 4.The tea plantations 5.Industrialisation in 6.Independent India Urbanisation in independent India
8.CULTURAL CHANGE	<ul style="list-style-type: none"> 1.Social reform movement in the 19th and 20th century 2.Approaches to the study of sanskritisation, modernisation, secularisation, westernisation 3.sanskrtisation westernisation Modernisation and secularisation
9.THE STORY OF INDIAN DEMOCRACY	<ul style="list-style-type: none"> 1.Core values of Indian democracy 2.Intense open discussion 3.Competing Interests the constitution and social change 4.Constitutional norms and social justice 5.Ideals of panchayati raj Power and responsibilities 6.Panchayati raj in tribal area 7.Democracy and Inequality 8.Political parties , Pressure group and democratic politics.
10.CHANGE AND DEVELOPMENT IN RURAL SOCIETY	<ul style="list-style-type: none"> 1. Indian society primary a rural society 2. Agrarian structure Caste and class in Rural India 3.The colonial period 4.Independent India 5.Green revolution 6.Transformation in rural society after Independence 8.Circulation of labour 9.feminisation of agriculture 10.globalisation and liberalisation and rural society

<p>11.CHANGE AND DEVELOPMENT IN INDUSTRIAL SOCIETY</p>	<p>1.Images of Industrial society 2.Equality 3.Positive and negative Impact Industrialisation in India 4.Specificity of Indian Industrialisation 5.Industrialisation in early years of independence 6.Change in Indian Industry due to globalisation and liberalisation 7.how people find job 8.Scientific management Out sourcing 9.Working condition Home based work</p>
<p>12.GLOBALISATION AND SOCIAL CHANGE</p>	<p>1. Far reaching effect 2.The early years colonialism independent India 3.Understanding globalisation 4.Global communication 5Globalisation and Labour Globalisation and political change Globalisation and culture</p>
<p>13. MASS MEDIA AND COMMUNICATION</p>	<p>1.The term mass media 2.Forms of mass media 3.The beginning of modern mass media 4.Mass media in Independent India Radio, Television , Print media 5.Globalisation and media 6.Influence of mass media</p>
<p>14. SOCIAL MOVEMENT</p>	<p>1.Features of social movement 2.Sociology and social movement 3.Theories of social movement 4.Types of social movements Worker’s movement Ecological movement Peasant movement Dalit movement Tribal movement The women’s movements</p>

SOCIAL WORK

Unit No	Unit Name	Focus Area
1.	Social work -Primary Methods	1.1. Social case work - Meaning, objectives, principles, relationship in social case work, Components of social case work, process in social case work 1.2. Social Group work – Meaning, objectives, process, Group dynamics, Group Cohesion- importance of social group work in modern times. 1.3. Community organization – Meaning, , objectives, Process.
2.	Social work-Secondary Methods	2.1 Social action – definition, strategies, social action groups. 2.2 Social welfare administration – process and functions – Organogram. 2.3 Social work research – process of research.
3.	Leadership and Communication	3.1 Leadership – definition, functions of a leader, qualities of leader, types of leadership. 3.2 Communication - meaning, process, types of communication, barriers of communication.
4.	Development and Resource Mobilization	4.1 Development – meaning, dimension, approaches to development. 4.2 Community development Programmes in India 4.4 Participatory Rural Appraisal(PRA) - Resource Map 4.5 Methods of Resource mobilization.
5.	Health 5.1 Health – definition of health, determinants of health, indicators of health.	5.2 Epidemiological triad.
6.	Hygiene and Health Care Services	6.1 Hygiene – types of Hygiene 6.2 Pollution - types of pollution, prevention and control of pollution. 6.6 School health programmes components of School Health programme.
7.	Guidance and Counselling	7.1 Guidance – Types of Guidance 7.3 Counselling – meaning counselling skills.
8.	Family Life Education	8.1 Family Life Education -Meaning 8.2 Sex education – Meaning 8.5 Sexually Transmitted Disease Meaning – HIV/ AIDS
9.	International Social Work	9.5 International Association in Social work.

ISLAMIC HISTORY AND CULTURE

Lessons	Name
1.	The Abbasid Khilafath , the Cosmopolitan Empire
2.	Muslim Khilafath in the Afro-Asian Continents
3.	The Legacy of Islamic Spain
4.	Muslim World under the Ottomans
5.	The West Asia under the shadow of European Imperialism
6.	Muslim World in the new World order
7.	Muslim Rule in India-State Society and Culture
8.	Freedom Struggle and Indian Muslims
9.	Islamic Tradition in Kerala

PHILOSOPHY

No.	Unit	Focus Area
1	Philosophising	Doing philosophy Characteristics of philosophic concepts Learning Philosophy <ul style="list-style-type: none"> • Norms of learning philosophy
2	Prastanatraya	Vedas Upanishads Brahman - Atman relation Bhagavad Gita <ul style="list-style-type: none"> • Concept of Yoga • Stitaprajna Brahma Sutra
3	Darsana	Schools of Indian philosophy (Darsanas) Orthodox schools <ul style="list-style-type: none"> • Nyaya Darsana- The theories of knowledge • Vaisesika Darsana - The concept of Categories • Samkhya Darsana - The EvolutionTheory • Yoga Darsana - Astanga yoga • Purva Mimamsa • Uttara Mimamsa- Heterodox schools • Buddhism- Aryasatyas
4	Contemporary Indian Thinkers	Modern Indian philosophy <ul style="list-style-type: none"> • Swami Vivekananda - Universal Religion • Mahatma Gandhi – Sarvodaya • Sri Aurobindo - Integral Yoga • Sir Mohammad Iqbal - Nature of the Self
5	Greek Philosophy	Thales <ul style="list-style-type: none"> • Heraclitus • Socrates • Plato • Aristotle
6	Modern Western Philosophy	Systems of Modern Western Philosophy <ul style="list-style-type: none"> • Rationalism • Rene Descartes - Cogito ergo sum • Empiricism • John Locke - Rejection of innate ideas - Theory of knowledge
7	Recent Trends in Philosophy	Existentialism Pragmatism

8	Ethics	Definition of ethics Virtues Plato's Cardinal Virtues
9	Applied Ethics	Scope of Applied Ethics Professional Ethics - Teacher and student Ethics Environmental Ethics
10	Philosophy of Religion	Religion: Meaning and Definition Philosophy of Religion

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HOME SCIENCE

Chapter 1 – BASIC NUTRITION

1. Definition and Dimensions of health
2. Optimum and malnutrition
3. Classifications of
 - a. Carbohydrate
 - b. Protein
 - c. Lipids
 - d. Minerals
 - e. Vitamins
4. Functions of
 - a. Carbohydrates
 - b. Proteins
 - c. Vitamin A
 - d. Calcium
 - e. Iron
5. Deficiency diseases
 - a. PEM
 - b. Vitamin A
 - c. Vitamin C
 - d. Ca/ Vitamin D
 - e. Iron
6. Significance of dietary fibre

Chapter 2 - A GUIDE TO HEALTHY LIVING

1. Classification of Food
2. Objectives of Cooking Food
3. Methods of Cooking
 - Steaming
 - Pressure cooking
 - Electromagnetic waves
4. Conservation of nutrients
5. Junk foods
6. Advantages of
 - Germination
 - Fermentation
 - Fortification

Chapter 3 – NUTRITION FOR SELF AND FAMILY

1. Importance of Meal Planning
2. Principles of Meal Planning
3. Factors affecting Meal Planning
4. Expand RDA, ICMR, RDI

5. Reference Man, Reference Woman
6. RDA for:
 - a. Adult Man moderate work
 - b. Adult Woman moderate work
 - c. Pregnant Woman
 - d. Lactating Woman 0-6 months
7. Factors affecting RDA

Chapter 4 – DIET THERAPY

1. Definition of Diet Therapy.
2. General Objectives of diet therapy
3. Modification of Therapeutic diets.
 - a. Qualitative modification (without examples)
 - b. Quantitative modification (without examples)
4. Diet in Common diseases
 - Causes and Types of Diarrhoea
 - Types of Fever
5. Diet in Nutrition Related Problems
 - a. Obesity - Causes
 - b. Anaemia – Classification
 - i) Morphological classification
 - ii) Aetiological classification

Chapter 5 – FOOD PRESERVATION

1. Definition of Food spoilage and Food Preservation
2. Meaning of Food spoilage
3. Causes of Food spoilage
4. Principles of Food preservation
5. Methods of Food preservation
 - a. Bacteriostatic methods
 - b. Bactericidal methods

Chapter 6 – INTRODUCTION TO FIBRE SCIENCE

1. Classification of fibres
2. Properties of Natural fibres.

Chapter 7 – YARN – PRODUCTION AND PROPERTIES

1. Types of Yarns
2. Conventional spinning
3. Chemical spinning
4. Yarn properties

Chapter 8 – FABRIC CONSTRUCTION

1. Parts of looms
2. Characteristics of woven fabrics
3. Knitting
 - Warp and weft knits

- Comparison of knitting with weaving
- 4. Classification of Non-woven fabrics
 - Felts
 - Bonded fabrics
- 5. Other methods of Fabric Construction
 - Braided fabrics
 - Laces
 - Laminated fabrics
 - Nets
 - Stitch bonded fabrics
 - Tufting

Chapter 9 – FABRIC FINISHING

1. Importance of finishes
2. Classification of Finishes
3. Common fabric finishes
 - Bleaching
 - Mercerization
 - Singeing
 - Parchmentization
 - Sizing
 - Calendaring

Chapter 10 – FINISHING WITH COLOUR

1. Stages of Dyeing
2. Basic styles of Printing

Chapter 11 – INTRODUCTION TO EXTENSION EDUCATION

1. Definition Extension education
2. Objectives of Extension education
3. Principles of Extension education
4. Difference between formal and extension education
5. Extension teaching methods
6. Characteristics of Home science extension

Chapter 12 – COMMUNICATION

1. Objectives of communication
2. Elements of communication
3. Types of communication
4. Cone of experience

ELECTRONICS

Sl.	Name of chapter	Focus area
1	Power supplies and voltage stabilizers	1.1 Need for regulated power supply
		1.2. Block diagram of a regulated power supply
		1.3. Definitions and expressions of load regulation and line regulation
		1.4. Block diagrams and examples of series and shunt regulators
		1.5 Circuit diagram and working of Zener regulator
		1.6. Limitations of zener regulator
		1.7 Names and output voltages of positive and negative voltage regulators
		1.8 Connection diagram of 78XX series
		1.9 Connection diagram and output expression of LM 317 regulator
		1.10 Designing a typical power supply
2	Wave shaping circuits	2.1 Circuit diagram and output waveforms to differentiate basic positive, negative only
		2.2 Circuit diagrams and output waveforms to differentiate basic positive, negative only
		2.3 Circuit diagrams, output expressions and waveforms of basic
		2.4 Circuit diagrams and working of summing amplifier, subtractor, comparator using op-amp only
		2.5 LPF, HPF and BPF Circuits only
3	Digital electronics	3.1 Basic differences between combinational and sequential logic
		3.2 Definition and explanation of multiplexers
		3.3 Logic symbol, truth table and circuit implementation of a basic multiplexer
		3.4 Basic concepts of encoders and decoders
		3.5 Logic symbol and truth table of a basic encoder circuit
		3.6 Circuit diagram of a basic comparator
		3.7 Symbols and truth tables to show the basics of SR, JK, D and T flip flops
4	Radio broadcasting	4.1 Need for modulation
		4.2 Basic concept of AM
		4.3 Expression for modulation index of AM
		4.4 Frequency spectrum and bandwidth of AM
		4.5 Relation connecting the total and carrier powers of AM signal
		4.6 Basics of AM generation
		4.7 Block diagram and working of superhet receiver
		4.8 Comparison between AM and FM
		4.9 Block diagram and working of a basic superheterodyne receiver
5	Communication systems	5.1 Block diagram of a basic communication system
		5.2 Designations of different frequency bands used for communication
		5.3 Methods of propagation of waves as surface and sky waves
		5.4 Definitions of critical frequency and skip distance

6	Data communication	6.1 Block diagram of PCM
		6.2 Definitions of sampling, quantisation and encoding
		6.3 Statement and equation of sampling theorem
		6.4 Definitions of TDM and FDM
		6.5 Waveforms of ASK, FSK and PSK
7	Optical fiber and satellite communication	7.1 Block diagram of optical fiber communication
		7.2 Examples of light sources and detectors
		7.3 Advantages of optical fiber communication system
		7.4 Structure of optical fiber
		7.5 Method of light propagation through OFC (TIR)
		7.6 Definitions of dispersion and inter symbol interference
8	Television	8.1 Aspect ratio
		8.2 Concept of interlaced scanning
		8.3 Total channel bandwidth of TV
		8.4 Block diagram of monochromatic TV
9	Fundamentals of computers	9.1 Block diagram of a computer
		9.2 Definitions and examples of input and output devices
		9.3 Definitions and examples of primary and secondary memory
		9.4 Definition of system software, Language translators - compiler and assembler only
		9.5 Concepts of machine, assembly and high level languages
10	Internet technology	10.1 Definition and advantages of computer networking
		10.2 Definition and different types of network protocols
		10.3 Network topologies - Diagrams of bus, star and ring topologies only
		10.4 Data communication devices - hub, switch and repeater
		10.5 Definition and functions of MODEM
		10.6 Concepts of LAN, MAN and WAN
11	Basics of telephone communication	11.1 Structure of PSTN
		11.2 Concept of electronic exchange and its classification
		11.3 Definition of cells - basic concept of frequency re-use
		11.4. Definitions of different types of cells

PSYCHOLOGY

Unit no.	Name of unit	Focus area
1	Variations in psychological attributes	<ul style="list-style-type: none"> • Intelligence • Theories of intelligence • Assessment of Intelligence • Giftedness • Intelligence in the Indian tradition
2	Self and Personality	<ul style="list-style-type: none"> • Concept of personality • Major approaches of the study of personality (Trait approach, Psycho dynamic approach, Post Freudian approach, Cultural approach, Humanistic approach) • Assessment of personality
3	Meeting life challenges	<ul style="list-style-type: none"> • Nature , types and sources of stress • Effects of stress on psychological functioning and health • Coping with stress
4	Psychological disorders	<ul style="list-style-type: none"> • Factors underlying abnormal behaviour • Major psychological disorders
5	Therapeutic Approaches	<ul style="list-style-type: none"> • Therapeutic relationship • Types of therapies • Cognitive therapy • Humanistic and Existential Therapy • Biomedical therapy • Alternative therapy
6	Attitude and social cognition	<ul style="list-style-type: none"> • Attitude formation and change
7	Social influence and group process	<ul style="list-style-type: none"> • Types of groups
8	Psychology and Life	<ul style="list-style-type: none"> • Promoting pro-environmental behaviour
9	Developing psychological skills	<ul style="list-style-type: none"> • Characteristics of effective helper