

JKBOSE Class 11 Syllabus



**The Jammu & Kashmir
State Board of
School Education**

SYLLABI AND COURSES OF STUDY

FOR
Class XI

**Kashmir Division/Jammu Division (Winter Zone) 2017-18
Jammu Division (Summer Zone) 2018-19**

Published By
THE JAMMU & KASHMIR STATE BOARD OF SCHOOL EDUCATION

The Jammu and Kashmir State Board of School Education



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SCHEME OF STUDIES/ COMBINATION OF SUBJECTS

The Scheme of Studies and the combination of subjects at +2 stage has been prepared as per new scheme of studies. The combination of subjects is as per the standard at National Level particularly the standard set by the CBSE and other Boards has vertical linkage with under graduate courses offered by the University of Kashmir, Jammu and other national institutes.

The students who will seek admission in Higher Secondary Part-I (Class 11th) from the academic Session (Oct-Nov). 2017 in case of Kashmir Division including Winter Zone of Jammu Division and Academic Session (April-May) 2018 in case of Summer Zone areas of Jammu Division shall follow the given below Scheme/ Combination of subjects.

Subject Combination at Higher Secondary Part-I

Faculty of Science:

Group-I	Group-II	Group-III	Group-IV	Group-V	Group-VI	Group-VII	Group-VIII Vocational Courses level-III
General English (Compulsory)	Physics (Compulsory)	Chemistry (Compulsory)	Mathematics Applied-Mathematics	Biology Statistics Geography	Geography Biotechnology Microbiology Biochemistry	Computer-Science. Information-Practices. Environmental-Science. Functional-English. Physical-Education. Islamic Studies Vedic Studies Buddhist-Studies Electronics.	IT & ITes. Retail. Healthcare. Tourism. Security. Agriculture. Telecommunication Media and Entertainment. Beauty and Wellness. Physical Education and Sports

Note: i- A student shall have to opt any two subjects from IV to VII group, but not more than one from each group (for non Vocational students only).
ii-The students who have passed Vocational subject/s at level 1 and level 2 and intend to opt for Vocational subject at Higher Secondary Part-1st (Level-3) will have to opt 5th subject from Group VIII.

Faculty of Home Science:

Group-I	Group-II	Group-III	Group-IV	Group-V	Group-VI Vocational Course (Level-III)
General English (Compulsory)	Family, Health Care & Prevention. (Compulsory)	Food Science (Compulsory)	Management of Resources. (Compulsory)	Computer Science. Information Practices Environmental Science Functional English Islamic Studies Vedic Studies Buddhist Studies Physical Education Travel, Tourism & Hotel Management	IT & ITes. Retail. Healthcare. Tourism. Security. Agriculture. Telecommunication Media and Entertainment. Beauty and Wellness. Physical Education and Sports

Note: i- A student shall have to opt any one subjects from V.(for non vocational students only).
ii-The students who have passed their Vocational subject at level 1 and level 2 and intend to opt vocational subject at Higher Secondary Part-1st (Level-3), will have to opt 5th subject from Group VI.

Faculty of Commerce:

Group-I	Group-II	Group-III	Group-IV	Group-V	Group-VI	Group-VII Vocational Courses level-III
General English (Compulsory)	Business Studies (Compulsory)	Accountancy Mathematics	Entrepreneurship Or Economics	Type writing & Shorthand Business-Mathematics Public Administration	Computer- Science. Information-Practices. Environmental-Science. Functional-English. Islamic Studies Vedic Studies Buddhist-Studies Physical-Education. Education Travel, Tourism & Hotel Management	IT & ITes. Retail. Healthcare. Tourism. Security. Agriculture. Telecommunication Media and Entertainment. Beauty and Wellness. Physical Education and Sports

- Note:**
- i- A student shall have to opt any two subjects from IV-VI group but not more than one from each group (for non vocational students only).
 - ii- The students who have passed their Vocational subject at level 1 and level 2 and intend to opt for Vocational subject at Higher Secondary Part 1st (Level-3) will have to opt any one subject from Group IV to Group VI and 5th subject from Group VII.

Faculty of Humanities:

Group-I	Group-II	Group-III	Group-IV	Group-V	Group-VI	Group-VII	Group-VIII	Group-IX Vocational Courses level-III
General English (Compulsory)	Urdu Hindi Kashmiri Dogri Punjabi Bhoti	Arabic Sanskrit Persian Economics	Mathematics Applied-Mathematics Sociology	Psychology Music Geography Philosophy Education	History Home-Science (Elective) Public Administration	Statistics Political Science	Computer- Science. Information-Practices. Environmental-Science. Functional-English. Islamic Studies Physical-Education. Education Travel, Tourism & Hotel Management English Literature Vedic Studies. Buddhist Studies.	IT & ITes. Retail. Healthcare. Tourism. Security. Agriculture. Telecommunication Media and Entertainment. Beauty and Wellness. Physical Education and Sports

Note:

- i- A student shall have to opt any four subjects from II-VIII group but not more than one from each group (for non vocational students only).
- ii- The students who have passed their Vocational subject/s at level 1 and level 2 and intend to opt for Vocational courses at Higher Secondary Part -1st (Level-3) will have to opt any three subjects from Group No. II to Group VIII and 5th subject from Group No. IX.
- iii- No repetition/similarity or incomplete combination of subjects is allowed.
- iv- While choosing subjects students are advised to opt for such subjects or combination of subject which are available and taught in the institution as per the above mentioned.

SCHEME OF ASSESSMENT/EXAMINATION

The Higher Secondary Part-1st (11th) Examination conducted by the Board at the end of academic session on the basis of syllabi prescribed for class 11th is open to eligible candidates and shall be conducted according to the following scheme of examination.

Marks

Subject	Theory Marks	Practical Marks		Total Marks
		Internal Assessment	External Examination	
1- General English	100	---	---	100
2- History	90	Project work 10 marks	---	100
3- Economics	90	10 marks project/Viva	---	100
4- Geography	70	10 marks	20 marks	100
5- Political Science	100	---	---	100
6- Philosophy	100	---	---	100
7- Education	100	---	---	100
8- Psychology	70	10	20	100
9- Sociology	100	---	---	100
10- Home Science (Elective)	70	10	20	100
11- Music	50	25	25	100
12- Statistics	70	10	20	100
13- Mathematics	100	---	---	100
14- Islamic Studies	100	---	---	100
15- Vedic Studies	100	---	---	100
16- Hindi	100	---	---	100
17- Dogri	100	---	---	100
18- Philosophy	100	---	---	100
19- Bhoti	100	---	---	100
20- Punjabi	100	---	---	100

21- PublicAdministration	100	---	---	100
22- English Literature	100	---	---	100
23- Urdu	100	---	---	100
24- Kashmiri	100	---	---	100
25- Arabic	100	---	---	100
26- Persian	100	---	---	100
27- Buddhist	100	---	---	100
28- Applied	100	---	---	
28- Physics	70	10	20	100
29- Chemistry	70	10	20	100
30- Biology	70	10	20	100
31- Geology	70	10	20	100
32- Biotechnology	70	10	20	100
33- Microbiology	70	10	20	100
34- Environmental	70	10	20	100
35- Functional English	100	---	---	100
36- Bio-Chemistry	70	10	20	100
37- Computer Science	70	10	20	100
38- Information Practices	70	10	20	100
39- Physical Education	70	10	20	100
40- Electronics	70	10	20	100
41- Family Health Care & Prevention	70	10	20	100
42- Food Science	70	10	20	100
43- Management of Resources	70	10	20	100
44- Accountancy	80	05	15	100
45- Entrepreneurship	70	10	20	100
46- Typewriting & Shorthand		50	50	100
47- Business Mathematics	90	10 Project Work	---	100
48- Travel, Tourism Hotel Management	100	---	---	100

A- Subjects having weightage of 70 marks for Theory and 30 marks for Practical's

Maximum Marks: 70

Time Allowed: 3 hrs

Pattern of Questions	Marks per Question	No. of Questions	Total Marks
Long Answer type	05 marks	4	20
Short Answer Type	03 marks	8	24
Very Short Answer type	02 marks	8	16
Objective type	01 mark	10	10
		30	70

Note: There shall be internal choice in case of long answer type questions only.

B- Subjects having weightage of 90 marks for Theory and 10 marks for Practical's

Pattern of Questions	Marks per Question	No. of Questions	Total Marks
Long Answer type	5 marks	6	30
Short Answer Type	3 marks	10	30
Very Short Answer type	2 marks	10	20
Objective type	1 mark	10	10
		36	90

C- Subjects having weightage of 80 marks for Theory and 20 marks for Practical's

Pattern of Questions	Marks per Question	No. of Questions	Total Marks
Long Answer type	5 marks	5	25
Short Answer Type	3 marks	9	27
Very Short Answer type	2 marks	9	18
Objective type	1 mark	10	10
		33	80

Note: There shall be internal choice in case of long answer type questions only.

D- Subjects having weightage of 100 marks (except languages) for Theory.

Pattern of Questions	Marks per Question	No. of Questions	Total Marks
Long Answer type	6 marks	5	30
Short Answer Type	4 marks	10	40
Very Short Answer type	2 marks	10	20
Objective type	1 mark	10	10
		35	100

Note: There shall be internal choice in case of long answer type questions only.

E- Subjects having weightage of 50 marks for theory and 50 Marks for practical's

Pattern of Questions	Marks per Question	No. of Questions	Total Marks
Long Answer type	6 marks	3	18
Short Answer Type	4 marks	4	16
Very Short Answer type	2 marks	5	10
Objective type	1 mark	06	6
		18	50

Note: There shall be internal choice in case of long answer type questions only.

GENERAL ENGLISH

I. General aims of Teaching English

1. To develop student's ability to use English language accurately, appropriately, effectively and fluently for communication in various situations.
2. To develop student's ability to read and understand texts in English on different subjects and topics with minimal help from teachers.
3. To develop student's ability to use English language appropriately for effective written communication.
4. To hone their ability to listen to and understand English language when used in academic and social situations.
5. To enable students to become self reliant for learning many aspects of language and also to learn other content subjects.
6. To enrich their knowledge of grammar for accurate and precise communication.
7. To enrich their vocabulary and to enable them to use words most appropriate to situations.
8. To develop their skills to read and appreciate literature and develop a liking towards English language.

II. Domains

The major domains of teaching English are:

1. Listening
2. Speaking
3. Reading
4. Writing
5. Communication
6. Grammar
7. Vocabulary

8. Study Skills
9. Literary skills

III. Specific Objectives of Teaching English as a Second language in Class XI

A. Listening

1. To develop students' ability to listen to and understand instructions.
2. To develop their ability to listen to lectures, talks, interviews on familiar topics and get specific items of information.
3. To develop their ability to listen to and get an overall idea of the content of lectures, talks, discussions etc.
4. To develop their ability to gather almost full information by listening to live discussions, talks, lectures and also by listening to radio and television.

B. Speaking:

1. To enable students to pronounce words and phrases accurately.
2. To use pauses meaningfully in long utterances.
3. To use the right intonation to communicate the intended meaning.
4. To read prose passages, dialogues and poems aloud with correct pronunciation, stress and intonation.

C. Communication:

1. To enable students to use English language in day to day situations for common communicative functions.
2. To enable students to use English language appropriately in academic and social situations.
3. To enable students to speak reasonably fluently, with minimal hesitations.

D. Reading:

1. To enable students to read and understand prose and poems on a variety of academic and general topics from textbooks, reference sources and other common sources such as newspapers and magazines.

2. To enable students to employ the right reading strategies to suit the purpose of reading.
3. To develop students' ability to read and gather specific items of information from a variety of sources.
4. To develop their ability to read for an overall idea of the content of texts.
5. To develop their ability to read texts for full understanding.
6. To develop their ability to read fluently with reasonable degree of comprehension.
7. To develop in students an interest towards English Literature.

E. Writing:

1. To familiarize students with qualities of good and effective writing.
2. To develop their ability to write coherently and cohesively.
3. To develop their ability to write accurately and appropriately using language appropriate to the audience, situation and purpose of writing.
4. To develop their ability to write short paragraphs and essays on variety of topics.
5. To develop their ability to use English for writing letters for a variety of purposes.
6. To develop their ability to use English for e-mail communication.

F. Study Skills:

1. To sharpen their ability to use dictionary as a reference tool.
2. To develop their ability to read and make notes for study purposes.
3. To develop their ability to transcend information from verbal to visual format and vice-versa.
4. To develop their ability to make summaries of long prose passages.

G. Grammar:

1. To enhance their understanding of grammatical concepts.
2. To develop their ability to apply grammar rules in communicative situations.
3. To develop their ability to monitor their own language behavior.

4. To develop their ability to use the knowledge of grammar while listening, speaking, reading and writing.

H. Vocabulary:

1. To enrich their vocabulary.
2. To familiarize them with the concepts of synonyms, antonyms, collocations etc.
3. To develop their ability to use words most appropriate to the communicative situation.
4. To equip them with the strategies to cope up with unfamiliar words while reading texts in English.

IV Course Books Prescribed:

1. *Chinar I* – An Anthology of Prose and Poetry for class XI – Published by Cambridge University Press in cooperation with Jammu and Kashmir State Board of School Education.
2. A Course in English Grammar and Composition – for classes XI and XII, Published by Cambridge University Press in cooperation with Jammu and Kashmir State Board of School Education.

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GENERAL ENGLISH

Total M. Marks = 100

Time: 3 Hrs

SECTION:- A (LITERATURE)

Marks:- 40

- Q.1 One LAT question (100 Words) from prose based chapters on character sketch/ discription of Scene/ title etc be attempted out of two.
01x08= 08
- Q.2 One LAT question (100 Words) from poetry based on theme/ style/ critical appreciation etc to be attempted out of two.
01x07= 07
- Q.3 Two SAT questions (50-80 Words) from prose to be attempted out of four.
02x05= 10
- Q.4 Three SAT questions from poetry based on poetic devices to be attempted out of five.
03x03= 09
- Q.5 One reference to the context type question based on prose/ poetry to be attempted out of two.
01x06= 06

SECTION:- B (READING COMPREHENSION)

Marks:- 15

- Q.6 One out of two poetic passages from the textbook followed by questions and MCQ's, fill ups etc.
01x05= 05
- Q.7 One / Two unseen prose passages followed by comprehension questions:
- (a) T/F, Yes/No, MCQ's and Fill ups 01x05 = 05
 - (b) Vocabulary (word meaning, collocation, spelling, synonym/ antonym, homophones, homonyms ect) 01x05= 05

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SECTION:- C (WRITING SKILLS)

Marks:- 20

- I. Paragraph writing (Descriptive/ narrative) (60-80 word) with internal choice. 01x04 = 04
- II. Essay Writing (100-150 word) with internal choice 01x07= 07
(The examiner will give some clues regarding the topic) 01x04 = 04
- III. Letter Writing (Formal/ Informal) with internal choice. 01x05 = 05
- IV. Note Making

SECTION:- D (GRAMMAR)

Marks:- 25

- I. Simple, Compound, Complex sentences
- II. Tenses
- III. Auxiliaries
- IV. Relative Clauses
- V. Conditional Clauses

5x5 = 25

HISTORY

Introduction to World History

Maximum Marks: 100

Theory: 90 marks

Time: 3 hours

Project: 10 marks

Unit

Section A: Early Societies

- | | | |
|----|--|---|
| 1. | From the beginning of time. | 6 |
| | Focus: Africa, Europe till 15000 B.C. | |
| | a) Views on the origin of Human beings | |
| | b) Early societies | |
| | c) Historians' views on present day hunter-gathering societies | |
| 2. | Early Cities | 6 |
| | Focus: Iraq 3 rd Millennium B.C. | |
| | a) Growth of towns | |
| | b) Nature of early urban societies | |
| | c) Historians' debate of uses of writing | |

Section B: Empires

- | | | |
|----|--|---|
| 3. | An empire across three continents | 9 |
| | Focus: Roman Empire, 27 B.C. to AD 600 | |
| | a) Political evolution | |
| | b) Economic expansion | |
| | c) Religion | |
| | d) Late Antiquity | |
| | e) Debate on the institution of slavery | |
| 4. | Central Islamic lands | 8 |
| | Focus: 7 th to 12 th Centuries | |
| | a) Polity | |
| | b) Economy | |
| | c) Culture | |
| | d) Historians' viewpoints on the nature of the crusaders | |
| 5. | Nomadic Empires | 8 |
| | Focus: The Mongol, 13 th to 14 th Century | |
| | a) The nature of nomadism | |
| | b) Formation of empires | |

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- c) Conquests and relations with other states
- d) Historians' view on nomadic societies and state formation

Section C: Changing Traditions

6. Three orders

8

Focus: Western Europe, 13th to 16th Century

- a) Feudal society and economy
- b) Formation of states
- c) Church and society
- d) Historians' view on decline of feudalism

Project Work: Project No. 1 - Heritage sites of J&K State

5

7. Changing Cultural traditions

9

Focus: Europe 14th to 17th Century

- a) New ideas, and new trends in literature and arts
- b) Relationship with earlier ideas
- c) The contribution of the West Asia
- d) Historians' viewpoints on the validity of the notion 'European Renaissance'

8. Confrontation of cultures

9

Focus: America, 15th to 18th Century

- a) European voyages of exploration
- b) Search for gold; enslavement, raids, extermination
- c) Indigenous people and cultures-the Arawaks, the Azetecs, the Incas
- d) The history of displacements
- e) Historians' viewpoints on the slave trade

Section D: Paths to Modernization

9. The Industrial Revolution

9

Focus: England, 18th and 19th Centuries

- a) Innovations and 19th Centuries
- b) Pattern of growth

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- c) Emergence of working class
- d) Historians' viewpoint, debate on 'was there an industrial Revolution'

10. Displacing indigenous People

9

Focus: North America and Australia, 18th to 20th Century

- a) European colonists in North America and Australia
- b) Formation of white settler societies
- c) Displacement and repression of local people
- d) Historians' viewpoints on the impact of European settlement on indigenous population

11. Paths to modernization

9

Focus: East Asia, late 19th and 20th Century

- a) Militarisation and economic growth in Japan
- b) China and the communist alternative
- c) Historians' debate on the meaning of modernisation

Project work: Project No. 2 - Bhakti and Sufi traditions in J&K State/ Arts and Crafts in J&K State

5

BOOKS SUGGESTED:

Theme in History NCERT New Delhi

Code : 214

ECONOMICS

M. Marks: 100
Theory: 90 Marks
Practical: 10 Marks

Time: 3 hours

Unit 1: Introduction

7 marks

What is Economics ?

Meaning: scope and importance of statistics in Economics

Unit 2: Collection, Organisation and Presentation of Data. 13 marks

- Collection of data- Sources of data- primary and secondary; how basic data is collected: Methods of collecting data; Some important sources of secondary data; Census of India and National Sample Survey Organization.
- Organisation of Data: Meaning and types of variables; Frequency Distribution.
- Presentation of Data: Tabular Presentation and Diagrammatic Presentation of data
 - i) Geometric forms (bar diagram and pie diagrams.
 - ii) Frequency diagrams (histogram, polygon and ogive) and
 - iii) Arithmetic line graphs (time series graph).

Unit 3: Statistical Tools and Interpretation

20 marks

(For all the numerical problems and solutions, the appropriate economic interpretation may be attempted. This means, the students need to solve the problems and provide interpretation for the results derived).

- Measures of Central Tendency- mean (simple and weighted), median and mode.
- Measures of Dispersion- absolute dispersion (range, quartile deviation, mean deviation and standard deviation); relative dispersion (co-efficient of variation); Lorenz Curve: Meaning and its application.
- Correlation- meaning, scatter diagram; Measures of correlation- Karl Pearson's method (two variables ungrouped data), Spearman's rank correlation.
- Introduction to Index Numbers- meaning, types- wholesale price index, consumer

price index and index of industrial production, uses of index numbers; Inflation and index numbers.

Unit 4: Developing Projects in Economics

10 marks

The students may be encouraged to develop projects, which have primary data, secondary data or both. Case studies of a few organization/ outlets may also be encouraged. Some of the examples of the projects are as follows (they are not mandatory but suggestive);

- i) A report on demographic structure of your neighborhood;
- ii) Consumer awareness amongst households
- iii) Changing prices of a few vegetables in your market
- iv) Study of a cooperative institution: milk cooperatives

The idea behind introducing this unit is to enable the students to develop the ways and means by which a project can be developed using the skills learned in the course. This includes all the steps involved in designing a project starting from choosing a title, exploring the information relating to the title collection of primary and secondary data, analyzing the data, presentation of the project and using various statistical tools and their interpretation and conclusion

UNIT 5.

10 Marks

**Indian Economic Development:
Development Policies and Experience (1947-90):**

- A brief introduction of the state of Indian economy on the eve of independence.
- Common goals of Five Year Plans.

- Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy, etc.), industry (industrial licensing, etc.) and foreign trade

UNIT 6

Economic Reforms since 1991:

10 marks

- Need and main features- liberalization, globalisation and privatization;
- An appraisal of LPG policies

UNIT 7

Current Challenges Facing Indian Economy

20 marks

- Poverty- absolute and relative; Main programmes for poverty alleviation; A critical assessment
- Rural development: Key issues- credit and marketing role of cooperatives, agricultural diversification ; alternative farming organic farming
- Human Capital Formation; how people become resource; Role of human capital in economic development; Growth of Education Sector in India
- Employment: Growth, informalisation and other issues; Problems and policies
- Infrastructure: Meaning and types: Case Studies: Energy and Health: Problems and Policies- A critical assessment ;
- Sustainable Economic Development.
Meaning: Effects of Economic Development on Resources and Environment

UNIT 8

Developing Experience of India:

10 marks

- A Comparison with neighbors
- India and Pakistan
- India and China

Issues: growth, population, and other developmental indicators.

Code : 215

GEOGRAPHY

Maximum Marks: 100

Theory: 70 marks

Time: 3 hours

Practical: 30 marks

A. Fundamentals of Physical Geography

Unit I: Geography as a Discipline

5 marks

- ♦ Geography as an integrating discipline, as a science of spatial attributes ;
- ♦ Branches of geography, importance of physical geography

Unit II: The Earth

5 marks

- ♦ Origin and evolution of the earth; interior of the earth Wegener's continental drift theory and plate tectonics; Earthquakes and volcanoes;

Unit III: Land Forms

6 marks

- ♦ Rocks and minerals –major types of rocks and their characteristics;
- ♦ Land forms and their evolution
- ♦ Geomorphic processes-weathering, mass wasting, erosion and deposition; soils – formation

Unit IV: Climate

11 marks

- ♦ Atmosphere- compositions and structure, elements of weather and climate;
- ♦ Insolation-angle of incidence and distribution; heat budget of the earth – heating and cooling of atmosphere (conduction, convection, terrestrial radiation, advection): temperature – factors controlling temperature; distribution of temperature-horizontal and vertical; inversion of temperature

- ♦ Pressure- pressure belts; winds-planetary seasonal and local, air masses and fronts; tropical and extra tropical cyclones;
- ♦ Precipitation –evaporation ; condensation –dew, frost, fog, mist and cloud; rainfall –types and world distribution ;
- ♦ World climates–classification (Koeppen), greenhouse effect, global warming and climatic changes.

Unit V : Water (Oceans)

4 Marks

- ♦ Hydrological Cycle ;
- ♦ Oceans – submarine relief; distribution of temperature and salinity; movements of ocean water waves, tides and currents.

Unit VI : Life on the Earth

4 Marks

- ♦ Biosphere - importance of plants and other organisms; biodiversity and conservation; ecosystems, bio-geochemical cycle, and ecological balance.

B. India–Physical Environment

Unit VII : Introduction

5 Marks

- ♦ Location – space relations and India's place in the world.

Unit VIII : Physiography

7 Marks

- ♦ Structure and Relief;
- ♦ Drainage systems: concept of water sheds; the Himalayan and the Peninsular ;
- ♦ Physiographic divisions.

Unit IX : Climate, Vegetation and Soil

14 Marks

- ♦ Weather and Climate – spatial and temporal distribution of temperature, pressure, winds and rainfall; Indian monsoons: mechanism, onset and variability – spatial and temporal; climatic types;
- ♦ Natural vegetation –forest types and distribution; wild life; conservation; biosphere reserves ;
- ♦ Soils – major types (ICAR's classification) and their distribution, soil degradation and conservation.

Unit X : Natural Hazards and Disasters: Causes, Consequences and Management (One case study to be introduced for each tropic)

9 Marks

- ♦ Floods and droughts
- ♦ Earthquakes and Tsunami
- ♦ Cyclones
- ♦ Landslides

C Practical Work

Unit I: Fundamentals of Maps

- ♦ Maps – types ; scales –types ; construction of linear scales, measuring distance finding direction and use of symbols;
- ♦ Latitude, Longitude and time ;
- ♦ Map projection – typology, construction and properties of conical with one standard parallel and Mercator's projection.

Unit II: Topographic and Weather Maps

30 Marks

- ♦ Study of topographic maps (1:50,000 or 1:25,000, Survey of India Maps) : contour cross section and identification of landforms – slopes hills, valleys, waterfalls, cliff; distribution of settlements;

- ♦ **Aerial Photographs and Satellite Images ;**

Aerial Photographs: Types and Geometry – vertical aerial photographs; difference between maps and aerial photographs; photo scale determination.

Satellite images: Stages in remote sensing data acquisition, platform and sensors and data products (photographic and digital)

Interpretation of physical and cultural features from aerial photographs and satellite imageries.

- ♦ **Use of weather instruments:** thermometer, wet and dry – bulb thermometer, barometer wind vane, rain gauge.
- ♦ **Use of weather charts:** describing pressure, wind and rainfall distribution .

POLITICAL SCIENCE

Maximum Marks: 100

Time: 3 hours

Unit : I

Indian Constitution at work:

1. **Making of the constitution:** why do we need constitution? What does a constitution do? Who made our constitution? How did the country's partition affect the working of the constitution assembly? What were the sources of constitution? **4 Marks**
2. **Fundamental Rights:** Why do we need for a bill of rights in the constitution? What are the fundamental rights provided by the constitution? Why was the right of the property removed from fundamental rights? How have the interpretation by the courts influenced Fundamental Rights? How has provision of Fundamental Rights provided the basis for civil liberties movement in India? What are the fundamental Duties? **6 Marks**
3. **System of representational democracy:** What are the different methods of election? How do these methods affect parties and politics? Why was the post system chosen in India? What have been the effects of this system? Why is there a system of reserved seats? What are the provisions to ensure free and fair elections? What does the Election Commission do? **6 Marks**

Unit II

4. **Executive in a parliamentary system:** Why was parliamentary system chosen over other forms of government? Why does the parliamentary system need a constitutional head? How are the Prime Minister and the Chief Ministers elected? What are the formal and real powers of the President of India? What are the powers of Prime Minister or the Chief Ministers and the Council of Ministers? What are the powers of the Governor? **6 Marks**

5. **Legislature at the central and state level:** Why does the Parliament of India have two Houses? How are the parliament and the state Assemblies constituted? What are the 3 powers of the Rajya Sabha and Lok Sabha? How are the laws passed? How is the executive made accountable? What are the constitutional means to prevent defection? **4 Marks**
6. **Judiciary:** What is the rule of law? Why do we need an independent judiciary? What are the provisions that ensure the independence of judiciary in India? How are judges appointed? What are the powers of the Supreme Court and the High Courts? How do they use their powers for public interest? **5 Marks**
7. **Federalism:** What is Federalism? How does federalism ensure accommodation of diversities? In which ways is the Indian constitution federal? In which ways does the constitution strengthen the centre? Why are there special provision for some states and areas? **4 Marks**
8. **Local government:** Why do we need decentralization of powers? What has been the status of local government in the constitution? What are the basic features of rural and urban local governments? What has been the effect of giving constitutional status to local governments? **5 Marks**
9. **Political philosophy underlying the constitution:** What are the core provisions of the constitution? What are the visions underlying these core provisions? How are these shaped by modern Indian political thought? **5 Marks**
10. **Constitution as a living document:** How has the constitution changed since it inception? What further changes are being debated? What has the working of democracy done to the constitution? **5 Marks**
11. **Introduction to Political Theory:** What is Politics? Do we find politics in seemingly non-political domain? Can political argument be resolved through reasoning? Why do we need political theory? **5 Marks**
12. **Freedom:** What is freedom? What are reasonable constraints on individual liberty? How are limits defined? **5 Marks**

- 13 **Equality:** Do all differences involve inequality? Does equality imply sameness? What are the major forms of inequality? How can equality be realized? **5 Marks**
- 14 **Social Justice:** Is justice all about fairness? What is the relationship between justice and equality? What are the different forms of injustice? In which ways can justice be secured? **5 Marks**
- 15 **Rights:** How is a right different from any claim? What are the major kinds of right claims? How do we resolve a conflict between individual and community rights. How does the state enable and obstruct rights? **6 Marks**
- 16 **Citizenship:** Who is a citizen? What are relevant grounds for inclusion and exclusion? How are new claims to citizenship negotiated? Can we have a global citizenship? **5 Marks**
- 17 **Nationalism:** How are the boundaries of a nation defined? Must every nation have a state? What demands can a nation make on its citizens? What is the basis of the right to self determination? **5 Marks**
- 18 **Secularism:** What is secularism? Which domains of life does it relate to? What is a secular state? Why do we need secular state in modern life? Is secularism suitable for India? **6 Marks**
- 19 **Peace:** What is peace? Does peace always require non-violence? Under what conditions is war justified? Can armament promote global peace? **4 Marks**
- 20 **Development:** What is development? Is there a universally accepted model of development? How to balance the claims of present generation with claims of future generation? **4 Marks**

Code : 216

INTRODUCTION OF PHILOSOPHY

Maximum Marks: 100

Time: 3 hours

Unit -I Nature and scope of philosophy:

10 Marks

- (i) Meaning and definition of philosophy
- (ii) Nature of Philosophy
- (iii) Branches of Philosophy

UNIT-II

10 Marks

- (i) Origin of Philosophy
- (ii) Relation of Philosophy with Science.
- (iii) Relation of Philosophy with Religion.

UNIT-III Theories of Knowledge

10 Marks

- (i) Rationalism
- (ii) Empiricism
- (iii) Intuitionism

Unit-IV Different concepts of God

10 Marks

- (i) Deism
- (ii) Pantheism
- (iii) Theism.

Unit-V Nature and scope of logic.

10 Marks

- (i) What is logic
- (ii) Uses and applications of logic.

Suggested text-book

- (i) An introduction to Philosophy by J.N. Sinha.
- (ii) History of Philosophy by R.N. Sharma.
- (iii) History of Philosophy by Betrand Russell.
- (iv) History of Philosophy by Frank Thilly.
- (v) Introduction to Philosophy by Y. Maisah.
- (vi) Introduction to logic by I.M. Copi.
- (vii) introduction to logic by Vatsayan.

Introduction to Ethics.

Unit VI:

10 Marks

- (i) Definition and Meaning of Ethics
- (ii) Nature of Ethic
- (iii) Scope of Ethics

Unit VII: Hedonism

10 Marks

- (i) Meaning of Hedonism
- (ii) Psychological and Ethical Hedonism
- (iii) Utilitarianism

Unit VIII: Theories of Punishment

10 Marks

- (i) Crime
- (ii) Punishment, theories of Punishment. (Preventive, reformatory, retributive)

Unit IX:

10 Marks

Mahatma Gandhi – Ahimsa (Non-Violence)
Gautam Buddha – Four noble truth
Socrates – Virtue

Unit X: Terms and Propositions

10 Marks

- (i) Definition of Term, Denotation and connotation of terms.
- (ii) Proposition, Classification of propositions.

Books Recommended

- (i) A manual of Ethics by J.N. Sinha.
- (ii) A manual of Ethics by J.S. Mackenzie.
- (iii) An introduction to Ethics by William Lilly.
- (iv) Introduction to logic by I.M. Copi.

Code : 217

EDUCATION

Maximum Marks: 100

Time: 3 hours

Objective:

1. To have complete conceptual clarity of Education and its role.
2. To be familiar with various aims of education and their importance.
3. To have a working knowledge of various agencies leading to education of children.
4. To have current understanding of pre-primary system of education both in Theory and Practice.
5. To have clear understanding of Educational Psychology.

Unit : I Meaning and Concept of Education

- 1.1 Etymological meaning of education
- 1.2 Narrow and Broader meaning of education
- 1.3 Definitions-- Pestalozzi, Redden, M. K. Gandhi,
Dr. Zakir Hussain, Dr. Sir Muhammad Iqbal
- 1.4 Need and importance of education

10 marks

UNIT - 2 Understanding Aims of Education

- 2.1 Meaning of aims of education
- 2.2 Meaning and importance of following aims:-
 - ** individual aims
 - ** moral and spiritual aim
 - ** social aim
 - ** cultural aim
 - ** vocational aim

10 marks

UNIT -3 Understanding Agencies of Education

- 3.1 Meaning of agencies of education
- 3.2 Types
 - ** Formal..... School and religious institutions
 - ** Informal.... Family and Society
 - ** Non-formal.... Open school, Distance education and Mass Media.

10 marks

UNIT-4 Organization & Structure of Education in India

- 4.1 Pre-primary education
 - 4.2 Primary education
 - 4.3 Secondary education
 - 4.4 Higher education
- (to be discussed with special reference to organization, structure and aims)

10 marks

UNIT-5 Universalization of Elementary Education

- 5.1 Concept of universalization of elementary education
- 5.2 Problems of universalization
- 5.3 Initiatives of elementary education
 - ** Non formal education
 - ** Early childhood care and education
 - ** Sarva Shiksha Abhiyan
 - ** Right to Education Act (1997)
- 5.4 Wastage and Stagnation.....causes and control

10 marks

Unit 6 : Educational Psychology

- 6.1 Meaning and definition of Educational Psychology
- Stern ,Skinner, Judd, Crow & Crow

SYLLABUS CLASS XI

6.2 Need and scope of educational psychology

6.3 Methods of educational psychology

** Observation method

** Case-study method

10 marks

Unit 7 : Emotions

7.1 Understanding the concept of emotions

7.2 Definitions : McDougall, Woodworth, Gates

7.3 Characteristics of emotions

7.4 Types of emotions—Fear, Anger, Jealousy

7.5 Classification proposed by McDougall

7.6 Training of emotions:-Sublimation and Catharsis

7.7 Importance of training of emotions

10 Marks

Unit 8 : Value Education

8.1 Conceptual clarity of value education

8.2 Types of values (Social, Moral and Religious)

8.3 Need and importance of value education

8.4 Role of education in imbibing values

10 Marks

Unit 9 : Elementary Statistics

9.1 Meaning of statistics

9.2 Tabulation of Data into frequency distribution

9.3 Graphic Representation of Data

** Frequency Polygon

** Histogram

** Pie-chart

** Ogive

SYLLABUS CLASS XI

- 9.4 Measures of central tendency —Mean, Median and Mode (calculations only) **10 marks**

Unit 10 : Environmental Education

- 10.1 Concept of environmental education
10.2 Aims and objectives of environmental education
10.3 Need and importance of environmental education
10.4 Environmental Pollution....Air, Water and Noise
(Meaning, Causes and Control)

10 marks

Books Suggested:

1. A textbook of Education by Dr. G. Rasool and Dr. H.P. Mangotra.
2. Education for Beginners by N.A. Nadeem. Fullbright Publishing Co., Karan Nagar, Srinagar.
3. Principles & Techniques of Education by Safaya and B.D. Shida.
4. Educational Psychology by S.K. Mangal.

PSYCHOLOGY

Maximum Marks: 100

Theory: 70 Marks

Practical: 30 Marks

Time: 3 hours

UNIT-I INTRODUCTION TO PSYCHOLOGY

- ♦ Nature and scope of Psychology
- ♦ Brief historical background of Psychology
- ♦ Branches of Psychology: *Educational, Social, Abnormal, Experimental, Clinical, Industrial and Cognitive Psychology*
- ♦ Schools of thought in Psychology: *Structuralism, Functionalism, Behaviourism and Psychoanalysis*

9 marks

UNIT-II METHODS IN PSYCHOLOGY

- ♦ Observation, Experimental, Survey & Case Study method.
- ♦ Psychological Testing and its characteristics: Reliability & validity

5 marks

UNIT-III THE BASIS OF HUMAN BEHAVIOUR

- ♦ Biology of behaviour: *Structure and functions of Nervous system.*
- ♦ Locations and functions of endocrine systems & its effect on behaviour.
- ♦ Heredity and Behaviour: *Genes and Chromosomes*
- ♦ Socio-cultural basis of behaviour: Family, Neighbourhood and School

7 marks

UNIT-IV HUMAN DEVELOPMENT

- ♦ Meaning of growth and development.

SYLLABUS CLASS XI

- ♦ Factors influencing development.
 - ♦ Overview of developmental stages: *Infancy, Childhood, Adolescence, Adulthood and Old Age.*
- 7 Marks**

UNIT-V SENSORY, ATTENTIONAL AND PERCEPTUAL PROCESSES

- ♦ Meaning of Sensation, Attention and Perception.
 - ♦ Laws of perceptual organization.
 - ♦ Attentional processes: *Selective and Sustained Attention, Illusions.*
 - ♦ Sense Modalities: *Visual and Auditory Modalities.*
- 7 Marks**

Unit VI: LEARNING

- ♦ Meaning and characteristics of Learning.
 - ♦ Classical and Operant Learning, Observational Learning, Verbal Learning, Skill learning.
 - ♦ Factors facilitating Learning, Transfer of Learning.
- 8 marks**

Unit VII: MEMORY AND FORGETTING

- ♦ Meaning of Memory & its components.
 - ♦ Levels of processing: *Sensory memory, Short-term memory, Long-term memory.*
 - ♦ Forgetting: *Nature of Forgetting, Theories of Forgetting (Trace decay, Interference, Retrieval failure).*
- 8 marks**

SYLLABUS CLASS XI

Unit VIII: THINKING AND LANGUAGE

- ♦ Nature of thinking
- ♦ Process of thinking, Reasoning, Problem solving and Decision making.
- ♦ Nature and process of creative thinking.
- ♦ Thought and Language, Development of Language and Language use **6 marks**

Unit IX: MOTIVATION

- ♦ Meaning, Cycle of motivation.
- ♦ Biological Motives.
- ♦ Psycho-social motives: *Achievement, Affiliation and Power.*
- ♦ Maslow's Hierarchy of needs. **7 marks**

Unit X: EMOTIONS

- ♦ Meaning of emotion and its characteristics
- ♦ Theories of emotion: *James-Lange Theory, Cannon-Bard Theory*
- ♦ Emotional reactions: *Happiness, Optimism, Anger and Fear.* **6 Marks**

PRACTICALS

30 Marks

- ♦ Memory and forgetting by using memory drum.
- ♦ Learning: (*Star shape*) Bilateral transfer of learning.
- ♦ Attention

SOCIOLOGY

Maximum Marks: 100

Time: 3 hours

Unit I : Introduction to Sociology

10 Marks

- Concept of Sociology :- Nature and Subject Matter
- Emergence of Sociology :- Enlightenment, Industrial Revolution, French Revolution
- Society:- Concept, Structure, function & Types
- Society:- Functional and Conflict Perspective

Unit II : Basic Concepts

10 Marks

- Social Groups:- Concept and Nature, Primary, Secondary and Reference groups
- Social Stratification:- Concept and Nature, Caste & Class
- Social Control:- Concept and Nature, Agencies of Social Control
- Status and Role:- Concept and Nature, Types of Status and Role

Unit III : Social Institutions - I

10 Marks

- Concept and Definition of Social Institution
- Family:- Structure and Functions
- Marriage:- Concept and Types of Marriage
- Kinship:- Concept Terminologies, Types & Rules

Unit IV : Social Institutions - II

10 Marks

- Religion:- Concept, Role and Functions
- Education:- Role and Functions
- Polity:- State, Sovereignty, Legislature, Executive, Judiciary
- Economy:- Concept and Nature, Jajmani system, Socialistic & Capitalistic System

SYLLABUS CLASS XI

Unit V : Culture and Society

10 Marks

- Culture:- Concept and Dimensions
- Values, Norms, Folkways, Customs
- Socialization: Agencies of Socialization
- Pluralistic and Cultural Ethos - With special reference to J&K

MAXIMUM MARKS: 50

Time: 2 ½ hrs

Unit VI: Classical Sociological Thought

10 Marks

- August Comte:- Law of three-Stages
- Karl Marx:- Class and Class struggle
- Emile Durkheim:- Social Fact-Suicide
- Max Weber:- Religion

Unit VII: Indian Sociological Thought

10 Marks

- G S Ghurye: Caste and Race in India
- D P Mukherjee: Tradition and Modernity
- M N Srinivas: Sanskritization
- Imtiyaz Ahmad: Arsharfization and Ajlafization

Unit VIII: Social Structure and Processes in Indian Society

10 Marks

- Social Structure: Concept
- Social Processes: Concept, Nature & Types
- Cooperation, Division of labour
- Conflict and Competition

Unit IX : Social Change

10 Marks

- Social Change: Conflict model and Evolutionary model
- Social Order: Deviance and Conformity

SYLLABUS CLASS XI

- Social Change in Rural society (Structural & Functional)
- Social Change in Urban Society (Structural & Functional)

Unit X : Environment and Society

10 Marks

- Ecology and Social Environment (Relationship)
- Preservation of water bodies and their significance With special reference to J&K Dal Lake, Wular, Jhelum, Tawi and Mansar.
- Deforestation and its impact on society
- Social response to Natural Disaster :Earth quake, Floods (J&K)

Books Prescribed :-

1. Introducing Sociology: A textbook Class XI by NCERT, New Delhi
2. Understanding Society: A textbook Class XI by NCERT, New Delhi
3. Indian Society by NCERT, New Delhi.

Code : 221

HOME SCIENCE

(ELECTIVE)

Home Science as a discipline aims to empower learners by developing understanding of four different areas, namely:

- ♦ Food and Nutrition
- ♦ Human Development
- ♦ Community Resource Management and Extension
- ♦ Fabric and Apparel Science

The subject helps students to understand changing needs of Indian society, academic principles as well as develop professional skills.

This would make them competent to meet challenges of becoming a responsible citizen.

Objectives:

The Syllabus at Senior Secondary level develops in the learners an understanding that the knowledge and skills acquired through Home Science facilitates development of self, family and community. It endeavors to -

1. Acquaint learners with the basics of human development with specific reference to self and child.
2. Help develop skills of judicious management of various resources.
3. Enable learners to become alert and aware consumers.
4. Impart knowledge of nutrition and lifestyles to enable prevention and management of disease.
5. Inculcate healthy food habits.
6. Help develop understanding of textiles for selection and care of clothes.
7. Develop skills of communication to assist in advocacy and dissemination of knowledge to community.

SYLLABUS CLASS XI

Maximum Marks: 100

Theory: 70 Marks

Practical: 30 Marks

Time: 3 hours

Unit I : Concept of Home Science and its Scope

3 Marks

- Definition and meaning of Home Science.
- Historical review of development of Home Science as a discipline.
- Its scope and interdisciplinary approach.

Unit II : Growth & Development

12 Marks

- Understanding the concept of Growth and development: The basic principles of development and the difference b/w Growth and development.
- Life span of different stages of growth.
- Adolescence definition.
- Characteristics
- Physical development - Growth spurt, Sexual development.
- Social and emotional development: Family and socialization, Parental Control techniques, Role of siblings and grandparents, Development of peer relationship & Friendship pattern, Interest in opposite sex, development of gender role, stereotype, Role of school and teacher, Identity crises, storm and stress, Anger Management.
- Cognitive development: - Meaning & Characteristics.

Unit III : Some Problems Related to Adolescence

12 Marks

- Awkwardness due to growth spurt, freedom and control, depression, alcohol, drugs and smoking; delinquency, problems related to sex; ignorance and increased Curiosity, Prevention of HIV / AIDS and other sexually transmitted diseases; Adolescence a period of stress.

Important Developmental Task

- Role of heredity and environment (family, peers, school and neighbourhood), preparing, Role of parents and teachers solving adolescence problems.

SYLLABUS CLASS XI

Population Education

- Population explosion definition - Causes, effects of over population and its Control.
- Population Education and its aim.
- Importance of girl child; Govt incentives to improve status of girl child (With special ref. to state)

Unit IV : Introduction to Fabrics

8 Marks

- **Classification of fibres:**

Natural (Cotton, silk and wool.)

Man-made (Regenerated & Synthetic), (Rayon, nylon and polyester).

Blends - Characteristics (terry cot, terry silk, terry wool)

Characteristics of fibres : Physical & Chemical properties.

- **Fabric Construction:**

Yarn making: - Basic procedure of making yarn.

Weaving: - Construction of weaves, types of weaves - plain (Basket and rib), twill, sateen & satin weave.

A brief mention of special weaves (Pile and jacquard weaves).

Knitting and non woven fabrics.

Felting and bonding.

Effect of weaves on appearance, durability and maintenance of garments.

- **Fabric Finishes:**

Meaning and importance.

Classification of finishes.

Basic finishes: - (Cleaning, scouring), singeing, bleaching, stiffening, calendaring and tentering)

Special finishes (Mercerization, shrinkage control). (Sanforizing, water proofing), dyeing & Printing.

Handlooms of J&K.

Unit -V : Nutrition for Family

9 Marks

- Definition and relationship between food, nutrition, health: nutritional status, signs of good health; physical status, psychological status, mental ability, mortality and longevity.
- Classification of foods on the basis of nutrients and functions: - Physiological, psychological and socio-cultural, nutritional status and calorie intake on the basis of poverty line.
- Selection of foods for optimum nutrition and good health: basic knowledge of nutrients - sources, function, deficiency and prevention | proteins, Carbohydrates, fat, dietary fibre, vitamin - A, D, B, B2 Niacin, Folic acid B12 and Vit C, minerals - Calcium, Iron and Iodine. Basic foods group. (ICMR) and their contribution, concept of balanced diet food and nutritional requirement for family (ICMR Tables); factors influencing selection of food culture, family food practices, media, peer group and availability of foods (with special reference to J&K)
- Nutritional problems of adolescents -IDD, Anaemia.
- Eating disorders of adolescents.

Unit VI : Maximum Nutritive Value From Food by Proper Selection, Preparation, Cooking and Storage:

9 Marks

- Selection and storage of foods - perishable, semi-perishable, non-perishable, convenience foods, reasons for spoilage; brief description of household methods of preservation - refrigeration, dehydration use of chemicals and house hold preservation, Cooking: Principles of cooking: Methods of cooking boiling, steaming, pressure cooking, deep and shallow frying parboiling, sautéing, roasting and grilling, effects of cooking on the nutritive value of food. Method of enhancing nutritive value - germination, fermentation, fortification and proper food combination.

SYLLABUS CLASS XI

Unit VII : Resource Management.

9 Marks

- Resource - Meaning, types and characteristics.
- Community facility/shared resources: school, parks, hospitals, roads, transports, water, electricity, library fuel and fodder.
Need to manage the resources and methods of Conservation of shared resources.
- Management.
- Meaning need and steps in management.
- Decision making and its role in management.

Unit VIII : Time and Energy Management.

8 Marks

- Need and procedure for managing time for occupation and leisure.
- Work simplification meaning and methods, types and ways of reducing fatigue.
- Work ethics - meaning and its importance.

PRACTICAL

Marks : 30

Time: 3 Hours

UNIT MARKS

1.	Concept of Home Science	
2.	Growth & Development	
3.	Nutrition for self and family	8 marks
4.	Resources management	8 marks
5.	Clothing, selection & care	7 marks
6.	Record	5 marks
7.	Viva	2 marks

Unit I : Concept of Home Science - Making Charts and Posters.

Unit II :

- Observation of Adolescence strength and weaknesses and suggestions for utilization of strength and weaknesses to overcome them.

Unit III : Nutrition for Self & Family

SYLLABUS CLASS XI

Activity:- Look for signs of good health within your family.

Activity:- Make a list of food available in the local market according to food groups.

Practical:- Diet plan for Adolescence.

Practical:- Preparing nutritious snacks, Canteen meal .Using different methods of cooking.

Practical: - Household methods of food preservation (Jam, Squash, Pickles/Chutney)

Unit IV : Resource Management

Activity:- Observe & list resources available at home & in neighbour and suggest improvements.

Activity:- Observe and make a list of resources materials, surrounding at home & community-
make an article of waste product.

Practical: make flower & foliage arrangements, floor decorations. Clean & polish copper or
brass, glass & iron

Unit V : Introduction to Clothing.

Activity:- Collect samples of fabrics & study characteristics for identification.

Activity: - Collect samples of weaves & identify them.

Practical: - Carry out burning test, slippage test, tearing test & test for colour fastness.

Practical: - Dyeing: - tie & dye, Block printing.

SYLLABUS CLASS XI

Code : 235

MUSIC

Max. Marks: 100

Theory: 50

Practical: 50

Time: 2½ hours

Marks : 25

Unit-I

1. Writing of atleast ten Alankars in Shudh Swaras only.
2. Writing of Swar Malika or Lakshan Geet in Raag Bilawal and Rag Yaman.
3. Write the Notation of the Taalas in single and double layakaries prescribed in the course of study (i) Teen tal (ii) Kehra (iii) Dadra

Unit-II

1. Define the following Musical Terms:-
Naad, Shruti, Swar, Saptak, Sangeet, Vadi Swar, Samvadi Swar, Anuvadi Swar, Varjya Swar, Alankar, Aroh, Avroh, Pakad.
2. Detail Study of the following with its comparison:
(i) Thaata-Raag (ii) Classical-Semi-Classical music
3. Swar:- Chal, Achal, Shudh, Komal, Teervra swar (with examples)

Marks : 25

Unit-III

1. Write Notation in Bhatkhande Notation System of the following Raags
(Chota Khayal/Razakhani Gat)
2. Full Definition of the Raagas prescribed in the course of study.

Unit-IV

1. Life History and contributions of the following Musicians:
(i) Pt. Vishnu Narayan Bhatkhande (ii) Swami Haridas
2. Essay type
(i) Lok Sangeet and Shastriya Sangeet
(ii) Importance of Taal and Laya in Music
(iii) Importance of Music in life
3. Draw and explain the parts of Tanpura/Sitar
4. Style of Singing and Playing
(i) Khayal Gayaki (ii) Dhrupad Gayaki (iii) Maseetkhani Gat & Razakhani Gat

SYLLABUS CLASS XI

PRACTICALS

Time : 3 hrs.

50 Marks

	Marks
I st Test in Practical	20
2 nd Test in Practical	20
Practical file and Impression	10

- 1 Alankars in Bilawal Thaata.
- 2 Raag Bilawal and Raag Yaman (Swar Malika/Lakshan Geet).
- 3 Playing of Teen Taal in Single and double Layakaries.
- 4 Any folk song of your State/Different Bols of Mizrab
- 5 Singing/playing of Alankars in Kalyan thaata.
- 6 Raag Bilawal and Raag yaman (Chota Khayal or Razakhani Gat with four Tanas and Todas.
- 7 Playing of Teentaal, Dadra and Kehrva Taal in Single and double layakaries.
- 8 Any Classical based Filmi song or Folk song .

BOOKS SUGGESTED:

1. Sangeet Visharad.
2. Sangeet shastra Darpan I and II.
3. Kramik Pustak Malika Part-I and Part-II.

STATISTICS

Maximum Marks: 100

Maximum Marks (Theory): 70

Maximum Marks (Practical): 30

Unit I: Introduction to Statistics

- Origin, Definition and Meaning of Statistics. Importance and Scope of Statistics.
- Limitations of Statistics. Data and its types (Primary, Secondary, Qualitative and Quantitative data), Sources of secondary data. **6 marks**

Unit II: Data Collection

Concept of Population and Sample. Methods of data collection (Questionnaire and Interview Method). Merits and Demerits of these Methods. Presentation, Classification and Tabulation of data. Discrete and continuous data. Frequency and frequency distribution. **6 marks**

Unit III: Graphical representation of data

Representation of data by Graph, its advantages. Construction of diagrams/Charts (Bar chart, Multiple Bar diagram, Pie chart). Frequency graphs (Histogram, Frequency Polygon, Frequency Curve, Ogive Curves) **7 marks**

Unit IV: Measures of Location

Centre Tendency and its Measures (Mean, Median, Mode, Geometric Mean and Harmonic Mean). Essentials of good average. Merits and Demerits of Measures of Central Tendency. Combined and Weighted Mean. **8 marks**

Unit V: Partitation Values

Graphical Location of Median, Concept of Quartiles, Deciles and Percentiles.

Percentile Rank. Empirical relation between Mean, Median and Mode. Symmetrical and Asymmetrical data. **8 marks**

Unit VI: Dispersion

Dispersion and its absolute measures (Range, Quartile Deviation, Mean Deviation and Standard Deviation). Merits and Demerits of these measures. Relative measures of Dispersion (Co-efficient of Range, Co-efficient of Quartile deviation, Co-efficient of Standard deviation). Co-efficient of variation (C.V.). **8 marks**

Unit VII: Moments

Define Moments, Types of Moments (Raw Moments and Centre Moments for discrete and continuous data). Relationship between Raw and Central Moments. Numerical illustration based on Moments. **6 marks**

Unit VIII: Skewness and Kurtosis

Define Skewness and its types, Measures of Skewness (Karl Pearson, Bowleys and Moment based measure), Kurtosis and its types. Measures of Kurtosis.

7 marks

Unit IX: Correlation

Bivariate data, Scattered diagram, Concept of Correlation and its types. Methods of measuring Correlation (Product moment method, Graphical method). Properties of Correlation co-efficient. Rank correlation for simple and repeated Ranks.

8 marks

Unit X: Introduction to Computers

Basic idea about computers, Functional components (Input/Output Units, Hardware

and Software). Generation of Computers, Concept of flow charts, Classification of computers.

6 marks

Practical Work (weightage 30 marks)

1. Practical's based on Baye's thermo.
2. Calculation of two Regression lines.
3. Practical's based on measures of fertility and mortality .
4. Estimates of Trend values by free hand and semi average method.
5. Drawing of Charts through Excel.
6. Measures of Central Tendency through Excel.

MATHEMATICS**Maximum Marks: 100****Time: 3 hrs**

Topics	Marks
Unit-I Sets	06
Unit-II Relations and Functions	06
Unit-III Trigonometry	12
Unit-IV Mathematical Induction	04
Unit-V Permutation and Combinations	06
Unit-VI Complex Numbers and Linear In equations	06
Unit-VII Limits and Derivatives	10
Unit-VIII Co-ordinate Geometry (Straight Line)	06
Unit-XI Conic Section (Circles) Parabola, Ellipse, Hyperbola	10
Unit-X Probability	06
Unit-XI Statistics	06
Unit-XII Binomial Theorem	06
Unit-XIII Sequences and Series	08
Unit-XIV Three Dimensional Geometry	04
Unit-XV Mathematical Reasoning	04

Unit-I**Sets**

Sets and their representation. Empty set. Finite and Infinite sets. Equal sets Subsets. Subsets of the set of real numbers especially intervals (with notations).

Power set. Universal set. Venn diagrams. Union and Intersection of sets. Difference of sets. Compliment of a set.

Ordered pairs, Cartesian product of sets. Number of elements in the Cartesian product of two finite sets. Cartesian product of the reals with itself (up to $\mathbb{R} \times \mathbb{R} \times \mathbb{R}$).

Unit-II**Relations and Functions**

Definition of relation, pictorial diagrams, domain, co-domain and range of relation. Function as a special kind of relation from one set to another. Pictorial representation of a function, domain and co-domain and range of a function. Real valued function of the real variable, domain and range of these functions. Constant, identity, polynomial, rational, modulus, signum and greatest integer functions with their graphics. Sum, difference, product and quotients of functions.

Unit-III**Trigonometry**

Positive and negative angles. Measuring angles in radians and in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity $\sin^2 x + \cos^2 x = 1$, for all x . Signs of trigonometric functions and sketch of their graphs. Expressing $\sin(x \pm y)$ and $\cos(x \pm y)$ in terms of $\sin x$, $\sin y$, $\cos x$ and $\cos y$. Deducing the following identities:

$$\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}, \quad \cot(x \pm y) = \frac{\cot x \cot y \mp 1}{\cot y \pm \cot x},$$

$$\sin x + \sin y = 2 \sin \frac{x+y}{2} \cos \frac{x-y}{2}, \quad \cos x + \cos y = 2 \cos \frac{x+y}{2} \cos \frac{x-y}{2},$$

$$\sin x - \sin y = 2 \cos \frac{x+y}{2} \sin \frac{x-y}{2}, \quad \cos x - \cos y = -2 \sin \frac{x+y}{2} \sin \frac{x-y}{2}.$$

Identities related to $\sin 2x$, $\cos 2x$, $\tan 2x$, $\sin 3x$, $\cos 3x$ and $\tan 3x$. General solution of trigonometric equations of the type $\sin \theta = \sin \alpha$, $\cos \theta = \cos \alpha$ and $\tan \theta = \tan \alpha$. Proofs and simple applications of sine and cosine formulae.

SYLLABUS CLASS XI

Unit-IV Mathematical Induction

The Principal of Mathematical induction and Simple Applications.

Unit-V Permutation and Combinations

Fundamental principle of counting. Factorial n . Permutations and combinations, derivation of formulae and their connections, simple applications.

Unit-VI

Complex Numbers and Linear Inequations

Need for complex numbers, especially $\sqrt{-1}$, to be motivated by inability to solve every quadratic equation. Brief description of algebraic properties of complex numbers. Argand plane and polar representation of complex numbers. Statement of Fundamental Theorem of Algebra, solution of quadratic equation in the complex number system.

Linear inequalities. Algebraic solution of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Solution of system of linear inequalities in two variables - graphically.

Unit-VII Limits and Derivates

Derivative introduced as rate of change both as that of distance function and geometrically, intuitive idea of limit. Definition of derivative, relate it to slope of tangent of the curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions

Unit-VIII Straight Lines

Brief recall of 2d from earlier classes. Slope of a line and angle between two lines. Various forms of equations of a parallel to axes, point-slope form, slope-intercept form, two-point form, intercepts form and normal form. General equation of a line. Distance of a point from a line.

Unit-IX Conic Sections (Circles)

Sections of a cone: Circles, ellipse, parabola, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.

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Unit-X Probability

Random experiments: Outcomes, spaces (set representation). Events: Occurrence of events, 'not', 'and' & 'or' events, mutually exclusive events. Axiomatic (set theoretic) probability, connections with the theories of earlier classes.

Unit-XI Statistics

Measure of dispersion: mean deviation, variance and standard deviation of ungrouped/grouped data. Analysis of frequency distributions with equal means but different variances.

Unit-XII Binomial Theorem

History, Statement and proof of the binomial theorem for positive integral indices. Pascal's triangle, general and middle term in binomial expansion, simple applications.

Unit-XIII Sequence and Series

Sequence and Series. Arithmetic Progression (A.P.), arithmetic mean (A.M.). Geometric progression (G.P.) general term of a G.P., sum of n terms if a G.P. and A.P. Geometric mean (G.M.), relation between A.M. and G.M. Sum to n terms of the special series: Σn , Σn^2 and Σn^3 .

Unit-XIV Three-dimensional Geometry

Coordinates axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points and section formula.

Unit-XV Mathematical Reasoning

Mathematically acceptable statements. Connecting words/phrases-consolidating the understanding of "if and only if (necessary and sufficient) condition", "implies", "and/or", "implied by", "and", "or", "there exists" and their use through variety of examples related to real life and Mathematics. Validating the statements involving the connecting words-difference between contradiction, converse and contrapositive.

APPLIED MATHEMATICS

Max Marks :- 100

Time: 3 hrs

Unit 1st. Sets, Relations and Functions

Sets and their representation . finite and infinite sets . empty sets. equality of sets. subset, powerset, universal set, venn diagram, compliment of a set. Algebra of sets (Union, intersection and difference of sets). Demorgan's laws, Cartesian product of sets.

Relations , types of relations (equivalence relation).

Definition of a function and its various types.

13 marks

Unit 2nd. Complex numbers and quadratic equations

Definition of a complex number, its representation. Conjugate of a complex number, modulus of a complex number, amplitude of a complex number. Square root of a complex number. Cube roots of unity and its properties. Quadratic Equations with complex coefficients and roots.

13 marks

Unit 3rd. Sequences and Series

Geometric progression, general term sum to n terms, and sum to infinity of a geometric series. Geometric and arithmetic means, Evaluation of $\sum n$, $\sum n^2$, $\sum n^3$

13 marks

Unit 4th. Trigonometry

Trigonometric ratios of allied angles (without proof). sum, difference formulae and their applications. Solution of trigonometric equations.

11 marks

Unit 5th. Permutations, Combinations & Binomial theorem

Factorial notation, fundamental principle of counting. Meaning of $P(n, r)$ & $C(n, r)$ and their relations with simple applications.

Binomial theorem for any index. General term, middle term/s of a Binomial Expansion. Applications of binomial expansion.

15 marks

Unit 6th. Co-ordinate Geometry

2-Dimensional Geometry: Applications of section formula (centroid, incentre and orthocenter of a triangle). Equation of straight line in various forms. condition of perpendicularity and parallelism.

Equation of a circle in general and standard form and in diametric form.

3-Dimensional Geometry: Distance formula, Section formula, direction cosines and direction ratios. Projection of a line with respect to another line. Angle between two lines. **13 marks**

Unit 7th. Probability

Random experiment and sample space. Event of a sample space and its various types. Axiomatic probability. **12 marks**

Unit 8th. Vectors

Definition of a vector & its representation, types of vectors, components of a vector, Addition of vectors, scalar (or dot) product of vectors, Vector (or cross) product of vectors, Scalar tripple product (Geometrical representation). **10 marks**

Suggested Textbook: A Textbook of Mathematics for class XI published by NCERT, New Delhi

Code : 224

ISLAMIC STUDIES

Islamic education is divided into what is called individual and social education. Individual education aims at familiarizing the individual with:

- a. his relation with the Creator of the universe;
- b. his individual responsibilities in life;
- c. his responsibility towards the human community;
- d. his social relations;
- e. his relation to other creatures;
- f. his relationship to the universe and universal phenomena and exploration of nature's laws in order to utilize and exploit them for the welfare of mankind;
- g. His Masters creative wisdom apparent in His creation.

Islamic Studies curricula also aims at:

1. Building a society of good, pious and God-fearing individuals where social justice prevails;
2. Building a society where tolerance, co-existence, brotherhood, love, mercy, goodness and righteousness are predominant;
3. Building a society based on mutual consultation and the maximum exploitation of the individual's intellectual capacities;
4. Building a society where individuals enjoy freedom of thought and are competent to take responsibility;
5. Building a society where individuals can live an ideal, pure and prosperous life.

ISLAMIC STUDIES

Maximum Marks: 100

Time: 3 hours

UNIT I: Islamic Studies: Definitions and Scope

10 Marks

- a. Islamic Studies: Definitions
- b. Nature of Islamic Studies
- c. Basic sources of Islamic Studies (The Qur'an and the Sunnah)
- d. Scope of Islamic Studies

UNIT II: Faith in Islam and its Articles

10 Marks

- a. Islam: the Divine Religion
- b. Faith (Iman): Definition
- c. Faith in Allah
- d. Faith in Divine Books

UNIT III: Prophethood (*Risalah*) in Islam

10 Marks

- a. Concept of prophethood (Necessity and divine sanction)
- b. Role of Prophets in human society:
 - i. Educational and ii. As Reformers
- c. Early Prophets and their universal message
- d. Introduction to some prominent prophets:
 - i. Adam (AS) ii. Ibrahim (AS) iii. Yusuf (AS)
 - iv. Musa (AS) v. 'Isa(AS),

UNIT IV: Man in the Universe

10 Marks

- a. Allah, the Creator and the Master of universe.
- b. Creation of universe: purposes
- c. Status of man (Vicegerency)

UNIT V: Faith in Practice

10 Marks

- a. Impact of Faith upon the behavior of an individual
- b. Sense of responsibility and accountability (consciousness, dutifulness and sincerity)
- c. The social behavior of God-conscious persons (Piety, honesty, modesty and kindness).

Unit VI: Life of Prophet Muhammad (SAW) at Makkah

10 Marks

- a. Prior to *Nabuwwah*: birth, childhood, marriage and the construction of Ka'bah
- b. *Nabuwwah* and its proclamation
- c. Post-*Nabuwwah*: major events
- d. *Hijrah* of the Prophet (SAW)

Unit-VII: Life of Prophet Muhammad (SAW) at Madinah

10 Marks

- a. Emergence of Muslim community
- b. Characteristics of Muslim community:
 - i. Brotherhood (*muakhat*)
 - ii. Generosity (*sakhawat*)
 - iii. Sincerity (*ikhlas*)

Unit-VIII: Treatment Towards Other Communities

10 Marks

- a. Jews
- b. Christians
- c. Mushrikin
- d. Importance of the treaties with other communities

Unit-IX: Da'wah and other Developments

10 Marks

- a. Preaching of Islam at Madinah
- b. Treaty of Hudaibiyah
- c. Conquest of Makkah
- d. The sermon of *Hajjat-ul-Wida* and its significance
- e. Muhammad (SAW) the seal of Prophethood

Unit-X: The Day to Day Life of the Prophet (a brief account)

10 Marks

- a. Worship (*Salah and Sawm*)
- b. Family life
- c. Treatment towards the neighbours
- d. Treatment towards orphans and the weaker sections of the society

Textbooks Suggested

1. *Introduction to Islam* by Dr. Hamidullah, Kitab Bhawan, Delhi.
2. *Islam at a Glance* by Sadruddin Islahi, Markazi Maktaba Islami, Delhi.
3. *The Noble Life of Muhammad (SAW)* by Muhammad Abdul Hai, Al-Hasanad Books, Delhi.
4. Muhammad Shaltut, "Islamic Beliefs and Code of Life", in *Islam: The Straight Path*, edited by Kenneth W. Morgan, Motilal Banarasidas, Delhi.

VEDIC STUDIES

Maximum Marks: 100

Time: 3 hours

Unit I : Vedic Studies : Definition and Scope **13 Marks**

- (i) Definition and Scope of Vedic Studies
- (ii) What is Veda?
- (iii) Importance of Vedas
- (iv) The Vedas - Rigveda, Yajurveda, Samveda and Atharva Veda

Unit II: Origin of Vedas **13 Marks**

- (i) Paurusheya or Apaurusheya
- (ii) Rishis and Rishikas.

Unit III: Vedic gods and goddesses **11 Marks**

- (i) The nature and classification of the Vedic gods
 - (a) Terrestrial
 - (b) Aerial or Intermediate
 - (c) Celestial
- (ii) Pantheism and Monotheism

Unit IV: The Later Vedic Literature **13 Marks**

- (i) The Brahmanas
- (ii) The Aranyakas
- (iii) The Upanishads

Book Prescribed :

Vedic Studies Part-I

Published by Jammu and Kashmir State Board of School Education

Unit V : Vedic Society 10 Marks

- (i) Family, Vish (Clan), Jana (Tribe) Varnas.
- (ii) Education, Dress, Food and Drinks.
- (iii) Habits and customs, Manners and the four Ashramas.

Unit VI: Role and Status of Women 10 Marks

- (i) Right to Education.
- (ii) Institution of Marriage & Women.
- (iii) Position of Widow.
- (iv) Proprietary Rights.

Unit VII: Polity and Administration 10 Marks

- (i) The Nature of the State-Monarchical and Republican.
- (ii) The Vedic Kings and Chief Officials.
- (iii) Popular Assemblies.

Unit VIII: Economic Life 10 Marks

- (i) Agriculture and Cattle rearing.
- (ii) Occupations and Industries
- (iii) Trade and Commerce

Unit IX: Vedic Values 10 Marks

- (i) Social Values (ii) Ethical Values

BUDDHIST STUDIES

Max Marks :- 100

Time: 3 hrs

Unit - I Life of Gautama Buddha

10 Marks

- i. Birth
- ii. Renunciation
- iii. Enlightenment
- iv. Dharmachakrapravartana
- v. Mahaparinirvana

Unit-II Buddhist Councils

10 Marks

- i. First Buddhist Council
- ii. Second Buddhist Council
- iii. Third Buddhist Council

Unit - III Royal Patronage to Buddhism

10 Marks

- i. Ashoka
- ii. Menander
- iii. Kanishka
- iv. Lalitaditya

Unit - IV Introduction of Buddhism to J&K State

10 Marks

- i. Introduction of Buddhism in Kashmir
- ii. Introduction of Buddhism in Jammu
- iii. Introduction of Buddhism in Ladakh

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Unit - V Buddhist Sites of J & K State 10 Marks

- i. Sites in Jammu Region: Ambaran (Akhnoor), Paddar (Kishtwar),
- ii. Sites in Kashmir Valley: Parihaspur, Harwan, Pandrethan, Ushkur
- iii. Sites in Ladakh: Alchi, Thiksay, Hemis, Matho, Dakthog.

Unit VI Four Noble Truths 10 Marks

- i. Suffering
- ii. Cause of Suffering
- iii. Cessation of Suffering
- iv. Path Leading to the Cessation of Suffering

Unit VII Eight Fold Path 10 Marks

- i. Right View
- ii. Right Determination
- iii. Right Speech
- iv. Right Action
- v. Right Livelihood
- vi. Right Effort
- vii. Right Awareness
- viii. Right Concentration

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Unit- VIII Law of Dependent Origination 10 Marks

- i. Nature of Twelve Link
- ii. Affliction
- iii. Action
- iv. Resultant of Karmic Forces

Unit - IX Four Phenomena 10 Marks

- i. Anitya (Impermanence)
- ii. Duhkha (Suffering)
- iii. Anatma (No Soul)
- iv. Nirvana (Emancipation)

Unit - x Four States of Sublime Living 10 Marks

- i. Maitri (Friendliness)
- ii. Karuna (Compassion)
- iii. Mudita (Happiness)
- iv. Upeksha (Equanimity)

COMPUTER SCIENCE

Maximum Marks: 100
Theory: 70 Marks
Practical: 30 Marks

Time: 3 hours

UNIT 1: COMPUTER FUNDAMENTALS

Evolution of computers; Basics of computer and its operation: Functional Components and their interconnections, concept of Booting.

Software Concepts:

Types of Software - System Software, Utility Software and Application Software;

System Software: Operating System, Compilers, Interpreters and Assembler;

Utility Software : Anti-Virus, File Management tools, Compression tools and Disk Management tools (Disk Cleanup, Disk Defragmenter, Backup);

Application Software as a tool: Word Processor, Presentation tools, Spreadsheet Package, Database Management System; Business software (for example: School Management System, Inventory Management System, Payroll System, Financial Accounting, Hotel Management, and Reservation System);

6 Marks

UNIT 2: Operating System

Need for operating system, Functions of Operating System (Processor Management, Memory Management, File Management and Device Management), Types of operating system - Interactive (GUI based), Time Sharing, Real Time and Distributed; Commonly used operating systems:

LINUX, Windows, Bharti OO, Solaris, UNIX;

Illustration and practice of the following tasks using any one of the above Operating Systems:

- ♦ Opening / Closing Windows

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- ♦ Creating / Moving / Deleting Files / Folders
- ♦ Renaming Files / Folders
- ♦ Switching between Tasks

Number System : Binary, Octal, Decimal, Hexadecimal and conversion between two different number systems;

Internal Storage encoding of Characters: ASCII, ISCII (Indian scripts Standard Code for Information Interchange), and UNICODE;

Microprocessor : Basic concepts, Clock speed (MHz, GHz), 16 bit, 32 bit, 64 bit processors; Types

- CISC, RISC;

Memory Concepts :

Units : Byte, Kilo Byte, Mega Byte, Giga Byte, Tera Byte, Peta Byte

Primary Memory : Cache, RAM, ROM,

Secondary Memory : Hard Disk Drive, CD / DVD Drive, Pen Drive, Blue Ray Disk;

Input Output Ports / Connections: Serial, Parallel and Universal Serial Bus, PS-2 Port, Infrared port, Bluetooth.

6 Marks

PROGRAMMING METHODOLOGY

General Concepts; Modular approach; Clarity and Simplicity of Expressions, Use of proper names for identifiers, Comments, Indentation; Documentation and Program Maintenance; Running and Debugging programs, Syntax Errors, Run-Time Errors, Logical Errors; Problem Solving Methodology and Techniques: Understanding of the problem, Identifying minimum number of inputs required for output, Step by step solution for the problem, breaking down solution into simple steps, Identification of arithmetic and logical operations required for solution, Using Control Structure: Conditional control and looping (finite and infinite)

23 Marks

UNIT 3: INTRODUCTION TO C++

Getting Started:

C++ character set, C++ Tokens (Identifiers, Keywords, Constants, Operators), Structure of a C++ Program (include files, main function); Header files - iostream.h, iomanip.h; **cout**, **cin**; Use of I/O operators (<< and >>), Use of **endl** and **setw()**, Cascading of I/O operators, Error Messages; Use of editor, basic commands of editor, compilation, linking and execution; standard input/ output operations from C language: **gets()**, **puts()** of **stdio.h** header file;

Data Types, Variables and Constants:

Concept of Data types; Built-in Data types: **char**, **int**, **float** and **double**; Constants: Integer Constants, Character Constants (Backslash character constants - **\n**, **\t**), Floating Point Constants, String Constants; Access modifier: **const**; Variables of built-in data types, Declaration/ Initialisation of variables, Assignment statement; Type modifier: **signed**, **unsigned**, **long**;

Operators and Expressions:

Operators: Arithmetic operators (**-**, **+**, *****, **/**, **%**), Unary operator (**-**), Increment and Decrement Operators (**-++**, **++-**), Relational operators (**>**, **>=**, **<**, **<=**, **==**, **!=**), Logical operators (**!**, **&**, **||**), Conditional operator: **<condition>?<if true>:<else>**; Precedence of Operators; Expressions; Automatic type conversion in expressions, Type casting; C++ shorthand's (**+=**, **-=**, ***=**, **/=**, **%=**);

6 Marks

UNIT 4: PROGRAMMING IN C++

Flow of control:

Conditional statements: **if-else**, **Nested if**, **switch..case..default**, **Nested switch..case**, **break statement** (to be used in **switch..case** only); Loops: **while**, **do-while**, **for** and **Nested loops**;

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String Functions:

Header File: string.h

Function: **isalnum()**, **isalpha()**, **isdigit()**, **islower()**, **isupper()**, **tolower()**, **toupper()**;

Character Functions:

Header File: ctype.h

Functions: **isalnum()**, **isalpha()**, **isdigit()**, **islower()**, **isupper()**, **tolower()**, **toupper()**, **strcpy()**, **strcat()**, **strlen()**, **strcmp()**, **strcmpi()**;

Mathematical Functions:

Header File-math.h, stdlib.h;

Functions: **fabs()**, **log()**, **log10()**, **pow()**, **sqrt()**, **sin()**, **cos()**, **abs()**.

Other Functions:

Header File- stdlib.h;

Functions: **randomize()**, **random()**;

6 Marks

UNIT 5 : USER DEFINED FUNCTIONS:

Defining a function; function prototype, Invoking/calling a function, passing arguments to function, specifying argument data types, default argument, constant argument, call by value, call by reference, returning values from a function, calling functions with arrays, scope rules of functions and variables; local and global variables;

Structured Data Type: Array

Declaration/initialization of One-dimensional array, Inputting array elements, Accessing array elements, Manipulation of Array elements (sum of elements, product of elements, average of elements, linear search, finding

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maximum/minimum value); Declaration/Initialization of a String, string manipulations (counting vowels/consonants/digits/ special characters, case conversion, reversing a string, reversing each word of a string);

Two-dimensional Array :

Declaration/initialization of a two-dimensional array, inputting array elements
Accessing array elements, Manipulation of Array elements (sum of row element, column elements, diagonal elements, finding maximum/minimum values);

User-defined Data Types

Need for User defined data type:

Defining a symbol name using type def keyword and defining a macro using #define directive.

Structures:

Defining a Structure, Declaring structure variables, Accessing structure elements, passing structure of Functions as value and reference argument/parameter, Function returning structure, Array of structures, passing an array of structure as an argument/ a parameter to a function.

23 Marks

(Practical)

Total Marks: 30

Time: 3 hours

1. Programming in C++

One programming problem in C++ to be developed and tested in Computer during the examination. Marks are allotted on the basis of following:

Logic

Documentation/Indentation

Output presentation

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2. Project Work

Problems related to String, Number and Array manipulation;

General Guidelines: Initial Requirement, developing an interface for user (it is advised to use text based interface screen), developing logic for playing the game and developing logic for scoring points

1. Memory Game : A number guessing game with application of 2 dimensional arrays containing randomly generated numbers in pairs hidden inside boxes.
2. Cross 'N Knots Game : A regular tic-tac-toe game
3. Hollywood/Hangman: A word guessing game
4. Cows 'N Bulls : A word/number guessing game

Similar projects may be undertaken in other domains

3. Practical File

- ♦ **Must have minimum 15 programs from the topics covered in class XI course.**

- ♦ 5 Programs on Control structures
- ♦ 4 Programs on Array Manipulations
- ♦ 4 Programs on String Manipulations
- ♦ 2 Programs on structure manipulations

4. Viva-voce

Viva will be asked from syllabus covered in class XI and the project developed by student.

INFORMATICS PRACTICES

Maximum Marks= 100

Theory: Marks 70

Practicals: Marks 30.

External: 20 marks, Internal: 10 marks

Unit – I: Digital Design:

Number Systems: Binary, Octal, Decimal, Hexadecimal and conversions, Coding Schemes ASCII, EBCDIC, Basic Logical Gates (AND, OR, NOT, XOR, XNOR) with Truth Tables.

Unit – II: Computer Fundamentals:

Basics of a Computer and its operation; Functional Components and their interconnection (Block Diagram; illustrating main parts of computer (CPU, ALU, CU, Memory); Generations of Computers, Classification of Computers.

Input / Output Devices: Keyboard, Mouse, Light Pen, Touch Screen, Joy Stick, Mic, Scanner (MICR, OCR, BCR, VDU (CRT, LCD), Printers (Dot Matrix, Inkjet, LaserJet), Speaker.

Memory: Primary Memory (ROM and its Types); Secondary Storage Devices (Floppy Disks, Hard Disk, Compact Disk, Magnetic Tape, Flash Devices).

Units of Memory: Bit, Nibble, Byte, Kilo Byte, Mega Byte, Giga Byte, Tera Byte, Zeta Byte.

Unit –III: Software Concepts:

Concept of Software, Types of Software, System Software, Operating System, Functions of OS [Processor Management, Memory Management,

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File Management, Device Management], Application Software, Utility Programs; Computer Languages: Compilers, Interpreters, Assembler. Commonly used OS, Boot and its types; Computer Languages: Low Level Language, High Level Languages, Assembly Language; Concept of GUI and CUI.

Unit-IV: Graphical User Interface:

GUI based OS: Introduction to Windows, Features of Windows, File structure of Windows, Concept of Folder, Directories, Path, Path Name, Elements of Desktop, Taskbar, Icon, Start Buttons, Shortcuts, Recycle Bin, My Computer, Start Menu; Control Panel: Adding New Hardware and Programs.

Unit-V: Office Automation:

Word Processing: Introduction, Open a Document, Saving a Document, Printing a Document, Page Setup, Cut, Copy, Paste, Format Painter, Bold, Italics, Underline, Superscript, Subscript, Alignment of a Text, Formatting a Text, Indentation, Line Spacing, Find, Replace of a text, Insertion of a Table with other options, Picture, Clip Art, Shapes, Chart, Hyperlink, Header, Footer, Page Number.

Spreadsheets: Basic Options, wrap text, merge and center, Number format, Conditional Formatting, Format as Table, Format as cell; Insert, Delete and

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format cells, Auto Sum, Sort, Find and select; Header & Footer, Symbols; Page Layout, Margins, Size, Paper, themes; Insert Functions.

Presentations: Creating Presentation, Opening and Saving Presentation, Adding and Formatting Text, Formatting Paragraphs, Making Notes Page and Handout, Adding Clip Art and Other Pictures; Animations – Custom Animations, Transition Speed, Transition Speed; Slide Show –Custom Slide Show, Setup Slide Show.

Unit VI: Programming Fundamentals:

Introduction to VB, Concept of Event driven programming, VB user Interface, Toolbox, Project Explorer, Properties Window, Form Layout; Variables – Declaring variables, scope and life time of variables (Local & Global), Data Types: Integer, Long, Single, Double, String, Date and Variant; Operators (Arithmetic, Relational, Logical); Control Structures: Decision Structures – IF, IF – Then, IF – Then – Else, Select Case : Looping Structure – For – Next, Do – While, While – Wend.

Practicals

Time = 3 Hours

Marks = 30 Marks

1. Computer Assembly (Motherboard, Processor, RAM, Hard Disk, USB, etc)
2. Peripheral Connections and Identification of Parts (Serial, Parallel, USB, PS-2, Bluetooth).
3. Installation of Operating System and Application Software's.
4. Creation of Files and Folders using windows (Rename, Create, Delete, Move).
5. Creation of Word Document –
 - a. Open a document.
 - b. Insert a text.
 - c. Save a Document.
 - d. Format & Edit a Document.
6. Creation of Work Sheet –
 - a. Payroll System.
 - b. Marks Sheet, etc.
7. Creation of a Presentation – (Relevant to the Subject).

8. Create an application using Visual Basic programming to print a message like "Hello World" using Command Button and Text Button.
9. Create an application to calculate the grade of your class mates output of five different subjects like English, History, Chemistry, Math and IP. Calculate Grades as follows –

%age	Grade
≥ 90	A++
≥ 80 and < 90	A+
≥ 70 and < 80	A
≥ 60 and < 70	B
≥ 50 and < 60	C
Less than 50	F

10. Create an application to generate Sum of First 10 Natural Numbers using Command Button Only.

Code : 202

ENGLISH LITERATURE Syllabus & Scheme of Assessment

Total Marks :- 100

Time: 3 hrs

- 1) Reference to context type questions based on Poetry, Short Stories and Essays (one from each) with internal choice.
3x8=24
- 2) Three long answer type questions (100-150 words) from short stories, essays and poetry based on character sketch/ description of scene/title, theme etc to be attempted with internal choices.
3x10=30
- 3) Five short answer type questions (80-100 words) from short stories (two questions) and essays (three questions) to be attempted with internal choices.
5x5=25
- 4) Five very short answer type questions from poetry based on poetic devices (metaphor, simile, hyperbole, personification, imagery, irony, paradox, etc,) to be attempted out of given eight questions.
5x3=15
- 5) Six MCQ's to be asked from short stories, poetry and essays. (Two each)
1x6=6

Book Prescribed:

Glory : Textbook of English Literature Published by J&K BOSE

Code : 203

FUNCTIONAL ENGLISH

Aims and Objectives of the Functional English Courses

- (i) To enable the learner to acquire competence with special emphasis on different linguistic functions.
- (ii) To reinforce the various sub skills acquired in classes IX and X with reference to reading, writing, listening and speaking.
- (iii) To equip the learner with language skills that will enable him/ her to achieve his/her Academic and career goals.
- (iv) To broaden the language base that will empower the learner to use language for creative purposes.
- (v) To promote personal growth and development..

The Approach to Functional English Curriculum

- (i) A skill based communicative approach recommended in Functional English, with graded texts followed by learner centered and teacher- friendly activities.
- (ii) It is recommended that teachers consciously take a back seat, playing the role of a manager, co-ordinator and facilitator.
- (iii) Texts used are varied, authentic and represent various authors to help the learner discover the various aspects of language in use.

The following skills and their objectives are spelt out in detail: -

1. Reading

- (i) Variety in text type rather than having only short stories and prose pieces.
- (ii) Activities in built with enough guidance to the teacher and learners towards acquisition of reading skills.

- (iii) Vocabulary developed through word building skills.
- (iv) Reading inputs cater to the needs of the students and help to prepare them for professional courses as well as vocational courses.
- (v) Ten core objectives of the National Policy kept in mind while looking for reading inputs and working on the materials.

2. Specific objectives of Reading

(a) To develop specific study skills such as follows:

- (i) To refer to dictionaries, encyclopedia, thesaurus and academic reference material.
- (ii) To select and extract relevant information, using reading skills of skimming and scanning.
- (iii) To transcode information from one form to another.
- (iv) To be able to read and comprehend a given text (for example advertisements, posters, newspaper articles, reports, write-ups, extracts etc. specifically.
- (v) To understand the writer's attitude and bias.
- (vi) To comprehend the difference between what is said and what is implied.
- (vii) To understand the language of propaganda and persuasion.
- (viii) To develop the ability to differentiate between claims and realities, facts and opinion.
- (ix) To develop the ability to form business opinion on the basis of latest trends available.
- (x) To develop the ability to comprehend technical language as required in computer related fields.
- (xi) To arrive at personal conclusion and comment on a given text specifically.

- (iii) To appear for interviews and participate in formal group discussions.
- (iv) To make enquiries meaningfully and adequately respond to enquiries for the purpose of travelling within the country and even abroad.
- (v) To listen to business news and be able to extract relevant/important information.
- (vi) To develop the art of formal public speaking.

(e) Writing Skills

- (i) Teaching skills and sub skills of writing focused on the process of writing.
- (ii) Writing skills integrated with the other skills and not compartmentalized.
- (iii) Sub skills of writing are taught in a context.
- (iv) Courses for two years graded in such a way that it leads the students towards acquire advanced writing skills.
- (v) Writing tasks move from less linguistically challenging to more linguistically challenging ones.

Specific objectives of Writing

To develop the ability:

- (i) To write letters to friends, pen friends, relatives etc.
- (ii) To write business letters and official ones.
- (iii) To send telegrams, faxes, e-mails.
- (iv) To open accounts in post offices and banks.
- (v) To fill in railway reservation slips.
- (vi) To write to various issues or institutions seeking relevant information, lodge complaints, express thanks or tender apology.

- (xii) To develop the ability to be original and creative in interpreting opinion.
- (xiii) To develop the ability to be logically persuasive in defending one's opinion.
- (b) To develop literary skills as enumerated below
 - (i) To personally respond to literary text.
 - (ii) To appreciate and analyze special features of language that differentiates literary texts from non-literary ones.
 - (iii) To explore and evaluate features of character, plot, setting etc.
 - (iv) To understand and appreciate the oral, mobile and visual elements of drama.
 - (v) To identify the elements of style such as humour, pathos, satire and irony etc.

(c) Speaking and Listening

- (i) Skills overtly built into the materials. (Language skills book)
- (ii) Teachers need special guidance in the actualization of the skills.
- (iii) Speaking needs a very strong emphasis and is an important objective leading to professional competence.
- (iv) Testing of oral skills to be made an important component of the overall testing pattern.

(d) Specific objectives of Listening and Speaking Conversation Skills (Aural/ Oral)

To develop the ability

- (i) To listen to lectures and talks and to be able to extract relevant and useful information for a specific purpose.
- (ii) To listen to news bulletins and develop the ability to discuss informally on wide ranging issues like current national and international affairs, sports, business etc.

- (vii) To write applications, fill in application forms, prepare personal bio-data for admission in college, universities, entrance tests and jobs.
- (viii) To write informal reports as part of personal letters on functions , programmes and activities held in school (morning assembly, annual day, sports day etc.)
- (ix) To write formal reports for school magazines or in local newspapers on the above events or occasions.
- (x) To write presentation of opinions, facts arguments in the form of set speeches for debates.
- (xi) To present papers for taking part in symposia.
- (xii) To take down notes from talks, lectures, and make notes from various resources for the purpose of developing ideas into sustained pieces of writing.
- (xiii) To write examination answers according to the requirement of the various subjects.

Code : 203

FUNCTIONAL ENGLISH

Syllabus & Scheme of Assessment

Total Marks :- 100**Time: 3 hrs**

The Paper shall be divided into Two (02) Sections covering prose, poetry and play from *Literature Reader-I* and writing skills from *Language Skills-I*.

(Section A) Literature**50 Marks**

- 1) One/Two prose passage/s from prose chapters of *Literature Reader-I* followed by comprehension questions on:
 - A. True/False, Yes/No, MCQ and Fill ups 1x5=5
 - B. Vocabulary, word meaning, collocation, spelling, etc. 1x5=5
- 2) Five short answer type questions (50-80 words) from prose chapters to be attempted out of given eight questions. 4x5=20
- 3) One long answer question (100-150 words) from prose chapters of *Literature Reader-I* based on character sketch/ description of scene/event/title/theme, etc to be attempted out of two. 1x10=10
- 4) One long answer question (100-150 words) from play based on character sketch/description of scene/event/title/theme, etc to be attempted one out of two. 1x10=10

(Section B) Writing Skills**50 Marks**

To test the writing skills, following tasks are to be attempted:

1. One question based on writing a message to a friend or relative.

Or

One question based on E-mail writing. 1x5=5

2. One question based on Notice writing.

Or

One question based on Poster writing. 1x7=7

3. One question based on writing a Conversation on the given topic.

Or

One question based on writing a Telephonic Conversation on the given topic. 1x6=6

4. One question based on article writing on the given topic.

Or

One question based on report writing on the given topic/situation. $1 \times 10 = 10$

5. One question based on speech writing with internal choice. $1 \times 10 = 10$

6. One question based on writing on recent actions and activities with internal choice.

$1 \times 5 = 5$

7. One question based on Note-making.

$1 \times 7 = 7$ Marks

Books Prescribed:

1. Functional English language Skills Book-Class XI.
2. Functional English Literature Reader-Class XI Published by Goyal Brother Prakashan in cooperation with J&K State Board of School Education.

BIOTECHNOLOGY

OBJECTIVES

The broad objectives of teaching Biotechnology at higher secondary level are:

- (i) To help the learners know and understand basic facts and concepts of the subject at elementary stage.
- (ii) To expose the students to different basic processes and basic techniques used in Biotechnology.
- (iii) To familiarize the learners to understand the relationship of the subject to health, nutrition, environment, agriculture and industry etc.
- (iv) To develop conceptual competence in the learners so as to cope up with professional courses in future career.
- (v) To acquaint students with different applications of Biotechnology in everyday life.
- (vi) To develop an interest in students to study Biotechnology as a discipline.

COURSE STRUCTURE

Maximum Marks: 100
Theory: 70 Marks
Practical: 30 Marks

Time: 3 hours

Unit I: Introduction to Biotechnology

Chapter 1 : Introduction

Chapter 11 : Biochemical Engineering and Fundamentals

Chapter III : Biotechnology and Society

50 marks

17 marks

04 marks

10 marks

03 marks

SYLLABUS CLASS XI

Unit II : Biomolecules

18 marks

Chapter IV : Biomolecules: Structure and design	7 marks
Chapter V : Metabolism of Biomolecules	7 marks
Chapter VI : Biochemical Techniques	4 marks

Unit III : Cell and Development

17 Marks

Chapter VII : Introduction to cell as a basic unit of life.	7 marks
Chapter VII : Cell growth and development	7 mark
Chapter IX : Cellular Techniques	3 marks

Unit IV : Genetics and Molecular Biology

18 Marks

Chapter X : Principles of Genetics	10 marks
Chapter XI : Genome Function	5 marks
Chapter XII : Genetical Techniques	3 marks

PRACTICALS = 30 MARKS

Note: Every student is required to do the following experiments during the academic session.

LIST OF EXPERIMENTS

1. Personal safety and precautions.
2. Emergency treatment for Laboratory accidents.
3. Care and cleaning of glassware's, apparatus.
4. Operation of Autoclave, Incubator, Water Bath, pH meter, Vacuum pump, Centrifuge etc.

SYLLABUS CLASS XI

5. Sterilization principle and methods - moist heat - dry heat and filtration methods.
6. Media preparation: Liquid media, solid media, Agar slants and plates.

1. Preparation of buffers
2. pH determination
3. slide preparation of bacterial strains
4. Protein estimation methods
 - a. Lowrey's
 - b. Biurette
5. Molish test for estimation of carbohydrates.

NOTE: - Besides the above experiments the students are required to have field work and visit Indian Institute of Integrative Medicine (Formerly RRL) of Jammu / Sanatnagar, Srinagar, Biotechnology Laboratories J&K Universities.

Book Prescribed: A Textbook of Biotechnology for class XI by K. Kanan, published by J&K State BOSE in Collaboration with Foundation Books Pvt Ltd., New Delhi.

Code : 228

ENVIRONMENTAL SCIENCE

Class 11th

Maximum Marks: 100

Theory: 70

Practical: 30

Unit 1:- Understanding Environment

(7 marks)

- Concept of Environment and its types: physical, biological and social environment.
- Scope and importance of Environmental Sciences
- Components of environment:
 - a. Lithosphere
 - b. Hydrosphere
 - c. Atmosphere
 - d. Biosphere
- Origin of Earth
- Human and environment relationship

Unit 2:- Ecology

(7 marks)

- Ecology (definition and types)
- Concept and structure of ecosystem
- Trophic relationships (food chain, food web, ecological pyramids)
- Functions of ecosystem (energy flow in an ecosystem)
- Ecological Succession (types and stages)

Unit 3:- Ecological Interactions and Adaptations

(7 marks)

- Ecological interaction and its types
- Inter-specific interaction: positive interaction (mutualism, proto-cooperation, commensalism, symbiosis and scavenging), negative interaction (parasitism, competition and ammensalism)
- Intra-specific interaction: cooperative and competitive
- Adaptations: concept and need
- Types of adaptations (with special reference to wind, light and temperature)

Unit 4:- Population Ecology

(7 marks)

- Concept of species, population and communities
- Population Dynamics (population size and density, dispersion, natality, mortality, age structure)
- Population growth (exponential and logistic growth)
- Factors regulating population growth (competition, weather and climate, territory, predation, natural disasters and diseases)
- Human population growth (Malthusian theory and neo-Malthusian theory, Demographic Transition)

Unit 5 :- Energy Resources

(7 marks)

- Concept of energy resources
- Non-renewable energy resources: coal, petroleum, natural gas
- Renewable energy resources (solar, wind and hydropower)
- Nuclear energy (uses and limitations)
- Biofuels

Unit 6:- Earth's Environment and Natural Disasters

(7 marks)

- Atmosphere: structure and composition
- Hydrosphere: distribution, hydrological cycle
- Lithosphere: structure
- Biogeochemical cycles (Carbon, Nitrogen and Phosphorus)
- Natural disasters (earthquakes, floods and volcanoes)

Unit 7:- Environmental education and Awareness

(7 marks)

- Concept and need of environmental education
- Formal and informal means of environmental education
- Modes of environmental awareness
- Role of NGOs
- Environmental movements (Chipko movement, Narmada Bachao Andolan)

Unit 8:- Environmental Health

(7 marks)

- Concept of health and disease
- Water borne diseases (Cholera, Hepatitis, Typhoid)
- Air borne diseases (Influenza, Tuberculosis)
- Soil borne diseases (Tetanus, Botulism)
- Occupational diseases (Silicosis, Asbestosis)

Unit 9:- Natural Resources

(7 marks)

- Forest resources (types and uses)
- Animal resources (fish and livestock)
- Water resources (fresh and marine)
- Mineral resources (types and uses)
- Medicinal plants (with special reference to J&K)

Unit 10:- Managing Agriculture

(7 marks)

- Concept of traditional and modern agriculture
- Green revolution and white revolution
- Pesticides and fertilizers (types, advantages and disadvantages)
- Integrated pest control
- Food security

PRACTICALS:

1. Study of density and abundance of different plant species in a particular area using quadrat method.
2. Determination of water, air and soil temperature.
3. Collection of locally available herbal plants and preparation of herbarium.
4. Field work and visit to National Park / wild life sanctuary / STP / water body and preparation of a field report.
5. Visit to a nearby primary or middle school to impart environmental awareness.
6. Documentation of agricultural crops, fertilizers and pesticides used in your locality.

Code : 251

MICROBIOLOGY

OBJECTIVES

The broad objectives of teaching Microbiology at higher secondary level are:

- (i) To help the learners know and understand basic facts and concepts of the subject at elementary stage.
- (ii) To expose the students to different basic processes and basic techniques used in Microbiology.
- (iii) To familiarize the learners to understand the relationship of the subject to health, nutrition, environment, agriculture and industry etc.
- (iv) To develop conceptual competence in the learners so as to cope up with professional courses in future career.
- (v) Studying, preventing and controlling infectious disease.
- (vi) To develop an interest in students to study Microbiology as a discipline.

COURSE STRUCTURE

Maximum Marks: 100
Theory: 70 Marks

Time: 3 hours
Practical: 30 Marks

UNIT 1 : General Microbiology

12 marks

Chapter I : History and importance of microbiology. Koch's postulates, Difference between prokaryotes and eukaryotes. Introduction to microbial world: bacteria, virus, fungi and protozoa. Scope of microbiology (medical, agricultural veterinary, sanitary, environmental, industrial and food microbiology).

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Chapter II : Introduction to microscopy: Simple, Compound, Fluorescent, Phase Contrast, Dark Field, Electron Microscope.

Chapter III: Five kingdom and three domain classification of organisms: Bacteria, Eucarya and Archaea.

Unit II : Bacterial structure

12 marks

Chapter IV: Morphology of bacteria: Shape, size and arrangement. Motility. Fine structure of bacteria: cell wall, cell membrane, outer membrane, flagella, pilli, capsule, cytoplasmic inclusions, ribosomes and nuclear material. Structure of bacterial spore. Bacterial stains: simple, Grams (gram positive Gram negative), Ziehl-Neelson (Acidfast and non acidfast), capsule and spore stain.

Unit III : Bacterial Physiology

11 Marks

Chapter V : Bacterial nutrition, Physical growth parameters (Temperature, pH, oxygen tension). Bacterial growth curve, Bacterial reproduction, Bacterial count: total and viable. Autotrophic, heterotrophic, thermophilic, mesophilic, psychrophilic organisms.

Chapter VI: Cultivation of bacteria. Colony characteristics, growth media liquid, solid, general, differential, selective, enrichment, transport) and their preparation. Cultivation methods: aerobic and anaerobic. Isolation, identification and preservation of pure culture. Lyophilization.

Chapter VII: Definition: virus, virion, virioids, prions and bacteriophage Historical background of virus. General characteristics of viruses. Structure of virus: capsid, nucleocapsid, envelope. Viral symmetry: icosahedral (polio virus), helical (Tobacco Mosaic Virus) and complex (pox virus). Replication of viruses.

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Unit V : Protozoa, Algae and Fungi

12 Marks

Chapter VIII: Protozoa, Definition, general characters classification structure and reproduction: asexual and sexual

Chapter IX: Fungus: Definition, general characters classification structure and reproduction.

Chapter X: Algae: Definition, general characters, classification and reproduction.

Unit VI : Sterilization and Disinfection

14 Marks

Chapter XI: Definition: sterilization, disinfection, antisepsis, pasteurization and tyndalization. Physical agents: heat (moist/dry), desiccation, radiation, filtration and centrifugation. Chemical agents: phenol and phenolic compounds, alcohol, halogens, detergents, aldehydes. Radial walker coefficient (phenol coefficient). Segregation and disposal of contaminated waste.

Chapter XII: Antimicrobial and chemotherapeutic agents: general properties and drug resistance. Antimicrobial agents: antibacterial, antiviral, antifungal, antiprotozoal. Bactericidal and bacteriostatic agents.

PRACTICALS & PROJECT = 30 MARKS

Note: Every student is required to do the following experiments during the Academic Session.

LIST OF EXPERIMENTS

Marks: 10

1. Standard laboratory safety practices.
2. Washing of glassware.
3. Microscope: Parts, description, care, handling and procedures.
4. Gram staining.

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Marks 10

5. Demonstration of Gram positive, Gram negative bacteria in prepared slides.
6. Visit to govt. institutions (microbiology laboratories) for demonstration and working of autoclave, hot air oven, laminar flow, centrifuge, glassware used in microbiology laboratory etc.

Project work with ten page write up on any one like: Gram staining, preparation of any bacteriological growth medium, streaking of plates, isolation of any microorganism.

Marks : 10

Code : 229

PHYSICS

25% of the maximum marks is allotted to numerical problems.

Maximum Marks: 100

Maximum Marks: 100
Theory: 70 Marks

Time: 3 hours
Practical: 30 Marks

Unit - I : Mathematical Tools

Marks 04

Functions, limits of function, simple ideas of differentiation integration, differentiation of x^n , e^{ax} , $\sin x$ by ab-initio method, integration of x^n , $1/x$, e^{ax} , $\sin x$ and $\cos x$. Simple Idea of definite integral.

Unit - II : Physical world and measurement

Marks 5

Physics - Scope and excitement, physics in relation to science, society and technology. Need for measurement, units of measurement, system of units, SI Units, fundamental and derived units, length, mass and time measurement. Accuracy and precision of measuring instruments; errors in measurement, significant figures.

Dimensions of physical quantities, dimensional analysis, its applications.

Unit III : Kinematics

Marks 7

Motion in a straight line, position time graph, speed and velocity.

Uniform and non uniform motion, average speed and instantaneous velocity. Uniformly accelerated motion, velocity time graph, position time graphs, relations for uniformly accelerated motion. (graphical treatment and calculus approach).

Scalar and vector quantities, position and displacement vectors, general vector and notation, equality of vectors, multiplication of vectors by a real number, addition and subtraction of vectors, Relative velocity.

Unit vector, Resolution of a vector in a plane rectangular components, Scalar and vector product of two vectors with properties, Motion in a plane, cases of uniform velocity and uniform acceleration. Projectile motion.

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Unit-IV : Laws of Motion

Marks 7

Concept of force and inertia, Newton's first law of motion, Momentum and Newton's second law of motion, impulse, Newton's Third Law of Motion. Law of conservation of linear momentum and its applications, Equilibrium of concurrent forces.

Friction, static and kinetic friction, laws of friction, rolling friction. Dynamics of uniform circular motion, centripetal force, examples of circular motion (vehicle on level circular road, vehicle on banked road).

Unit-V : Work, Energy and Power

Marks 6

Concept of scalar product of vectors, Work done by a constant force and a variable force, Kinetic Energy, Work energy theorem, Power.

Motion of potential energy, potential energy of spring, conservative forces, conservation of mechanical energy (K. E. and P. E's), non conservative forces, elastic and inelastic collision in one and two dimensions.

Unit-VI : Motion of system of particles and Rigid body.

Marks 6

Centre of mass of a two particle system, momentum, conservation and centre of mass motion, centre of mass of a rigid body, centre of mass of circular ring, disc, rod and sphere.

Concept of vector product of vectors: Moment of a force, torque, angular momentum, conservation of angular momentum with some examples.

Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, Comparison of linear and rotational motions, moment of inertia, radius of gyration.

Values of moment of inertia for simple geometrical objects (no derivation), statement of parallel and perpendicular axes theorem and their applications.

Unit VII: Gravitation

Marks 6

Kepler's laws of planetary motion, The universal law of gravitation. Acceleration due to gravity and its variation with altitude, depth and shape, Gravitational potential, gravitational

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potential energy, escape velocity, orbital velocity of a satellite, geo-stationary satellite.
Inertial and gravitational mass.

Unit VIII: Properties of Bulk matter

7 Marks

Elastic behaviour, stress-strain relationship, Hooke's law, young's modulus, bulk modulus, shear modulus of rigidity.

Pressure due to fluid column, Pascal's law and its applications (hydraulic lift and hydraulic brakes). Effect of gravity on fluid pressure.

Viscosity, stoke's law, terminal velocity, streamline and turbulent flow, Critical velocity, Reynold number, Bernoulli's theorem and its applications.

Surface energy and surface tension, angle of contact, applications of surface tension, ideas to drops, bubbles and capillary rise, action of detergents.

Heat, temperature, thermal expansion, specific heat, calorimetry, change of state-latent heat. Heat transfer-conduction, convection and radiation, thermal conductivity, Newton's law of cooling.

Unit IX : Thermodynamics

6 Marks

Thermal equilibrium and definition of temperature (Zeroth law of thermodynamics). Heat, work and internal energy, First law of thermodynamics. Second law of thermodynamics, reversible and irreversible processes. Heat engines and refrigerators (concept only).

Unit X : Behavior of perfect gas and Kinetic theory

6 Marks

Equation of state of perfect gas, work done on compressing a gas.

Kinetic theory of gases-assumptions, concept of pressure, expression for pressure exerted by a gas, Kinetic energy and temperature, rms speed of gas molecules, degrees of freedom, law of equipartition of energy (statement only) and application to specific heat capacities of gases, concept of mean free path, Avogadro's number.

Unit XI : Oscillation and waves

10 Marks

Periodic motion-- period, frequency, displacement as a function of time. Periodic functions, simple harmonic motion (S.H.M) and its equation, phase, oscillation of a spring-restoring

SYLLABUS CLASS XI

force and force constant, energy in S.H.M-Kinetic and potential energies, simple pendulum- derivation of expression for its time period, free forced and damped oscillations (qualitative ideas only), resonance.

Wave motion - Longitudinal and transverse waves, speed of wave motion, Displacement relation for a progressive wave, Principle of super position of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics. Beats, Doppler effect.

PRACTICALS

NOTE :- Every student is required to perform minimum of 10 experiments and 8 activities.

EXPERIMENTS :

1. Use of vernier calipers
 - i) To measure diameter of a small spherical/ cylindrical body.
 - ii) To measure internal diameter and depth of a given beaker/ calorimeter and hence find its volume.
2. Use of screw gauge.
 - i. To measure diameter of given wire.
 - ii. to measure thickness of a given sheet.
 - iii. to measure volume of an irregular lamina.
3. To determine radius of curvature of a given spherical surface by a spherometer.
4. To find the weight of a given body using parallelogram law of vectors.
5. Using a simple pendulum plot L-T graph hence find acceleration due to gravity (g).
6. To study the relation between force of limiting friction and normal relation force find coefficient of friction between a block and a horizontal pull of the earth and study in relationship with the angle of inclination by plotting a graph between force and $\sin \theta$.

ACTIVITIES/Project work

1. To make a paper scale of a given least count e.g. 0.2 cm, 0.5 cm.
2. To determine mass of given body using a meter scale by principle of moments.
3. To plot a graph for a given set of data, with proper choice of scales and error bars.
4. To measure the force of limiting friction for rolling of a roller on a horizontal plane.
5. To study the variation in range of jet of water with angle of projection.
6. To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.
7. To study collision of two balls in two dimensions.

EXPERIMENTS

1. To determine young modulus of elasticity of the material of a given wire.
2. To find the force constant of a helical spring by plotting a graph between load and extension.
3. To determine the surface tension of water by capillary rise method.
4. To determine the coefficient of velocity of a given viscous fluid by measuring the terminal velocity of a given spherical body.
5. To find the speed of sound in air at room temperature using a resonance tube by two resonance position method.
6. To study relation between the length of a given wire and tension for constant frequently using sonometer.
7. To determine specific heat of a given solid and liquid, by method of mixtures.

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ACTIVITIES/PROJECT WORK

1. To observe change of state and plot a cooling curve for melted wax.
2. To observe and explain the effect of heating on a bi-metallic strip.
3. To study the effect of detergent on surface tension by observing capillary rise.
4. To study the factors effecting the rate of loss of heat of a liquid.
5. To study the effect of nature of surface on emission and absorption of radiation.

Suggested Textbook: Textbook of Physics for class XI published by NCERT, New Delhi.

CHEMISTRY

Maximum Marks:100

Time 3 hrs.

Theory: 70 Marks

Practical: 30 Marks

UNIT-I: SOME BASIC CONCEPTS OF CHEMISTRY **05 Marks**

General Introduction: Importance of studying chemistry, Historical approach to particulate nature of matter, Laws of Chemical combination (numerical), Dalton's Atomic Theory, Concept of elements, atoms & molecules, Atomic and molecular masses, Mole concept and molar mass, percentage composition, empirical and molecular formula; chemical reactions; stoichiometry and calculation based on stoichiometry.

Unit-II: STRUCTURE OF ATOM **05 Marks**

Discovery of electron, proton and neutron, atomic number, isotopes and isobars. Thompson's model and its limitations, Rutherford's model and its limitations, Bohr's model & its limitations, concept of shells and sub-shells. Dual nature of matter and light, de-Broglie's relationship. Heisenberg's uncertainty principle; concept of orbitals, quantum numbers, shapes of s, p and d- orbitals. Rules for filling electrons in orbitals- Aufbau's principle, Pauli's exclusion principle and Hund's rule. Electronic configuration of atoms, stability of half filled and completely filled orbitals.

Unit-III: CLASSIFICATION OF ELEMENT AND PERIODICITY IN PROPERTIES **05 Marks**

Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of the periodic table, periodic trends in properties of elements: atomic radii, ionic radii, inert gas radii, ionization enthalpy, electron gain enthalpy, electronegativity, valence.

Unit-IV: CHEMICAL BONDING AND MOLECULAR STRUCTURE

05 Marks

Valence electrons, ionic bond, covalent bond, bond parameters, Lewis structure, polar character of covalent bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization involving s, p and d-orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear molecules (Qualitative idea only), hydrogen bond.

Unit-V: STATES OF MATTER: GASES AND LIQUIDS

06 Marks

Three states of matter: intermolecular interactions, type of bonding, melting and boiling points, role of gas laws in elucidating the concept of the molecule, Boyle's law, Gay-Lussac's law, Avogadro's law, ideal behavior, empirical derivation of gas equation, Avogadro's number, ideal gas equation, deviation of real gases from ideal behavior, Liquefaction of gases, critical temperature.

Liquid state- Vapor pressure, surface tension, viscosity (Qualitative idea only, no mathematical derivation).

Unit-VI: THERMODYNAMICS

04 Marks

Concepts of system, types of systems, surrounding, work, heat, energy, intensive and extensive properties, state functions. First Law of Thermodynamics, internal energy, enthalpy, heat capacity, specific heat, molar heat capacity, measurement of ΔE and ΔH , Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition ionization and dilution.

Introduction of entropy as a state function, free energy change for spontaneous and non-spontaneous process and equilibrium.

Unit-VII: EQUILIBRIUM

05 Marks

Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium; Le-Chatelier's principle; ionic equilibrium- ionization of acids and bases, strong and weak electrolytes,

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degree of ionization, Concept of pH. Hydrolysis of salts (elementary idea), buffer solutions, solubility product, common ion effect (with suitable examples).

Unit-VIII: REDOX REACTIONS

02 Marks

Concept of oxidation and reduction, redox reactions, oxidation number, balancing of chemical equations in redox reactions, applications of redox reactions.

Unit-IX: HYDROGEN

02 Marks

Position of hydrogen in periodic table, occurrence, isotopes, preparation, properties and uses of hydrogen, hydrides-ionic, covalent and interstitial. Physical and chemical properties of water; heavy water; hydrogen peroxide-preparation, reactions and structure, hydrogen as a fuel,

Unit-X: s-BLOCK ELEMENTS (ALKALI AND ALKALINE EARTH METALS)

06 Marks

Group 1 and Group 2 elements;

General introduction, electronic configuration, occurrence, uses, anomalous properties of the first elements in each group, diagonal relationship; trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii). Trends in chemical reactivity with oxygen, hydrogen, water and halogens; uses.

Preparation and properties of some important compounds: Sodium carbonate, Sodium chloride, sodium hydroxide and sodium hydrogen carbonate. Biological importance of sodium and potassium; CaO, CaCO₃ and industrial uses of lime and limestone, biological importance of Mg and Ca.

Unit-XI: SOME p-BLOCK ELEMENTS

05 Marks

General introduction to p-Block Elements

Group 13 elements: General introduction, electronic configuration, occurrence,

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variation of properties, oxidation states, trends in chemical reactivity, anomalous properties of the first element in group. Boron - physical and chemical properties; some important compounds: borax, boric acids, boron hydrides.

Aluminium: uses, reactions with acids and alkalis.

Group 14 elements: General introduction, electronic configuration, occurrence, anomalous properties of the first element in group, trends in physical properties, trends in chemical properties. Carbon - catenation, allotropic forms, physical and chemical properties, trends in chemical properties, uses of oxides of carbon, important compounds of silicon and their uses: silicon tetrachloride, silicones, silicates and zeolites.

Unit-XII: ORGANIC CHEMISTRY- SOME BASIC PRINCIPLES AND TECHNIQUES

09 Marks

General introduction to organic chemistry, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds.

Electronic displacement in a covalent bond: inductive effect, electromeric effect, resonance and hyper- conjugation. Homolytic and heterolytic fission of a covalent bond, free radicals, electrophiles, nucleophiles, carbocations and carbanions. Types of organic reactions.

Unit-XIII: HYDROCARBONS

09 Marks

Classification of hydrocarbons

Alkanes: Nomenclature, isomerism, conformations (ethane only), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis.

Alkenes: Nomenclature, structure of double bond (ethene), geometrical isomerism, methods of preparation, physical properties, chemical reactions- addition of hydrogen, halogen, water, hydrogen halides (Markownikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.

Alkynes: Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of-

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hydrogen, halogens, hydrogen halides and water, **Aromatic hydrocarbons**: Introduction, IUPAC nomenclature; Benzene: resonance, aromaticity; chemical properties; mechanism of electrophilic substitution - nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation; directive influence of functional group in monosubstituted benzene.

Unit-XIV: ENVIRONMENTAL CHEMISTRY

02 Marks

Environmental pollutions: soil, water and air pollution, acid rain, effects of the depletion of ozone layer, Green house effect and global warming- pollution due to industrial wastes. Lake water pollution: sources of pollutants in lake water, sources of pollution in Dal lake, Wullar lake and Mansar lake in J&K state. Green chemistry as an alternative tool for reducing pollution, strategy for control of environmental pollution.

PRACTICALS

Marks: 30

Time: 3 Hrs.

A) Organic Preparations:

- i) Preparation of acetylene and study of its acidic character.
- ii) Preparation of Acetanilide
- iii) Preparation of p-Nitroacetanilide

B) Characterization and Purification of Chemical Substance:

- i) Determination of melting point of an organic compound (below 100°C)
- ii) Determination of boiling point of an organic liquid.
- iii) Crystallization involving impure sample of any one of the following: Alum, Copper sulfate, Benzoic acid.

C) Experiments Related to pH Change

Any one of the following experiments:

- i) Determination of pH of some solutions obtained from juices and solutions of

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- known and varied concentrations of acids, bases and salts using pH paper/ universal indicator.
- ii) Comparing the pH of solutions of strong and weak acid of same concentration.
 - iii) Study the pH change in the titration of a strong acid with a strong base using universal indicator.
 - iv) Study of pH change by common-ion effect in case of weak acids and weak bases.

D) Chemical Equilibrium:

One of the following experiments:

- i) Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/ decreasing the concentration of either ions.
- ii) Study the shift in equilibrium between $[\text{Co}(\text{H}_2\text{O})_6]^{3+}$ and Cl^- ions by changing the concentration of either ions.

E) Quantitative Estimation:

- i) Setting of a chemical balance and preparation of a standard solution of oxalic acid.
- ii) Determination of strength of a given sodium hydroxide solution by titrating it against a standard solution of oxalic acid.
- iii) Preparation of standard solution of sodium carbonate.
- iv) Determination of strength of given solution of dilute hydrochloric acid by titrating it against a standard solution of sodium carbonate.

F) Qualitative Analysis

Determination of one cation and one anion in a given salt (insoluble salts to be excluded):

Cations: Pb^{2+} , Cu^{2+} , As^{3+} , Al^{3+} , Fe^{3+} , Mn^{2+} , Zn^{2+} , Ni^{2+} , Co^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+} , Mg^{2+} , NH_4^+

Anions: CO_3^{2-} , S^{2-} , SO_3^{2-} , SO_4^{2-} , NO_2^- , NO_3^- , Cl^- , Br^- , PO_4^{3-} , $\text{C}_2\text{O}_4^{2-}$, CH_3COO^-

G) PROJECT

Scientific investigation involving laboratory testing and collecting information from other sources.

- * Determination of BOD/ COD of locally available water sample.
- * Analysis of fruit and vegetable juices for their acidity.
- * Preparation of a sample of soap from available oils (Groundnut/Coconut oil).
- * To dye wool and cotton clothes with any marked available dye.
- * Study of the effect of acids and bases on the tensile strength of fibres.
- * Silvering of mirrors
- * Compare the contents of tannic/ caffeine in various samples of tea and hence their flavor.

Note: Collaboration to sought from nearby institutions with regard to the performing of practicals/project work.

Suggested Textbook: A textbook of Chemistry for class XI published by NCERT, New Delhi

BIOLOGY

Maximum Marks: 100

Time: 3hrs.

Theory: 70 Marks

Practical: 30 Marks

SECTION A: (Botany)

Marks: 35

Unit-I Diversity of Life

8 marks

Variety of living organism Systematics, need, history and classification (Artificial, natural and Phylogenetic). **Biosystematics**, Binomial nomenclature, Two kingdom system, five kingdom system, their merits and demerits. (Detailed study of kingdom, Monera Protista and fungi), status of some acellular organisms/Slime moulds like: viruses and viroids. Lichens taxonomic aids i.e. Botanical garden, herbaria, museum & keys.

Unit-II Kingdom Plantae

9 marks

Salient features of various plant groups for identification and their classes (Algae, Bryophytes, Pteridophytes, Gymnosperms and angiosperms). **Morphology of flowering plants and their function**. Morphology of root, stem, leaves, inflorescence, flowers, fruits and seed. Description of flowering plants of families Fabaceae, Solanaceae and Liliaceae.

Unit-III Anatomy of flowering plants

8 Marks

Tissues and tissue system, Types of Tissues, Meristematic and Permanent and their classification and functions.

Anatomy of Dicot and Monocot Root, Stem and Leaves, Secondary Growth in Dicot stems and roots.

Plant Physiology:

Transport in plants: means of transport, (diffusion, facilitated diffusion, Passive symports and anti ports, Active transport)

Plant water relations: water potential, osmosis, plasmolysis, imbibition, long distance transport of water- apoplast, symplast, pathways ascent of sap, Root pressure theory and transpirational pull theory (cohesion - tension theory).

Tranpiration: types & significance, mechanism of opening and closing of stomata, guttation, Phloem transport, flow from source to sink, (mass flow hypothesis)

Unit IV Mineral Nutrition

10 Marks

Methods to study mineral requirement (Hydroponics). Essential mineral, elements criteria for essentiality of nutrients. Essential elements. Micro and Macro nutrients, their role and deficiency symptoms. Mechanism of absorption of elements, translocation of solutes, soil and reservoir of essential elements. **Nitrogen metabolism**, Nitrogen cycle- Biological nitrogen fixation, 'Photosynthesis, Historical background, site of photosynthesis. Various photosynthetic pigments, Mechanism, Light reaction including PS I, PS II and photophosphorylation (Cyclic and non-cyclic). Dark reaction or Biosynthetic phase, Calvin (C_3) cycle, C_4 cycle, factors effecting photosynthesis. Photorespiration.

Respiration:- Introduction mechanism- glycolysis, Kreb's cycle. Electron transport system, Aerobic and anaerobic respiration. Respiratory quotient.

Growth and Development:- Characteristics of plant growth, phases of growth, growth curve and its components- differentiation, dedifferentiation and redifferentiation, **Development**, sequence of developmental processes in a plant cell, **plant growth regulators**, discovery and physiological effects (Auxins, Gibberellins, cytokinins, ethylene and IBA, Photoperiodism and vernalisation.

Unit-III Diversity in Living world.**8 Marks**

- i) Characteristic features of living organisms.
- ii) Salient features of animals (non chordates upto phylum level, chordates upto class level), Animal kingdom
- iii) Zoological parks, Natural museums (with special reference to local Zoos/National Parks (Manda, Mahamaya, Dachigam, Hemis))

Unit-IV Cell-Structure and Function**10 Marks**

- i) **Cell-** Brief description of cell, Cell theory; Prokaryotic and eukaryotic cell, cell wall, cell membrane and cell organelles (Plastids, Mitochondria, Endoplasmic reticulum, Golgi bodies/dictyosomes, Ribosomes, Lysosomes, Nucleus, Vacuoles, Centrioles), Cilia and flagella, and nuclear organization.
- ii) **Cell Division:-** Cell cycle, Mitosis, Meiosis.
- iii) Basic chemical constituents of living bodies.
- iv) **Biomolecules:** Structure and functions of :- carbohydrates, proteins, lipids and nucleic acids, Metabolites (Primary and Secondary, Metabolism (elementary idea))
- v) **Enzymes:** Types, Properties and Functions.

Unit-III Histology and Morphology**7 marks**

- i) **Animal tissues:-** Epithelial, Connective, Muscular & Nervous, Organ and Organ system
- ii) **Elementary Knowledge of :-** Morphology and Anatomy of Frog, Earthworm & Cockroach.

Unit IV Human Physiology**10 Marks**

- i) Digestion and Absorption
- ii) Breathing and Respiration
- iii) Body fluids and circulation
- iv) Excretory products and elimination

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- v) Locomotion and Movement
- vi) Neural control and coordination
- vii) Chemical coordination and integration.

PRACTICALS

M.Marks- 15

Time: 3 hrs.

SECTION A: (BOTANY)

Marks: 7½

1. Study of different parts of a Compound Microscope.
2. Study of specimens and identification with reasons- Bacteria, Oscillatoria, Spirogyra, Rhizopus, Mushroom, Yeast, Liverwort (Marchantia/Moss (Funaria), Pinus (Male & female cone), Lichens.
3. Study of different modifications in
 - a. Roots (Tap & Adventitious)
 - b. Stems (Herbaceous & Woody)
 - c. Leaves (Leaf arrangement, shape, venation, simple & Compound leaves)
4. Description of 3 locally available flowers from the families- Fabaceae, Solanaceae and Liliaceae (1 from each family)
5. Study of plant tissues from permanent slides (Parenchyma, Collenchyma, Sclerenchyma, Xylem and Phloem)
6. Study of T.S. of Dicot & Monocot Root, Stem and leaf from permanent slides.
7. Study of osmosis by Potato osmoscope.
8. Study of Plasmolysis in epidermal peels(e.g. Rhoeo leaves)
9. Study of distribution of stomato in upper and lower surface of leaves
10. To make comparative study of the rates of transpiration in upper and lower surface of leaves by cobalt chloride method
11. Study of imbibition in seeds/ raisins
12. Observation and comment on the experimental set up on phototropism.
13. To separate plant pigments through paper chromatography.

SECTION-B (ZOOLOGY)

Marks: 7½

1. Study and handling of compound Microscope.
2. Study of salient features of specimen and identification with reasons; Amoeba, Paramecium, Hydra, Liver fluke, Ascaris, Leech, Earth worm, Honeybee, Snail, Star fish, Shark, Labeo, Frog, Lizard and Pigeon.
3. Study of preserved specimens of at least one representative of each group to understand co-relations between characteristics of organisms and systematic position.
4. Study of animal cell and its organelles with the help of chart/slides.
5. Study of Mitosis and Meiosis from prepared slides.
6. Preparation of temporary mounts of mammalian squamous epithelium striated muscles, fibres and mammalian blood film.
7. Study of different types of mammalian connective tissues, muscle fibres and nerve cells through prepared permanent slides.
8. Study of different systems with the help of charts/dissections-Earthworm, Cockroach.
9. Testing for the presence of carbohydrate and protein.
10. Preparation and study of human blood smear.

Project work:

1. Collection of animal specimen for school museum.
2. Visit to a zoological /National park and preparation of report.
3. Study of cyclosis in Paramecium.
4. Study of Mitosis by using root tips of onion.
5. Study of Meiosis from flower buds.
6. Study of external morphology of earthworm, cockroach and frog.

Textbook Suggested: A Textbook of Biology for class XI published by NCERT, New Delhi.

Code : 232

ELECTRONICS

Maximum Marks: 100

Practical: 30

Theory: 70

Unit - I

AC Signals :

(06 Marks)

Definition of amplitude, frequency, time period, phase, sinusoidal signals, Triangular wave, Square wave, saw tooth wave. Periodic and non periodic signals. RMS Value, average value for sinusoidal signals, phasor representation of sinusoidal signals;.

Unit - II

Passive Components:

(08 Marks)

Resistance, Resistors, Types of resistors, variable resistance, colour code and power rating of resistors, combination of resistors (series and parallel), principle of rheostat.

Capacitance: Capacitors - types of capacitors, variable capacitors, colour codes, charging and discharging of capacitor, energy stored in a capacitor, combination of capacitors.

Inductors: Faraday's & Lenz's Law, self and mutual inductance, types of inductors, energy stored in an inductor, combination of inductors.

Unit - III

Circuits:

(12 Marks)

DC Circuits - RC, RL and LC circuits for growth and Decay of current and voltage. AC Circuits- Pure R, L and C Circuits and RC, RL and LC and RLC series and parallel and resonance circuits.

Unit - IV

Network Theorems :

(09 Marks)

Voltage and current sources (Ideal & Practical). KCL and KVL (with numerical) voltage

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division Theorem, Current Division Theorem, Thevenin theorem, Norton theorem, Superposition theorem. (Simple numerical on circuit analysis using various theorems).

Recommended/ Suggested books :

- Basic Electrical Engineering by S.N.Singh PHI
- Introduction to Electric Circuit Analysis by Ronald J. Tocci

UNIT - V

Semi Conductors:

(09 Marks)

Electronic configuration of atoms, crystalline structure of solids, Band theory of solids, Classification of metals, Semi conductors and Conductors on the basis of band theory. Types of semi conductors, Intrinsic and extrinsic (p & n type), semiconductors, temperature coefficient of Semi conductors.

Unit - VI

P N Junctions:

(09 Marks)

PN-junction: concept of depletion region & potential barrier. Drift and diffusion phenomenon PN junction, operation and V- I Characteristics (Forward and Reverse bias). Zener diode, Photo diode, LED. Introduction to solar cell.

Unit - VII

Applications of Diodes

(12 Marks)

Diode as half and full wave rectifier (qualitative treatment). Ripple factor and efficiency in half wave and full wave rectifier. Zener diode as voltage regulator. Diode as a clipper (positive and negative clipping), diode as a damper.

Unit - VIII

Bipolar Junction Transistor (BJT):

(05 Marks)

PNP and NPN Transistor, circuit symbols, construction and V-I characteristics. Different Transistor configurations (CB&CE). Current gain α and β of a transistor. Relation between α and β .

Recommended/ Suggested books

- 1) Semiconductor circuit approximations by A.P.Malvino

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- 2) Basic electronics by B.L. Theraja.
- 3) Principles of Electronics by V.K. Mehta & R. Mehta.
- 4) Basic Electronics and linear Circuits by N.N. Bhargava.

- 1) Identification of Electronics Components.
- 2) To measure Voltage (ac & dc), current (a.c & d.c.) and resistance using a Multimeter.
- 3) To find the value of a carbon resistor using colour coding and verify with a multimeter.
- 4) To find the value of a capacitor using colour code.
- 5) To study the common front controls of a C.R.O.
- 6) To find the amplitude and frequency of a.c. signal using C.R.O.
- 7) Verification of current Division principle.
- 8) Verification of voltage Division principle.
- 9) Verification of Thevenin's theorem.
- 10) Verification of Norton's theorem.
- 11) Verification of Superposition theorem.

- 1) To study the characteristics of a PN Junction.
- 2) To study diode as a half wave rectifier.
- 3) To study diode as a full wave rectifier.
- 4) To study the characteristics of a Zener Diode.
- 5) To study diode as a clipper.
- 6) To study diode as a damper.
- 7) To study the characteristics of an NPN CB configuration.
- 8) To study the characteristics of a PNP CB configuration.
- 9) To study the characteristics of a NPN CE configuration.
- 10) To study the characteristics of a PNP CE configuration.
- 11) To find the value of α and β from the characteristics curves of an NPN transistor.

Code : 234

BIOCHEMISTRY

Maximum Marks: 100

Theory: 70

Practical: 30

Time 3 hrs.

Note : Each unit comprises of 10 lectures and 10 marks.

Unit-I : Biophysical Chemistry

05 marks

Water, pH, pKa, buffers, Hydrophilicity, hydrophobicity. Hydrogen-bonding, vander Waal and ionic interactions. Osmosis, diffusion, dialysis.

Unit-II : Cell and subcellular Organelle Structure and Function - Part I

06 marks

Plasma membrane: fluid mosaic model, extrinsic, intrinsic and transmembrane proteins. Transport: uniport, antiport and symport. Endoplasmic reticulum, Golgi apparatus, lysosomes and vacuoles.

Unit-III : Cell and subcellular Organelle Structure and Function - Part II

06 marks

Nucleus, Ribosomes, Mitochondrion, Chloroplasts: Nucleolus/nucleolar region, Inner-mitochondrial membrane and matrix, organization of chloroplast and ribosome.

Unit-IV : Digestion and Absorption of Food

06 marks

Digestion and absorption of carbohydrates, proteins and lipids. Role of enzymes in digestion, bile salts in emulsification of lipids and other factors in absorption. Role of non-digestible dietary constituents.

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Unit-V : Chemistry of Carbohydrates

06 marks

Classification of carbohydrates, Isomerism in monosaccharides: Spatial/stereo-isomerism: Epimerism and anomerism. Optical isomerism. Important disaccharides: Sucrose, lactose, maltose etc. Important polysaccharides: Starch/glycogen, cellulose, chitin and glycosamine, glycans.

Unit-VI : Chemistry of Amino Acids and Proteins

06 marks

Amino acids of proteins. Essential and non-essential amino acids. Classification of amino acids based on R group, charge, hydrophobicity, aromatic, heterocyclic and sulfur-containing. Peptide bond. Classification of proteins based on function e.g. Structural, transport, catalytic, regulatory, hormones, antibodies and chromoproteins.

Unit VII: Chemistry of Lipids

06 marks

Classification : Fatty acids (Odd and even C; saturated, unsaturated, branched), glycerides. Phospholipids (phosphoglycerides: Lecithins, cephalins, phosphoinositides and phosphosphingolipids). Glycolipids and Lipoproteins.

Unit VIII: Chemistry of Nucleic Acids

06 marks

Introduction to nucleotides and deoxyribonucleotides.

Organization of nucleotides in DNA and RNA

Structure of B-DNA. Types of RNA: mRNA, tRNA, rRNA.

Unit IX: Water-soluble Vitamins

06 marks

Structure, physiological and biochemical (coenzyme) role of : Thiamine, Riboflavin, Niacin, Pyridoxine, Coenzyme A, Biotin; Cyanocobalamin, Folic acid, Vitamin-C.

Unit X: Fat-soluble Vitamins

06 marks

Structure, physiological and biochemical/hormonal role of : Vitamin A (with emphasis on Visual cycle), Vitamin D (and its role in bone formation), Vitamin E (with emphasis on its role as biological antioxidant) and Vitamin K (with stress on its role in blood coagulation).

Unit XI: Nutrition : Macro and Micro

06 marks

Introduction, calorific values of carbohydrates, proteins and lipids. Class A and Class B proteins/Essential amino acids. Essential fatty acids. Protein-/calorie malnutrition. Importance of minerals, iron, calcium, phosphorus, Iodine, Copper, Na^+ , K^+ , Zinc. Brief introduction to anaemia, rickets and Goiter.

Unit XII: Instrumentation

05 marks

Introduction to : pH metry, colorimetry, centrifugation, electrophoresis, chromatography (adsorption, Ion-exchange, gel-filtration).

PRACTICAL

Marks: 30

Time: 3 hrs.

1. Preparation of Molar and Normal solutions.
2. Buffers, Henderson-Hasselbalch equation, pH, pka.
3. Sterilization/Autoclaving
4. Colour reactions of carbohydrates: Molisch, Iodine, Benedict's, Barfoed's, Salivanoff's and inversion tests.
5. Microscopy, principle use, gram staining.
6. Colour reactions of proteins : Ninhydrin, Biuret, Xanthoproteic and Sulphur Tests.
7. Precipitation of proteins with acids (H_2SO_4 , HCl, CH_3COOH , Trichloro acetate or perchloric acid), alcohols, Salting out, Heat denaturation.
8. Qualitative test for cholesterol.
9. Salivary Amylase : Enzymatic hydrolysis of soluble starch to achro-dextrin (I_2 -based reaction).
10. Thin-layer chromatography : separation of pigments using silica gel G (on glass slides using stoppered bottles).

Book Prescribed:

A Textbook of Biochemistry for Class XI by Diwarka Sharma and Dr. Rafat Aeyesha Published by BOSE in Collaboration with Rahul enterprises, Jammu.

GEOLOGY

Theory	=	70 Marks
Practicals	=	30 Marks
Time	=	3 hours

Unit-I : Introduction

12 Marks

- (A) Definition of geology and its various branches viz; physical geology, mineralogy, petrology, palaeontology, stratigraphy, structural geology, geomorphology, economic geology, engineering geology and geohydrology.
- (B) Physical Geology
 - (a) Weathering - Definition, types of weathering viz; mechanical, chemical and biological weathering.
 - (b) Soil formation through weathering

Unit-II : Geohydrology

14 Marks

- (A)
 - (i) Definition of underground water, Juvenile water and connate water.
 - (ii) Concept of porosity and permeability.
 - (iii) Description of various zones of underground water, viz; zone of aeration, water table and zone of saturation.
 - (iv) Geological work of underground water.

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- (B) (i) Definition of Aquifer
- (ii) Types of Aquifers
- (C) Spring– Definition, Types of springs

Unit-III : Geomorphology

9 Marks

- (A) River
 - (I) Definition of River, stages of river.
 - (ii) Geological features viz; V-shaped valley, waterfall, River terraces, Meanders, Oxbow lake and Delta
- (B) Glacier
 - (I) Definition and types of Glaciers
 - (ii) Geological features viz; Cirque, U-Shaped Valley, moraines, Roches-Montonees and Fiords.
- (C) Lake
 - (I) Definition and types of lakes
 - (ii) Lake deposits

Unit IV: Mineralogy

14 Marks

- (A) (I) Definition of mineral

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- (ii) Study of the following physical properties of mineral viz form, colour, cleavage, fracture, hardness, Specific gravity, lustre and streak.
- (iii) Moh's scale of hardness
- (iv) Physical properties of the following minerals:– Talc, Gypsum, Calcite, Fluorite, Apatite, Orthoclase, Quartz, Topaz, Corundum and Diamond
- (B) Ores
 - (i) Definition of Ore
 - (ii) Physical properties of the following Ores:– Chalcopyrite, Bauxite, Hematite and Galena.
- (C) Methods of determining specific gravity of a mineral with Walker's Steelyard balance and Jolly's Spring balance.

Unit V: Petrology

9 Marks

- (A)
 - (i) Definition of a Rock
 - (ii) Three main types of Rocks.
 - (iii) Basic knowledge of texture and structure of rock as seen Megascopically.
- (B) Description of the following rock types :–
 - (i) Granite, Diorite, Gabbro and Basalt.
 - (ii) Shale, Limestone, Sandstones Conglomerate and Breccia.
 - (iii) Marble, Schist, Gneiss and Slate.

Unit VI: Palaeontology, Stratigraphy, Structural Geology and Engineering Geology
12 Marks

- (A) Geological Time Scale.
- (B)
 - (i) Basic knowledge of Dip and Strike.
 - (ii) Construction and working of Brunton Compass and its uses.
 - (iii) Definition of fold and fault.
 - (iv) Description of various parts of fold and fault.
 - (v) Description with Sketches of the following structures:—Anticline, Syncline, Normal Fault and Reverse fault
- (C)
 - (i) Definition of a fossil.
 - (ii) Preservation and uses of fossil.
- (D) Definition: Dam, Tunnel and Bridges.

Books Suggested:—

1. A textbook of Geology by P.K. Mukherjee
2. A textbook of palaeontology by S.K. Chadha
3. Engineering Geology by K.M. Banger
4. Ruttleys Elements of Mineralogy by H.H. Read.

PRACTICALS

Marks: 30

Time: 3 hours

1. Megascopic description and identification of the following minerals:—
Talc, Gypsum, Calcite, Fluorite, Apatite, Orthoclase, Quartz, Topaz, Corundum, Diamond, Chalcopyrite, Bauxite and Hematite.
2. Megascopic Description of the following rock types:—
 - (I) Igneous : Granite, Diorite, Gabbro and Basalt
 - (ii) Sedimentary: Shale, Sandstone, Conglomerate, Breccias and Limestone.
 - (iii) Metamorphic: Gneiss, Schist, Slate and Marble
3. Determination of specific gravity of a mineral specimen by Walker's steel yard balance/Jolly's Spring balance.
4. Sketches and description of the following structural features.
Anticline, Syncline, normal fault and Reverse Fault
5. Field work and Viva Voce
The fieldwork should include collection of mineral/rock specimens and study/identification of different geomorphological features.

BUSINESS STUDIES

Maximum Marks: 100

M. Marks: 100
Theory: 90 Marks
Practical: 10 Marks

Time: 3 hours

Part A: Foundations of Business

Chapter 1: Nature and Purpose of Business

8 Marks

- Concept and characteristics of business
- Business, profession and employment - distinctive features
- Objectives of business - economic and social, role of profit in business
- Classification of business activities: Industry and Commerce
- Industry - types: primary, secondary, tertiary
- Commerce: Trade and Auxiliaries
- Business risks - nature and causes,

Chapter 2: Forms of Business Organisations

12 Marks

- Sole Proprietorship; Joint Family Business-meaning, features, merits and limitations;
- Partnership- meaning, types, registration, merits, limitations, types of partners;
- Cooperative Societies-types, merits and limitations
- Company: Private Ltd., Public Ltd. - merits, limitations;
- Choice of form of business organizations
- Starting a business - Basic factors.

Chapter 3: Private, Public & Global Enterprises

10 Marks

- Private Sector and Public Sector
- Forms of organising public sector enterprises
- Departmental Undertaking
- Statutory Corporation
- Government Company
- Changing role of public sector
- Global Enterprises : meaning and features
- Joint ventures- meaning, benefits.

Chapter 4: Business Services

8 Marks

- Nature and types of Business services - Banking, Insurance, Transportation, Ware housing, Communication.
- Banking - Types of Banks, Functions of Commercial banks, E- banking
- Insurance - principles, types: life, fire and marine
- Communication and Transportation
- Warehousing: types and functions.

Chapter 5: Emerging Modes of Business

6 Marks

- E-Business - Meaning, scope and benefits, Resources required for successful e-business implementation, On-line transactions, payment mechanism, security and safety of business transactions;
- Outsourcing- concept, need and scope

Chapter 6: Social Responsibility of Business and Business Ethics

6 Marks

- Concept of social responsibility.

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- Case for social responsibility;- Arguments for and against CSR
- Responsibility towards owners, investors, employees, consumers, government and community
- Environmental protection and business
- Business ethics: concept and elements.

Part B: Organisation, Finance and Trade

Chapter 7: Formation of a Company

7 Marks

- Stages in the formation of a company
- Promotion
- Incorporation
- Capital Subscription
- Commencement of business

Chapter 8: Sources of Business Finance

10 Marks

- Nature and significance of business finance
- Classification of sources - Period, ownership basis
- Sources of raising Finance:
 - Equity and Preference shares
 - Debentures and Bonds
 - Loan from Financial Institutions

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- Retained Profits
- Global Depository Receipt, American Depository Receipt
- Loans from commercial Banks
- Public deposits
- Trade Credit

Chapter 9: Small Business

6 Marks

- Concept of small business, Types.
- Role of small business in rural India;
- Problems of small business in India.
- Government Assistance, Incentives Schemes for Industries in rural, backward and hilly areas.

Chapter 10: Internal Trade

10 Marks

- Meaning and types of internal trade: wholesale and retail.
- Services of a wholesaler and a retailer
- Types of Retail Trade:
 - Itinerant retailers and fixed shops.
 - Departmental store, super market, malls, chain store, mail order business, consumer's cooperative store.
 - Automatic Vending Machine
- Role of Chamber of Commerce and Industry in promotion of internal trade.

Chapter 11: International Business

7 Marks

- Nature, Importance and complexities involved in International Business;

- Understanding Export and Import procedures and documentation;
- Government support assistance, Incentives;
- Export processing zone special economic zones;
- International trade institutions - WTO, World Bank, IMF, UNCTAD.

Project Work

10 Marks

Suggestive/Illustrative Projects

Any one of the following:-

- (i) Find out from local sample business unit (s) the various objectives they pursue.
- (ii) Problems of setting up and running business units.
- (iii) Enquiry into the ethics of running business through questionnaires.
- (iv) Survey of quality of bank services in the local branch office.
- (v) Study of postal and courier mail services.
- (vi) Availability and use of agency services, advertising, packaging, investments in savings schemes, etc.
- (vii) Survey of the popularity of credit cards issued by different banks.
- (viii) Study the profile of a sole trader/partnership commenting on the nature and working of business.
- (ix) Study of a Joint family business.
- (x) Study of the working of any cooperative society.
- (xi) Study of a small business unit regarding source of finance.
- (xii) Study of nature of small traders (like hawkers and peddlers in a local locality) with reference to types of goods, capital investment, turnover.
- (xiii) Study of weekly bazaar in a locality.
- (xiv) Study of franchise retail store.

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- (xv) Study of export/import procedure of any article.
- (xvi) Problems of women entrepreneurs in business.
- (xvii) Survey of waste/garbage disposal by a hospitals/Private Nursing Homes
- (xviii) Study of pavement trade.
- (xix) Prepare a scrapbook and collect articles on the changing role of public sector and any other topics related to the syllabus.

Marks may be suitably distributed over the different parts of the Project Report-

- 1. Objectives
- 2. Methodology
- 3. Conclusions - findings and suggestions

Suggested Textbook :

- 1. Business Studies, published by NCERT, New Delhi

ACCOUNTANCY

Theory: 80 Marks

M. Marks :- 100

Practical: 20 Marks

Financial Accounting - I

Unit 1: Introduction to Accounting

06 Marks

- (i) Book keeping Meaning, Accounting meaning, objectives. Difference between Book-keeping and Accounting, Accounting as source of information, internal and external users of Accounting information and their needs.
- (ii) Qualitative characteristics of Accounting information-reliability, relevance, Understandability and comparability.
- (iii) Basic accounting terms: business transaction, account, capital, drawings, Liability (Non-current and current); Asset (Non- current; tangible, intangible assets, current assets), receipts (capital and revenue), expenditure (capital, revenue and deferred), expense, income, profits, gains and losses, purchases, sales, stock, trade receivables (debtors and bills receivable), trade payable (creditors and bills payable), goods, cost, vouchers, discount - trade and cash, bad debts, Vouchers (cash and non cash), source documents Invoices, cash memo, pay in slip, cheque.

Unit 2: Theory Base of Accounting

06 Marks

- (i) Accounting Principles-concept
- (ii) Accounting principles: Accounting Entity, Money measurement, Going Concern, Accounting Period, Costs Concept, Dual Aspect, Revenue Recognition (Realisation), Matching concept, Accrual, Full Disclosure, Consistency, Conservatism, Materiality
- (iii) Accounting Standards and IFRS (International Financial Reporting Standards): Concept

- (iv) Bases of Accounting—Cash Basis, Accrual Basis

Unit 3: Recording of Business Transactions 10 Marks

- (i) Accounting Equation Approach—Meaning and Analysis of transactions using Accounting Equation.
- (ii) Rules of Debit and Credit—traditional and modern approach.
- (iii) Recording of Transactions: Books of original entry – Journal, Special Purpose Books: Cash Book: Simple Cash Book, Cash Book with Discount Column, Cash Book with Bank and Discount Columns, Petty Cash Book. Other books: purchases book, sales book, purchases returns book, sales returns book and journal proper.
- (iv) Ledger—meaning, utility, format; posting from Journal and Subsidiary books; Balancing of Accounts.
- (v) Bank reconciliation statement- calculating bank balance at accounting date; need and preparation.

Unit 4: Trial Balance and Rectification of Errors 5 Marks

- (i) Trial balance: Meaning, objectives and preparation, (Scope: Trial Balance with balance method).
- (ii) Error: Types of Errors: Errors of omission, commission, principles and compensating errors affecting Trial Balance; errors not affecting Trial Balance.
- (iii) Detection and Rectification of Errors (One Sided and Two Sided); use of Suspense Account.

Unit 5: Depreciation, Provisions and Reserves 08 Marks

- (i) Depreciation: Meaning and need for charging depreciation, factors affecting depreciation, methods of depreciation—Straight Line method, Written Down Value method (excluding change in method), Method of recording depreciation—charging to asset account, creating provision for depreciation/accumulated depreciation account; Treatment of disposal of asset.
- (ii) Provisions and Reserves: meaning, importance, difference between Provisions and Reserves, types of Reserves: Revenue Reserve, Capital Reserve, General Reserve, Specific Reserve and secret Reserves.

Unit 6: Accounting for Bills of Exchange

05 Marks

- (i) Bills of exchange and Promissory Note: definition, features, parties, specimen and distinction.
- (ii) Important terms: term of bill, due date, days of grace, date of maturity, discounting of bill, endorsement of bill, bill sent for collection, dishonour of bill, noting of bill, retirement and renewal of a bill.
- (iii) Accounting treatment of bill transactions.

Project Work (Any One)(P₁)

10 Marks

- (i) Collection of source documents, preparation of vouchers and presentation of vouchers and presentation of source document of trading and banking concerns.
- (ii) Preparation of bank reconciliation statements with the given cash book and pass book with 20-25 transactions.
- (iii) Collection and presentations of Hundi, Passbook, Cheque book and promissory note, Bills of exchange, Debit and Credit note and other negotiable instruments.

Financial Accounting - II

Unit 7: Financial Statements of Sole Proprietorship from Complete and Incomplete Records

22 Marks

- (i) Financial Statements: Meaning and uses
- (ii) Capital expenditure and deferred revenue expenditure, Trading and Profit and loss account-Gross Profit, operating profit and net profit, Balance Sheet : need, grouping, marshalling of assets and liabilities. Preparation of Trading and Profit and Loss Account and Balance Sheet of sole proprietorship.

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- (iii) Adjustments of preparation of financial statements: with respect to closing stock, outstanding expenses, prepaid expenses, accrued income, income received in advance, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, manager's commission, abnormal loss, goods taken for personal use and goods distributed as free samples.
- (iv) Incomplete records: Meaning, uses and limitations. Ascertainment of profit/loss by statement of affairs method.

Unit 8: Financial Statements of Not for Profit Organisations 10 Marks

- (i) Not-for-profit organizations: concept.
- (ii) Receipts and Payment account: Features.
- (iii) Income and Expenditure account: features. Preparation of Income and Expenditure account and Balance Sheet from the given Receipts and Payments account with additional information.

Note for teachers: (i) Adjustments in a question should not exceed 3 or 4 in number and restricted to subscriptions, consumption of consumables, and sale of assets/old material. (ii) Entrance/ admission fees and general donations are to be treated as revenue receipts. (iii) Trading Account of incidental activities is not to be prepared.

Unit 9: Computers in Accounting 8 Marks

- (i) introduction to Computer and Accounting Information System (AIS), Application of computers in accounting:
- (ii) Automation of accounting process, designing accounting reports, MIS reporting, data exchange with other information systems, Comparison of accounting processes in manual and computerized accounting, Sourcing of accounting system: readymade and customized and tailormade accounting system.
- (iii) Accounting and Database Management System.
- (iv) Stages in automation (a) Accounting Process in a computerised environment (b) Sourcing of accounting Software (Kinds of software: readymade software; customised software and tailormade software; Generation of reports using TALLY and BUSY-Trial balance, profit and Loss account and Balance Sheet.

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software; customised software and tailormade software; Generation of reports using TALLY and BUSY Trial balance, Profit and Loss account and Balance Sheet.)

Project Work (Any One) (P₂)

10 Marks

1. Comprehensive project starting with journal entries regarding any sole proprietorship business, posting them to the ledger and preparation of Trial balance. The students will then prepare Trading and Profit and Loss Account on the basis of the prepared trial balance. Expenses, incomes and profit (loss) are to be depicted using pie chart/bar diagram.
2. Comprehensive project of Not for profit organisations starting with preparation of Receipts and payments account and Income and expenditure account.
3. The above projects can be presented by using software packages Tally of Busy.

The above mentioned projects should be presented in a project file which should be made available for evaluation.

Books Suggested

1. Accountancy Published by NCERT

Code : 242

ENTREPRENEURSHIP

**Theory: 70 Marks
Practical: 30 Marks**

**Time: 3 hrs
MM: 100**

UNIT-I

9 Marks

ENTREPRENEURSHIP

- I. Concept of entrepreneurship: Meaning, Definition and characteristics.
- II. Functions and need of entrepreneurship.
- III. Role of entrepreneurship in Economic development.
- IV. Barriers to entrepreneurship: Economic and technological.

UNIT-II

9 Marks

ENTREPRENEUR

- I. Meaning, Definition and characteristics.
- II. Types of entrepreneur.
- III. Role & problems of women entrepreneur.
- IV. Role of entrepreneur in generating national wealth and creation of employment.

UNIT-III

7 Marks

ENTREPRENEURIAL VALUES & MOTIVATION

- I. Entrepreneurship motivation-Meaning & Concept.
- II. Six C's for entrepreneurial motivation: Change, Challenge, Creativity, Curiosity, Control & Cash.
- III. Help & support to entrepreneur by state & central bodies.

UNIT-IV

8 Marks

ENTREPRENEURIAL SKILL DEVELOPMENT PROGRAMME.

- I. Entrepreneur Skill-Meaning & Concept.
- II. Importance of Skill development.
- III. Techniques of skill development.
- IV. Qualities of a successful entrepreneur.

UNIT-V

7 Marks

INTRODUCTION TO MARKET DYNAMICS

- I. Meaning of market dynamics.
- II. Causes of market dynamics.
- III. Competitive analysis of market.

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8 Marks

Unit VI SMALL ENTERPRISES

- I. Meaning, Definition and characteristics of small enterprise.
- II. Objectives of micro enterprises.
- III. Role of Micro enterprises in economic development.

9 Marks

Unit VII PROJECT SELECTION & FORMULATION

- I. Meaning of project.
- II. Project identification & steps in process of project selection.
- III. Meaning & significance of project report.

7 Marks

Unit VIII PROJECT APPRAISAL

- I. Meaning of Project appraisal
- II. Methods of Project appraisal:
(a) Economic (b) Financial (c) Technical

**Unit IX:
FINANCING OF ENTERPRISE**

9 Marks

- I. Meaning & need of financial planning.
- II. Sources of Finance: Long term & Short term.
- III. Capital Structure: Meaning and Factors determining capital structure.

**Unit X:
OWNERSHIP STRUCTURE**

7 Marks

- I. Proprietorship: Meaning, Features & Importance.
- II. Partnership: Meaning, Features & Importance.
- III. Company: Meaning, Features & Importance.

PROJECT:

Marks: 20

Introduction:

The Main objective of the course in Entrepreneurship is to generate in the students initiative, self reliance and enthusiasm so as to empower them to become entrepreneurs both in spirit and performance.

A number of skills such as observation, evaluation, communication, resource mobilization and management, risk assessment ,team building etc. are also to be developed in the students. Leadership qualities, sensitivity to business ethics and adherence to a positive value system are the core issues that the course highlights while presenting different concepts related to entrepreneurship.

Such a course should necessarily have a strong experiential component in the form of practical work. The objectives of the practical work are:

1. To introduce the students to the world of business by developing in them the core skills and competencies required for an entrepreneur.

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2. To develop in the students qualities such as leadership, self-confidence, initiative, facing uncertainties, commitment, creativity, people and team building, integrity and reliability.
3. To enable the students to acquire the skills and knowledge needed for conducting surveys, collecting, recording and interpreting data and preparing simple estimates of demand for products and services.
4. To guide the students to prepare a Project Report.
5. To equip the students with knowledge and skills needed to plan and manage an enterprise through case studies conducted and recorded by the students in different fields such as resource assessment, market dynamics, finance management, cost determination, calculation of profit and loss etc.
6. To instill in the students important values and entrepreneurial discipline.

FORMAT OF PROJECT

Total marks: 30 Marks

- | | | |
|----|-------------------------------------|-----------------|
| 1. | Project Report/Survey Report | 10 marks |
| 2. | Viva-Voce on PW /SR | 5 marks |
| 3. | Case Study | 10 marks |
| 4. | Problem Solving | 5 marks |

1. **Project Report/Market Survey Report**

- a) **Project Report:**

Preparation of a Project Report for an enterprise involving products/services. Students may be provided adequate guidance to choose a project based on their interests and availability of information and authentic inputs in the locality. The specimen proforma of project report given in the textbook may

be used for preparing the report. However, mechanical preparation of the report by filling in the information in the proforma should be discouraged.

Further, as the students will be required to appear for a Viva-voce on the basis of their projects, sufficient care should be taken by the students to prepare the report after studying the various aspects involved thoroughly. In a nutshell, the project report should lead to viable enterprise.

b) **Market Survey Report**

Market research is the process and technique of finding out who your potential customers are and what they want. The survey may be on products and services already available in the market or students may also conduct surveys for new products and services. The report of the survey should be organised under the following broad headings:

1. Objects.
2. Methods and tools (interviews, questionnaires etc.) to be used to collect information.
3. Records of data and information.
4. Analysis of data and information.
5. Interpretation and conclusion.

For example, a survey may be conducted to find out the choice of households in toiletry soap, tooth paste etc. The data may be analysed to establish a pattern that may be useful to an entrepreneur.

Guidelines for assessment of Project Report/ Survey Report

For purpose of assessment the same pattern shall be adopted for Term II also.

1. Presentation: Format, Clarity, Use of graphs, tables and other visuals, organisation, methodical recording of data and information and general neatness of execution.
2. Originality and Creativity

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3. Authenticity of information and correctness of calculations and general feasibility of the project/ sustainability of conclusion drawn in the survey.
4. Viva Voce on the Project /Market Survey Report

The questions should establish that the report is the original work of the student and that the student has a reasonably clear understanding of the work carried out by him/her. Entrepreneurial qualities such as leadership, self-belief, creativity, originality, initiative etc. may also be assessed by asking a variety of questions related to the report.

2. Viva-voce

3. Case Study

A case study is a focused research on an organisation, enterprise, practice, behaviour or person undertaken to highlight an aspect that the study attempts to examine. For instance, a case study may be conducted on the pollution control methods being employed by an industry. Or a successful industrialist may be chosen as a subject of a case study to analyze and understand the strategies that the industrialist adopted to achieve success. Ideally, a case study should be conducted on subjects with the objectives of bringing to the fore beliefs, practices, strategies, values etc. that have made them what they are. Such studies help us to understand the way in which great minds think and operate. We may also conduct case studies on failures; why a company collapsed, how a service lost its market etc. From both the types of case study, we learn lessons; how to do something or how not to do something. They also provide valuable insight into the processes involved in an enterprise. A few topics are suggested for carrying out case studies:

- i) Drawing a profile of a successful entrepreneur. ii) Studying a public sector undertaking and highlighting its success/failure, by analyzing the factors responsible.
- iii) Studying a small scale unit in the locality to bring out the procedures and processes adopted by the unit to become a feasible business venture.

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- iv) A study of competition in business by choosing two or more rivals in the market and analyzing their strengths and weaknesses.
- v) Take the school itself for a case study and analyze any two aspects of the school plant for chalking out a plan of action: infrastructure, academics, co-curricular activities etc.
- vi) A case study on a thriving fast food shop/restaurant in your locality. What makes it so popular?
- vii) A case study on the ways in which a business unit has mobilised its financial resources.
- viii) A case study on the enterprise management techniques adopted by a business house.
- ix) A case study on the marketing strategies of a successful consumer durable company.
- x) A case study on the financial management of a Public Limited Company.
- xi) A case study on any Specialized Institution that supports and guides the establishment of a small scale unit.
- xii) Studying the balance sheets of two big private companies to assess their trade and credit worthiness.
- xiii) Studying the inventory management of a large manufacturing industry to ascertain the processes involved for optimizing cost.
- xiv) Carrying out a case study on an established industrial house/company to find out the value system of the company and how it fulfils its social commitment/ obligations.
- xv) Carrying out a case study on an established industry to ascertain the processes followed to reduce/prevent pollution.
- xvi) Study on environment friendly companies and their contribution to preservation.

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Assessment of Case Studies

- i) Presentation: Format, accuracy, clarity, authenticity and general neatness
- ii) Analysis and Conclusions

4. Problem Solving

In this session, the students will be required to solve a problem in the form of a written test. The examiner may choose any problem related to the units in class XI Text Book and set it for the class. The problem may be in the following areas:

- a. How to scan the environment to establish the feasibility of a project.
- b. Given certain figures showing the consumption pattern of a product, drawing conclusions that have a bearing on similar products.
- c. Carrying out market assessment for a given product/service to ascertain the feasibility factor.
- d. Assessment of Working Capital.
- e. Calculation of total cost of production.
- f. Calculation of break-even point.
- g. Determining location of a manufacturing unit.
- h. Problems in inventory control (calculation of the Economic Order Quantity and carrying out ABC analysis).
- i. Applying Pricing methods to determine the price of a product or service.
- j. Applying promotion mix to plan a sales campaign for a product or service.
- k. Working out a simple budget for a given task or job.

Assessment of Answers

The examiner may prepare five problems which are solved by him/her before they are presented to the students. The student may choose anyone of the problems and solve it, showing the different steps/different reasons involved in the solution. If the problem does

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not involve actual calculations, it may not have anyone correct answer. So weightage should be given not only to the final answer but to the entire process of problem solving that the student has followed.

Originality and innovative spirit should be rewarded. The students should not be penalized for spelling errors, grammatical mistakes etc. as long as the answer is coherent. Where definite formulas are involved, accuracy should be given due weightage.

Textbook Suggested:

A textbook of Entrepreneurship for class 11th published by CBSE, New Delhi

TYPE WRITING & SHORTHAND

M. Marks: 100

Practical

Internal: 50 Marks

External: 50 Marks

Time: 3 hrs

25 Marks

A. Typewriting/On Machine/Computer Key Board.

There shall be one practical paper of 25 Marks. The paper shall contain the following exercises.

- | | | |
|------|----------------------------------|---------|
| i. | Passage of 350-400 words (prose) | 7 Marks |
| ii | A business letter | 6 Marks |
| iii. | A tabular statement | 7 Marks |
| iv. | Viva- voce. | 5 Marks |

In viva- voce knowledge of

- (a) Key Board of Typing machine/Computer
- (b) Function of different parts of machine (typewriter/Computer)
- (c) Type setting and
- (d) Maintenance of typewriter shall be tested

The length of the above material will be in accordance with the time allowed. Accuracy and arrangement shall be given paramount importance. The speed expected of the examinees shall be 25 words/minute. Actual time taken by the examinees in typing out the passage- shall be noted on the answer sheet.

B. Shorthand

25 Marks

There shall be one practical paper of 25 marks, the candidate shall be required to taken down dictation in shorthand at speed of 50 words/ minute. The material for shorthand may be a passage of 600-800 words.

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After taking down dictation students shall be required to transcribe the same in their own handwriting in longhand.

The outline of the shorthand shall have to be attached by the candidate with the answer sheet. Distribution of marks shall be as under :

- | | | |
|-----|----------------------------|----------|
| (a) | Outline | 6 Marks |
| (b) | Transcription in Long hand | 14 Marks |
| (c) | Viva- voce | 5 Marks |

In viva-voce knowledge of consonants and vowels, Grammon logues, Contractions, abbreviations, suffixes and prefixes, etc shall be tested.

PRACTICAL

Time: 3 hrs

C. Typewriting/On Machine/Computer Key Board. 25 Marks

There shall be one practical paper of 25 marks. The paper shall contain the following exercise

- | | | |
|-----|--------------------------|---------|
| (a) | Passage of 350-400 words | 7 Marks |
| (b) | A business letter | 7 Marks |
| (c) | A tabular statement | 6 Marks |
| (d) | Vice-voce | 5 Marks |

D. Shorthand 25 Marks

There shall be one practical paper of 25 marks. The candidate shall be required to take down dictation in shorthand at speed 50 words/minute. The material for shorthand may be a passage of 600-800 words.

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After taking down dictation students shall be required to transcribe the same in their own hand writing in long hand.

The out line of the short hand shall have to be attached by the candidate with the answer sheet Distribution of marks of different exercise shall be as under:

- | | | |
|-----|----------------------------|----------|
| (a) | Outline | 6 Marks |
| (b) | Transcription in long hand | 14 Marks |
| (c) | Viva-voce | 5 Marks |

Books Suggested:

Shorthand by pitman.

BUSINESS MATHEMATICS

Marks: 100

Time: 3 hours

Unit 1st: Sets, Relations and Functions

13 Marks

Sets and their representation, various types of sets, complement of a set. Algebra of sets (Union, intersection and difference of sets). Demorgan's laws, Cartesian product of sets.

Relations: Various types of relations, Equivalence relation simple examples

Definition of a function and its various types (Into, onto, one-one, many-one, polynomial function, rational, modulus, constant, signum, greatest integer function, composite function).

Unit 2nd: Sequences and Series

13 Marks

Geometric progression, general term sum to n terms, and sum to infinity of a geometric series. Geometric and arithmetic means, Evaluation of $\sum n$, $\sum n^2$, $\sum n^3$

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Unit 3rd: Trigonometry

13 Marks

Trigonometric ratios of allied angles (without proof). sum, difference formulae and their applications . solution of trigonometric equations .

Unit 4th : Permutations and combinations

11 Marks

Factorial notation, fundamental principle of counting. Meaning of $P(n,r)$ and $C(n,r)$ and their relations with simple applications.

Unit 5th: Binomial theorem

10 Marks

Binomial theorem for any index. General term, middle term/s of a Binomial Expansion. Applications of binomial expansion.

Unit 6th: Statistics

16 Marks

Measures of dispersion, Mean Deviation from mean and median.
Standard deviation and variance of a grouped and ungrouped data.
Quartile deviation.

Unit 7th: Probability

14 Marks

Random experiment and sample space (set representation). Events and their occurrence. various types of events. Mutually exclusive and Exhaustive events . Axiomatic probability with applications.

Unit 8th: Linear Inequations

10 Marks

Algebraic solution of an inequation in one variable and the representation on a number line. Graphical solution of linear inequations in two variables.

Books Suggested:

1. A Textbook of Mathematics for Class XI published by NCERT, New Delhi

TRAVEL AND TOURISM MANAGEMENT (Basic)

Maximum Marks: 100

Time: 3 hours

Unit I

10 Marks

Meaning, History and Importance of Travel and Tourism, Meaning of Tourist, Traveller, Transient & Excursionist, Types and Forms of Tourism, Concept of Mass Tourism/Eco-tourism and Sustainable tourism.

Unit II

10 Marks

Meaning, Features and Elements of Tourism Product, Difference between Tourism and Consumer Product. Tourism Products of J&K - Fairs & Festivals (Kheer Bhawani, Charar-e- Sharief, Sindhu Darshan, Jhari mela, Eid in J&K, Navaratra in Jammu, Losar in Ladakh region).

Unit III

10 Marks

Tourism destinations:- Srinagar- Pahalgam & Gulmarg, Jammu-Patnitop & Mansar, Ladakh- Leh & Zaskar, Shrines: Hazartbal, Hemis, Amarnath and Vaishno Devi.

Unit IV

10 Marks

Flora and Fauna of J&K - Parks/Wildlife Sanctuaries, Physiographic Divisions and Climate, Handicrafts of J&K, Craft Mela-Jammu and Kashmir Haat, Cuisine-Wazwan.

Unit V

10 Marks

Role of Ministry of Tourism (Govt. of India), ITDC, J K TDC, Hill Development Council of Ladakh in promoting Tourism.

HOTEL MANAGEMENT

Unit VI:

10 Marks

Meaning, Concept, Origin and Development of Hospitality Industry, Current Development and future scope. Importance of Customer Care in Hospitality

Unit VII:

10 Marks

Accommodation: Meaning & Scope, Types of Accommodation. Types of Hotels on the basis of their Size, Location, Comfort, Price and Ownership, Difference between Hotels, Motels and Resorts.

Unit VIII:

10 Marks

The important Functional Departments of the Hotel, their functions and Organizational Structure.

Unit IX:

10 Marks

Registration and Gradation of Hotels, Understanding Hotel functioning and Preparing report by visiting Star category Hotels- like Grand Palace, Hotel Broadway, Hotel Asia, Hotel K.C. Residency etc.

Unit X:

10 Marks

Meaning and Definition of Hospitality Distribution Channels, Functions and Levels of Distribution Channels, Basics of Major Hospitality Distribution Channels- Travel Agents, Tour operators, Consortia and Reservation System.

References:

1. Travel, Tourism & Hotel Management - S. Chand and Co. Ltd. New Delhi in collaboration with J&K State Bose

PHYSICAL EDUCATION

Max. Marks: 100

THEORY = 70, Practical = 30

UNIT- I

Time :3 Hrs

1. CONCEPT OF PHYSICAL EDUCATION

7 Marks

- 1.1) Meaning and definition of Physical Education.
- 1.2) Aims and objectives of Physical Education.
- 1.3) Need and importance of Physical Education.

UNIT-II

2. PHYSIOLOGICAL ASPECTS OF PHYSICAL EDUCATION

7 Marks

Effects of exercise on:

- a. Muscular system.
- b. Circulatory system.
- c. Respiratory system.
- d. Digestive system.

Unit-III

3. PSYCHOLOGICAL ASPECTS OF PHYSICAL EDUCATION

7 Marks

- 3.1) Definition of psychology and sports psychology.
- 3.2) Achievement and motivation in sports.

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Unit IV

4. CAREER ASPECT IN PHYSICAL EDUCATION

7 Marks

- 1.1) Career options in physical education.
- 1.2) Avenues for career preparations.

UNIT V

5. HEALTH AND FAMILY EDUCATION

7 Marks

- 5.1) Concept and importance of health Education.
- 5.2) Effect of alcohol, tobacco and drugs and & abuse on individual, family, Community and sports person.

UNIT VI

6. CONCEPT OF MAJOR GAMES/SPORTS:

7 Marks

KHO-KHO, BADMINTON, KABADDI, HANDBALL, ARCHERY, HOCKEY.

- 1.1) History of games (Above Games)
- 1.2) Rules, measurement of the field. (Above Games)
- 1.3) Fundamental skills and Sports Terminology.

UNIT VII

7. NATIONAL GAMES

7 Marks

- 1.1 National events.
- 1.2 National awards.

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UNIT-VIII

OLYMPIC GAMES

7 Marks

- 2.1) History of Olympic Games.
- 2.2) Olympic Village.
- 2.3) Olympic Rings and Torch

UNIT- IX

9. DIET AND ITS IMPORTANCE IN PHYSICAL DEVELOPMENT

7 Marks

- 1.1) Diet and physical fitness.
- 1.2) Obesity and its causes.
- 1.3) Balanced diet.

UNIT-X

10. COMMON SPORTS INJURIES & REHABILITATION

7 Marks

- 1.1) Muscle pull, sprain and strain.
- 1.2) Dislocation, Fracture.

Practical

Marks: 30

- | | | |
|----|--|---------|
| 1. | Camping and nature study | 6 Marks |
| 2. | Track & field (Three events) | 6 Marks |
| 3. | Project work. | 3 Marks |
| 4. | Physical fitness test | 6 Marks |
| 5. | Skill test of game/ sports
(Any two games/sports) | 6 Marks |
| 6. | Viva-voce | 3 Marks |

HOME SCIENCE

(FULL STREAM)

FAMILY HEALTH CARE & PREVENTION

Max. Marks: 100

Code : 236

Marks : 70 (Theory)

Practicals: 30 Marks

Time: 3 hours

Unit I : Good Health

12 Marks

- Definition of health - Dimensions of good health.
- External characteristics of good health.
- Height-weight norms for different age groups.
- Common health problems in India.
- Factors affecting health (Nutrition, Rest, Sleep, exercise, fatigue, posture, habits, substance abuse, clothes and footwear.
- Concept of Mental health.

Unit II : Diseases

12 Marks

- Water/Air borne disease and other common diseases.
- Causes, mode of spread, symptoms, prevention and control of the following: Typhoid, Cholera, bird flu, measles, mumps, plague, chicken pox, polio.

Unit III : Health Care Services.

11 Marks

- Role of Health Care Services at gross root level, state level and at the central level. ANP, ICDS, NNP, NRHM
- Primary Health Care Services and characteristics.

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- National Health policy - Aim/Objectives.

Practicals

15 Marks

1. Look for sign of good/poor health within your family.
2. Checking their own height and weight to determine whether they conform to norms for Indian Conditions.
3. Talk by a general physician on the signs of good and poor health.
4. Interaction with a PHE expert person and visit for a water filtration plant on source of water purification.
5. Visit to Primary Health Centre (PHC) in your own locality and maintain a record of the facilities being provided.

Family Health Care and Prevention

Unit IV: Hygiene and Environment

12 Marks

- Personal Hygiene and its importance: - Personal cleanliness.
- Waste disposal methods - rural and urban.
- Using safe drinking water. Importance of potable water for good health, qualities of safe drinking water, household methods of making water safe for drinking.
- Human Environment interaction: Environmental issues and problems.

Unit V: First Aid and Home Nursing

12 Marks

- How to handle simple emergencies in the home) Cuts, burns, scalds, electric shocks, choking of food, sprains, Insect and snake bite), food allergies, medicine.
- First Aid kit: its contents.
- The sick room: - Choice and preparation of sick room. How to make a bed.
- How to disinfect a room.
- The role of traditional and local system of medicine.

Unit VI: Population Education

11 Marks

- Population Explosion: - Definition, meaning, causes, effect of over population and its control.

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- Population Education and its Aim.
- Importance of girl child, Govt. incentives to improve status of girl child (with ref. to state)

Practical

15 Marks

- 1) Conduct a symposium on method of maintaining and preserving the environment.
- 2) Maintain the cleanliness and hygiene of the Home Science~laboratory.
- 3) Taking and recording body temperature, pulse rate, :respiration rate.
- 4) Preparation of First Aid Kit.
- 5) Make poster and charts, emphasizing the need for personal and environmental hygiene.
- 6) Prepare a list of Ten (10) traditional Home remedies being practiced at your Home.

FOOD SCIENCE

Max. Marks: 100

Time: 3 hours

Marks :70

Practicals:30

Unit I : Food and Nutrition

12 Marks

- Definition of food, food nutrients, nutrition, optimum nutrition and Malnutrition.
- Functions of food, specific functions of Nutrients, sources of Nutrients.
- Malnutrition - Indications of Malnutrition, Types of Malnutrition laying stress on P.E.M (Protein Energy Malnutrition)

Unit II : Utilization of Food in the Body

12 Marks

- The digestive system & its functions.
- Digestion, absorption, transport and utilization of food in the body.
- Metabolism of Protein, Carbohydrates and Fats.
- Importance of water and fibre in our diet.

Unit III : Food Preservation

11 Marks

- Importance of food preservation.
- Causes of food spoilage.
- Principles of food preservation.
- Methods of food preservation. (House hold and Commercial).

Practicals :

15 Marks

- Draw and label the different parts of the digestive system.
- Observation of Children in a pediatric ward of a local hospital to note sign and symptoms of different conditions of malnutrition.
- Preparation of Fruit squashes, Jams, Murrabas, Pickles, Sun drying of fruit and vegetables.

Unit IV: Planning a Balanced Diet

14 Marks

- Definition of Kilocalorie, Calorie.
- Nutrition of infants, Toddlers, children, Adolescence and Adults.
- Nutrition for special condition: - pregnancy/lactation, invalids and convalescents.
- RDA (Recommended dietary allowances) for all the above mentioned categories.
- Meal planning: - Importance and factors affecting meal planning.

Unit V: Food Selections & Preparation

14 Marks

- Selection and storage of Perishable, semi-perishable and non-perishable foods.
- Standards, weights and measures for foods.
- Reason for cooking food, methods of cooking food.
- Moist heat, dry heat and frying.
- Action of heat on various nutrients and changes in nutritional values, color.
- Methods of enhancing nutritional value - germination, fermentation, fortification and proper food combination.

Unit VI: FOOD SANITATION

7 Marks

- Definition and meaning of Food hygiene.
- Factors affecting safety of food at home.
- Principles of food hygiene.
- Diseases transmitted through food, their signs, symptoms and prevention.
- Food Adulteration: - Definition and measuring.
- Common adulterants present in Cereals, pulses, milk and milk products, fats and oil,

SYLLABUS CLASS XI

sugar jaggery, honey, spices and Condiments.

- Ill effects of some of the adulterants present in the foods, kesari dal, metanil yellow, argemone seeds.
- Safety against Food Adulteration: - Prevention of food Adulteration Act.
- Standard marks on Foods. FPO, ISI, AGMARK.
- Food Laws: - Their Importance and Aim.

Practicals

15 Marks

- Practical experience in planning a days' meal for :-
 - Vegetarian
 - Non-Vegetarian
 - Different age groups.
 - Pregnancy and Lactation.
- Survey of local and regional dietary pattern.
- Market survey of cost and availability of food in general use. Weighing and measuring of foods.
- Practical experience in preparing meals for the family.
- Detection of Adulterants present in foods:- Cereals, pulses, Milk, Condiments.

MANAGEMENT OF RESOURCES

Theory: Marks : 70

Practicals:30 Marks

Unit I : Family Resources

12 Marks

- Meaning and definition of resources.
- Classification of Resources - Human and Material Resources.
- Characteristics of Resources.
- Factors affecting the use of resources.
- The Management Process - Planning, Organizing, Implementing, Controlling and Evaluation.
- Qualities of a Good Home maker.

Unit II : Housing

14 Marks

- Housing - Factors affecting minimum need for satisfactory living.
- Factors affecting selection of house(Site, Soil, Physical Features, Sanitary Conditions, Practical Convenience)
- Selection of furniture, furnishing and household equipments.
- Principles in planning a house.
- Requirement & Arrangement of furniture in different rooms of the house.
- Interior Decoration - Principles of Art, Importance of color in the home, Use of plants and flowers as decoration.

Unit III : Disinfection and Pest Control

9 Marks

- Common household pest and their control measures.
- Different types of pest control : Preventive and curative.
- Disinfectants: Classification and use.
- Cleanliness and sanitation - Cleaning of the house.
- Cleaning and polishing of Metals (Brass, Copper, Silver, steel and Aluminum).
- Cleaning of wooden surfaces, Glass, Wicker, Tiles and Marble surfaces.

Practicals

15 Marks

- Make a diagrammatic representation showing arrangement of furniture in different rooms.
a) Drawing room. b) Bed room c) Multi-Purpose room.
- Making Rangoli patterns for different occasions.
- Making different types of flower arrangements.
- Cleaning of metals.
- Cleaning of window panes.

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Unit I : Resource Management.

11 Marks

- Meaning and types of values, goals and standards.
- The family cycle: Decision making in family living.
- Planning for the use of resources on short term & long term basis.
- Need to manage the resources and methods of Conservation of shared resources.

Unit II : Time and Energy Management

12 Marks

- Time plan: Need and steps in preparing time plan.
- Importance of Rest and Leisure.
- Energy cost of different activities carried out in the home.
- Work Simplification - Meaning and Methods.
- Fatigue: Types, Ways of reducing fatigue.
- The relation of energy to the stages in the family life cycle.

Unit III : Money Management

12 Marks

- Family Income: Money Income, Real Income (Direct, Indirect) and Psychic income.
- Family Budget: Importance, types, steps in preparing budget.
- Means of supplementing family income.
- Savings: Need and methods of Savings.
- Consumer Education: Need and importance. Brief history of development of Consumer Education.
- Consumer Protection Act - Its salient features.
- Consumer's: Rights and Duties.

Practical

15 Marks

- 1) Preparing a Time plan for the mother and self.
- 2) Make a budget for the family.
- 3) Make a list of real Income available for their family.
- 4) Fill bank and post office saving account form.
- 5) Get practical experience in opening a savings account in the bank.
- 6) Survey of the locality to assess the awareness of the residents about their Consumer's Rights and Responsibilities.

पाठ्यक्रम
कक्षा—ग्यारवीं
विषय: हिन्दी
जम्मू कश्मीर बोर्ड

पूर्णांक: 100

समय: 3 घंटे

(भाग क)

1. काव्य

अंक: 20

साखी—कबीरदास मानसर पाठ्य पुस्तक में संकलित
सूरदास—बाललीला मानसर पाठ्य पुस्तक में संकलित
बिहारीलाल—नीति के दोहे (केवल छः दोहे)
देव—हंसी की चोट, सपना और दरबार

नोट: काव्यांशों की व्याख्या

कवि परिचय

पाठ्य पुस्तक के प्रश्नोत्तर

परीक्षापयोगी महत्वपूर्ण प्रश्नोत्तर

(भाग ख)

2. हिन्दी साहित्य का इतिहास

अंक: 20

1. वीरगाथा काल
(परिस्थितियाँ, विशेषताएँ, युगीन कवि)
2. भक्तिकाल
(भक्तिकाल का वर्गीकरण, परिस्थितियाँ, विशेषताएँ तथा युगीन कवि)
3. कहानी
(अर्थ, परिभाषा, तत्त्व, प्रकार)

(भाग ग)

निबन्ध

अंक: 20

चार-चरित्र : बालकृष्ण भट्ट
सच्ची वीरता: सरदार पूर्ण सिंह
मित्रता: आचार्य रामचन्द्र शुक्ल
टार्च बेचने वाला: हरिशंकर परसाई

नोट: निबन्धों का सार

लेखक परिचय (संक्षेप में)
पाठ्य पुस्तक के प्रश्नोत्तर
परीक्षायोगी महत्वपूर्ण प्रश्नोत्तर

(भाग घ)

कहानियाँ

अंक: 20

ईदगाह: मुशी प्रेमचन्द
अभाव: विष्णु प्रभाकर
उसकी माँ: पांडेय बेचन शर्मा 'उग्र'
बापसी: उषा प्रियंवदा

नोट: कहानियों का सार

कहानिकार का परिचय (संक्षेप में)
पाठ्य पुस्तक के प्रश्नोत्तर
परीक्षायोगी महत्वपूर्ण प्रश्नोत्तर

(भाग ड)

व्याकरण

अंक: 20

निबन्ध: सामाजिक, उत्सव, वैज्ञानिक, खेले, राष्ट्रीय आदि

पत्रलेखन: निजी-पत्र, आवेदन पत्र, व्यवसायिक-पत्र

अलंकार: अनुप्रास, उपमा, अतिशयोक्ति तथा उत्प्रेक्षा के लक्षण और उदाहरण

SYLLABUS CLASS XI

डोगरी (DOGRI)

Maximum Marks: 100

Time: 3 hours

(ख) व्याकरण

- पद्य भाग : (क) कविता : नमां जुग, सरगम।
गजलां : रामनाथ शास्त्री ते वेदपालदीप।
गीत : यश शर्मा।
चमुखे : मोहन लाल सपोलिया।
गद्य भाग : (ख) कहानियां : पागल, कफर्यू।
निबंध : शेरसिंह बनाम पंजूसम, क्षमा करना धन्यवाद।
एकांकी : नीलकंठ।
(ग) व्याकरण : गद्य ते पद्य भाग चा व्याकरण सरबन्धी सुआल।

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(ख) व्याकरण :

पद्य भाग : (क) कविता : भाव-छुआले, इक दिन गिल्लुए जदू मठोना

गजलां : वेदपाल 'दीप' तै शिव राम 'दीप' ।

गीत : यश शर्मा ।

चमुखे : मोहन लाल सपोलिया ।

गद्य भाग : (ख) कहानियां : संगलां, अजब सा ओह आदमी ।

निबंध : म्हिसदियां लीकरां, जीवन केह ऐ ?

एकांकी : नीलकंठ ।

(ग) व्याकरण : गद्य ते पद्य भाग चा व्याकरण सरबन्धी सुआल ।

Book Prescribed

A Textbook of Dogri 'Rishman' for Class XI published by J&K State BOSE

Code : 206

संस्कृत (SANSKRIT)

Marks: 100

Time: 3 Hrs.

- (क) गद्य भाग तथा रङ्गिणी : एन० सी० ई० आर टी द्वारा संकलित एवं संपादित पाठ उद्घनरय पत्नी प्रीति
- (ख) पद्य भाग (काव्य) कालिदास कृत कुमारसंभवम् (केवल पांचवां सर्ग)
पहले श्लोक से 45 वें श्लोक तक
- (ग) व्याकरण
1. स्वर संधि भेद सहित
 2. स्वरान्त शब्दों में से अकारान्त पुल्लिङ्ग, आकारान्त स्त्रीलिङ्ग
उकारान्त पु० शब्द
 3. भ्वादि गण में से भू, गम्, पठ्, स्म, और दृश धातु (लट्, लोट्, लृट् तथा विधिलिङ्ग लकारों में)
 4. समास – कर्मधरय तथा तत्पुरुष
 5. प्रत्यय – शतृ, शानच्
- व्याकरण के लिये निर्धारित पुस्तक :-
संस्कृत व्याकरण प्रदीप या सुबोध संस्कृत व्याकरण या संस्कृत व्याकरण प्रबोध
- (घ) साहित्य
1. रामायण का महत्त्व
 2. कालिदास कवि के रूप में

Code : 208

འཛིན་གྱི་བརྒྱུ་གཅིག་པའི་སློབ་ཆན།

BHOTI

Marks 100

སློབ་དེབ་གཞིན་ནུའི་མགུལ་བྱམ་ཁག་དང་པོ་
(J&K Board of School Education)

ཁག་དང་པོ་

ཡུལ་

- ༡ ཆེག་ལྷུག (Prose Section)
- ༢ ཆེགས་བཅད (Poetry Section)
- ༣ བད་སྟོད་སྐབས་ (Grammar Section)

ཁང་ 40

ཁང་ 20

ཁང་ 40

- ༡ ཆེག་ལྷུག (Prose Section)

Marks 20

ཡང་གི་སློབ་དེབ་ནང་གི་བཤམ་བསལ་སློབ་ཆན།

དཔེ་སྟོང་སྒྲ་སྐབས་སྐབས།

- ༡ ཆེ་སྟོག་གཅིད་པ་དང་ཞེས་སྐབས།

- ༢ མེས་པོ་ཆེ་དང་ཡང་གི་ཁམས་དང་བསམ་པའི་དབང་གི་ཞེས་སྐབས།

3. རྒྱུ་ལ་པ་ཅད་ (Poetry Section)

Marks 10

1. རྒྱུ་ལ་པ་ཅད་ནང་ནས་གྲགས་པ་ཆེན་པོ་གྲགས་པ་ཅད་པ་
2. རྒྱུ་ལ་པ་ཅད་ནང་གི་ཆེན་པོ་འོས་བསྐྱོར་གྱི་ཆེན་པོ་
3. རྒྱུ་ལ་པ་ཅད་ནང་གི་ཆེན་པོ་འོས་བསྐྱོར་གྱི་ཆེན་པོ་
4. རྒྱུ་ལ་པ་ཅད་ནང་གི་ཆེན་པོ་འོས་བསྐྱོར་གྱི་ཆེན་པོ་
5. རྒྱུ་ལ་པ་ཅད་ནང་གི་ཆེན་པོ་འོས་བསྐྱོར་གྱི་ཆེན་པོ་
6. རྒྱུ་ལ་པ་ཅད་ནང་གི་ཆེན་པོ་འོས་བསྐྱོར་གྱི་ཆེན་པོ་
7. རྒྱུ་ལ་པ་ཅད་ནང་གི་ཆེན་པོ་འོས་བསྐྱོར་གྱི་ཆེན་པོ་
8. རྒྱུ་ལ་པ་ཅད་ནང་གི་ཆེན་པོ་འོས་བསྐྱོར་གྱི་ཆེན་པོ་
9. རྒྱུ་ལ་པ་ཅད་ནང་གི་ཆེན་པོ་འོས་བསྐྱོར་གྱི་ཆེན་པོ་
10. རྒྱུ་ལ་པ་ཅད་ནང་གི་ཆེན་པོ་འོས་བསྐྱོར་གྱི་ཆེན་པོ་

3. བཅའ་ཁྲིམས་ (Grammar Section)

Marks 20

1. བཅའ་ཁྲིམས་ །
2. ཡི་གེ ། རྒྱུ་ལ་ །
3. རྒྱུ་ལ་པ་ཅད་པ་ཅད་པ་ །
4. རྒྱུ་ལ་པ་ཅད་པ་ཅད་པ་ །
5. རྒྱུ་ལ་པ་ཅད་པ་ཅད་པ་ །
6. རྒྱུ་ལ་པ་ཅད་པ་ཅད་པ་ །
7. རྒྱུ་ལ་པ་ཅད་པ་ཅད་པ་ །
8. རྒྱུ་ལ་པ་ཅད་པ་ཅད་པ་ །
9. རྒྱུ་ལ་པ་ཅད་པ་ཅད་པ་ །
10. རྒྱུ་ལ་པ་ཅད་པ་ཅད་པ་ །

ਸ਼ੈਲੀ ਛਾਂਡਾਂ-ਮੁਲਾਂਭਾ (Scheme of Assessment)

Note:-

བེལ་ཆད་བཅུག་པ་ནི་སྤྱེ་བྱ་ཡང་གིས་སྒྲུབ་སྒྲུབ་སྒྲུབ་ལྟོན་དེ་ལས་ཁྲུང་ས་ཀྱིས་བཞུག་པ་ནི་འཆར་
 བེལ་ནང་བཞུག་ཡོང་བྱ།

’ ཆེན་མཁའ་ (Prose Section)

Marks 20

- [illegible]

3 ಹೆಣ್ಣು ಬಣ್ಣ (Poetry Section)

Marks 10

- | | | |
|---|--|------|
| 9 | གཤམ་གསལ་ཆེགས་བཅད་བཞི་ཡི་ནང་ནས་འབྱེད་དང་བཅས་པ་གཉིས་དྲུག་ | |
| | དེ་ལྟར་དུ་དང་ཡང་མེ་ཟེ་གང་ཤུང་ནང་བསྟུར་བྱ་། | ཡང་4 |
| 2 | ཆེགས་བཅད་གཉིས་ཀྱི་ནང་ནས་གཅིག་གི་ཆེག་འབྱེད་སྤྱང་དྲུག་གྱིས་། | ཡང་2 |
| 3 | གཤམ་གསལ་ཆེགས་བཅད་ཚུལ་ཚུལ་མི་འདྲི་བ་གཉིས་ཀྱི་ནང་ནས་གཅིག་གི་ | |
| | དོས་འཛིན་བྱ་བྱ་། | ཡང་2 |
| 4 | སྤྱང་གི་མཐའ་གཉིས་ཀྱི་ནང་ནས་གཅིག་གི་ཡོད་པུས་མདོར་བསྟུན་འབྱེད་བྱ་། | ཡང་2 |

4525 (Grammar Section)

Marks 20

- | | | |
|---|--|-------|
| १ | གཤམ་གསལ་ཅུམ་གཞི་བཞི་འི་ནང་ནས་གཅིག་གི་སྒྲིང་ཆེག་༡༠༠་ལས་མི་ཉུང་
བ་འབྱིན་གྱི། | ཅང་ 7 |
| २ | ཡི་གེ་ ཡང་ན་ ལྷན་ཞུ་གསུམ་གྱི་ནང་ནས་གཅིག་འབྱིན་གྱི། | ཅང་ 4 |
| ३ | གཤམ་གསལ་བཟླ་དེ་པ་ལྔ་ཡི་ནང་ནས་གསུམ་དག་པོ་འབྱིན་གྱི། | ཅང་ 2 |
| ॣ | གཤམ་གསལ་སྒྲིང་ཆ་བཞི་པོ་འབྲེང་ས་གྱི། | ཅང་ 2 |
| མ | གཤམ་གསལ་གདམ་དཔེ་ལྔ་ཡི་ནང་ནས་གསུམ་ལ་བཟླ་དེ་པ་འབྱིན་གྱི། | ཅང་ 2 |
| ཤ | གཤམ་གསལ་བྱ་བ་བཅུད་ཀྱི་ནང་ནས་བཞི་འི་འདས་མ་འོངས་པ་དང་ད་ལྟ་
བའི་ཆེག་སྒྲུབ་སྒྲིང་ས་འབྱིན་གྱི། | ཅང་ 1 |
| མ | གཤམ་གསལ་ཆེག་བཅུད་ཀྱི་ནང་ནས་བཞི་ལ་འགལ་བླ་འབྱིན་གྱི། | ཅང་ 1 |
| ཤ | གཤམ་གསལ་བཟླ་དེ་པ་བཞི་གཅིག་འབྲེང་ག་ནས་དོན་ཆ་ཆང་སྒྲིང་པ་འབྱིན་གྱི། | ཅང་ 1 |

१. **ಹೆಸರು** (Prose Section)

Marks 20

ཨང་གི་སྒྲིབ་དེབ་ནང་གི་གསལ་བསྐད་ཆེན་མོ་ལྟར་ཡིན།

१. རྩིང་ཐལ་པ་ནས་ཚོམ་སྒྲུབ་པའི་ཆེ་བོལ་མར་དགེ་བའི་བཞེས་གཉིན་གཉིན་པར་བྱའི་མོག་ལ།
 २. མཐོ་རིམ་གྱི་གནས་རིན་པོ་ཆའི་རང་བཞིན་གྱི་མཁའ་མོག་ལ།
 ३. ཡིད་ལམ་ཁ་ཅིག་གི་ལྷ་མ་ནི་ཞེས་མོག་ལ།
 ४. བསམ་བློན་མེད་པར་ཡང་ནི་བདག་མེད་པའི་དོན་ལ་ཞེས་མོག་ལ།
 ५. དཀོ་གཉིས་པ་ཐུན་མར་བའི་ཐུན་གྱི་དབྱེ་བཞིས་མོར་བཞད་པ་ལ་གཉིས་ཏེ་ཞེས་མོག་ལ།

3 རྒྱུ་མཁའ་འཕེལ་ (Poetry Section)

Marks 10

ཡང་གིསྟོབ་དེས་ནང་གི་གདམ་གསལ་རྩེགས་སུ་བཅད་པ་ཀླ་འོད་

- १) दद-दद-वड्ड-अमु-दद-दद-पद-
- २) दद-पद-दद-दद-दद-दद-
- ३) दद-वड्ड-अमु-दद-दद-पद-
- ४) दद-दद-वड्ड-अमु-दद-दद-

३. **बन्धुत्व** (Grammar Section)

Marks 20

- [illegible]

ਸਿੱਖ ਛੱਤ ਪੜ੍ਹਾਈ (Scheme of Assessment)

ॐ नमो भगवते वासुदेवाय ॥ श्रीकृष्णाय नमः ॥

ལྷན་པ་ལྟར་སྒྲུབ་སྒྲུབ་ལུ་ཤེས་ཚད་ལྟར་སྒྲུབ་

2. **ಕಥಾಭೂಮಿ (Prose Section)**

Marks 20

- | | | |
|---|--|--------|
| ७ | <p> རང་གི་སློབ་ཆན་ནང་ཡོད་པའི་ཚེས་ལྟར་གི་བཅད་མཆམས་ཁག་བཞིའི་ནང་
 ནས་གཉིས་ཀྱི་འབྲེལ་དང་བཅས་པ་སྐད་ནས་ཉེས། ། ༡༥ ། ཡང་ན་ཨང་པེ་
 ཟེའི་ནང་དུ་བསྒྲུར་བྱ། </p> | ཨང་ 07 |
| १ | <p> རང་གི་སློབ་ཆན་ཀུན་ལེགས་པར་ཤེས་ཡོད་མིན་བཅུག་ཕྱིར་དྲི་བ་ལྗེའི་ནང་ནས་
 བསྒྲུལ་ལ་ལན་འབྲི་བྱ། </p> | ཨང་ 04 |
| ३ | <p> རང་གི་སློབ་ཆན་ནང་ཡོད་པའི་ཚེས་ལྟར་ཚུམ་པ་པོ་གཉིས་ཀྱི་སྐོར་མདོར་བསྒྲུལ་
 ཞིག་འབྲི་བྱ། </p> | ཨང་ 03 |
| ༥ | <p> ཚེས་ལྟར་ཁག་གཉིས་ཀྱི་ནང་ནས་གཅིག་གི་འབྲེལ་དང་བཅས་གསལ་བཤད་འབྲི་
 བྱ། </p> | ཨང་ 03 |
| | <p> ཚེས་ལྟར་ཁག་གཅིག་བཞག་ལྷ དེ་བཟུགས་དེ་དྲི་བ་བཞི་ལ་ལན་འབྲི་བྱ། </p> | ཨང་ 03 |

3 ཆེ་གས་བཅད (Poetry Section)

Marks 10

- ཆོགས་བཅད་པ་བཞིའི་ནང་ནས་གཉིས་ཀྱི་འབྲེལ་དང་བཅས་པོད་མྱད་ནས་
 ཉིཿ ཟུང་། ཡང་ན་ཨང་རེ་བཞིའི་ནང་དུ་འབྲེལ་། ཨང་ 04
- ཆོགས་བཅད་གཉིས་ཀྱི་ནང་ནས་གཅིག་གི་འབྲེལ་དང་བཅས་པའི་ཆོག་འབྲེལ་
 ལམ་ སྤང་དོན་གྱིས་། ཨང་ 02
- དཔའི་བློ་བཞིའི་ནང་ནས་གཉིས་ཐོག་པ་རྩ་མ་འབྲེལ་། ཨ་ 02
- པ་གཉིས་དེའི་ནང་ཡོད་པའི་ཆོགས་བཅད་རྩ་མ་པ་པོ་གཉིས་ཀྱི་ནང་ནས་གཅིག་
 རེ་ཕྱུས་མདོར་བསྒྲུབ་ཏེ་འབྲེལ་། ཨང་ 02

2. བཅུ་གྲྭ་ (Grammar etc.)

Makrs 20

1. བཅུ་གྲྭ་ལ་རྩུ་མ་གཞི་བཞི་ནང་ནས་བཅུ་གྲྭ་གྲྭ་རྩུ་མ་ 100 ལས་མི་
ལྷོ་བཅུ་གྲྭ་གྲྭ་ | ལྷོ་ 07
2. ལོ་གཞི་ལྷོ་མ་ ལྷོ་གྲྭ་ ལོ་མང་ནས་བཅུ་གྲྭ་ལྷོ་གྲྭ་ | ལྷོ་ 04
3. བཅུ་གྲྭ་ལ་བཅུ་དེ་ལ་ལྷོ་མ་ནང་ནས་བཅུ་གྲྭ་ལྷོ་གྲྭ་ | ལྷོ་ 02
4. ལྷོ་མ་བཅུ་གྲྭ་ལྷོ་གྲྭ་ | ལྷོ་ 02
5. བཅུ་གྲྭ་ལ་ ལོ་མང་ནས་བཅུ་གྲྭ་ལྷོ་གྲྭ་དང་བཅུ་དེ་ལ་ལྷོ་གྲྭ་ | ལྷོ་ 02
6. ལྷོ་གྲྭ་བཅུ་གྲྭ་ནང་ནས་བཅུ་གྲྭ་ལྷོ་གྲྭ་ ལྷོ་གྲྭ་དང་ ལྷོ་གྲྭ་ལྷོ་གྲྭ་ | ལྷོ་ 01
7. ལྷོ་གྲྭ་བཅུ་གྲྭ་ | ལྷོ་ 01
8. ལྷོ་གྲྭ་བཅུ་གྲྭ་ནང་ནས་བཅུ་གྲྭ་ལྷོ་གྲྭ་ལྷོ་གྲྭ་ | ལྷོ་ 01
9. ལྷོ་གྲྭ་ལ་བཅུ་གྲྭ་ལྷོ་མ་ལྷོ་མ་ལྷོ་གྲྭ་ལྷོ་གྲྭ་ལྷོ་གྲྭ་ | ལྷོ་ 01

Code : 207

ਜਮਾਤ ਯਾਰਵੀ (ਹਾਇਰ ਸਕੈਂਡਰੀ ਪਾਰਟ ਫਸਟ)

ਸਲੈਬਸ ਪੰਜਾਬੀ (PUNJABI)

Maximum Marks: 100

Time: 3 hours

- (1) ਕਾਵਿ ਪ੍ਰਵਾਹ ਸੰਪਾਦਕ ਦੀਵਾਨ ਸਿੰਘ (ਕਵਿਤਾ)
- (ੳ) ਸ਼ੇਖ ਫਰੀਦ
 - (ਅ) ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ
 - (ੲ) ਦਮੋਦਰ
 - (ਸ) ਪੀਲੂ
 - (ਹ) ਭਾਈ ਗੁਰਦਾਸ ਜੀ
 - (ਕ) ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ ਜੀ
- (2) ਦਸ ਝਰੋਖੇ ਨਵਤੇਜ ਸਿੰਘ ਨਿੱਕੀ ਕਹਾਣੀ
- (ੳ) ਪ੍ਰੀਤਾਂ ਦੇ ਪਹਿਰੇਦਾਰ ਕਹਾਣੀ ਦਾ ਸਾਰ

ਅ) ਤਾਸ਼ ਦੀ ਆਦਤ ਪਾਤਰ ਚਿਤ੍ਰਣ

(ੲ) ਬਾਰੀ ਦੀ ਧੀ

(ਸ) ਪ੍ਰੇਮੀ ਦੇ ਨਿਆਏ

(ਹ) ਪਠਾਣ ਦੀ ਧੀ

(੩) ਇਕਾਂਗੀ ਪੰਜ ਚੋਣਵੇਂ ਇਕਾਂਗੀ ਸੁਰਜੀਤ ਸਿੰਘ ਸੇਠੀ

(ੳ) ਮਨ ਦੀਆਂ ਮਨ ਵਿਚ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ

(ਅ) ਇਕ ਐਤਵਾਰ ਪਾਤਰ ਚਿਤ੍ਰਣ

(ੲ) ਰਾਤ ਕਟ ਗਈ

ਵਿਆਕਰਣ

(ੳ) ਲੇਖ ਰਚਨਾ

(ਅ) ਚਿੱਠੀ ਪੱਤਰ

(ੲ) ਅਖਾਨ ਤੇ ਮੁਹਾਵਰੇ

4. ਕਾਵਿ ਪ੍ਰਵਾਰ: ਕਵਿਤਾ: ਦੀਵਾਨ ਸਿੰਘ
 (ੳ) ਨਜ਼ਾਬਤ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ
 (ਅ) ਵਾਰਸ ਸ਼ਾਹ ਕਵਿਤਾ ਦਾ ਸਾਰ
 (ੲ) ਹਾਸਮ
 (ਸ) ਸ਼ਾਸ ਮੁਹੰਮਦ
 (ਹ) ਫ਼ਸਲ ਸ਼ਾਹ
 (ਕ) ਮੁਹੰਮਦ ਬੂਟਾ ਗੁਜਰਾਤੀ
5. ਦਸ ਝਰੋਖਤ: ਨਵਤੇਜ ਸਿੰਘ: ਨਿੱਕੀ ਕਹਾਣੀ
 (ੳ) ਕਰਾਮਾਤ ਕਹਾਣੀ ਦਾ ਸਾਰ
 (ਅ) ਸਵੇਰ ਹੋਣ ਪਾਤਰ ਚਿਤ੍ਰ
 (ੲ) ਤੂਤੀ ਦੀ ਪੰਡ
 (ਸ) ਦੇਸ਼ ਵਾਪਸੀ
 (ਹ) ਗੁਲਬਾਨੋ
6. ਪੰਜ ਚੋਣਵੇਂ ਇਕਾਂਗੀ
 (ੳ) ਦਿਲ ਦੀ ਬੁੱਲ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ
 (ਅ) ਅਪਮਾਨ ਪਾਤਰ ਚਿਤ੍ਰ

ਅਵਾਕਰਣ

- (ੳ) ਲੇਖ ਰਚਨਾ
- (ਅ) ਸ਼ਬਦ ਰਚਨਾ ਤੇ ਸ਼ਬਦਾਵਲੀ
- (ੲਕ) ਵਿਰੋਧਅਰਥਕ ਸ਼ਬਦ
- (ਦੂਜਾ) ਅਗੇਤਰ ਤੇ ਪਿਛੇਤਰ
- (ਤੀਜਾ) ਬਹੁਅਰਥਕ ਸ਼ਬਦ
- (ਚੌਥਾ) ਭਿੰਨਅਰਥਕ ਸ਼ਬਦ

KASHMIRI

مضمون: کاٹشر جماعتہ: کھم نمبرات: ۱۰۰

- * نثری سبقن ہندحوالہ میں ۲۵، نمبرن ہندک سوال پڑھئے۔
 * کتابہ منز شامل شاعری ہندحوالہ میں ۲۵، نمبرن ہندک سوال پڑھئے۔
 * بچن ہنر تحریری تہ تخلیق صلاحیت پرکھاؤ، خاطر میں ۲۵، نمبرن ہندک سوال پڑھئے۔
 * گرامرس متعلق میں ۲۵، نمبرن ہندک سوال پڑھئے۔

حصہ (۱) نثر

- [illegible]

حصہ (ب) شاعری

- [illegible]

حصہ (ج) تخلیقی تہ تحریری سوال

- ۱۰: تزیو عنوانو منبر اُکس پڙھ مضمون (زچھر ۱۰۰ پڙھ ۱۵۰ تام) ----- ۱۰ نمبر
- ۱۱: چڙھي يادر خاس ----- ۸ نمبر
- ۱۲: اجباري رپورٽ، ميٽنگ / تقرير بهنو کاروائی، پوسٽر (اشتہار) لکھڻ ----- ۷ نمبر

حصہ (د) گزائر

- ۱۳: کلمه جماثر هنر کلمه منز شامل پتہ کنیہ و نہ آمرن مشقن ہند حوالہ گز امر۔ پنڈ ہو (۱۵) سوالو منز دین
سوالن ہندی جواب -----
 $10 \times \frac{2}{2} = 25$ نمبر

X line

Code : 209

ARABIC

Term 1st = 35 marks

Unit 1

Maximum Marks: 100

- 1/1 الحروف الهجائية
- 2/2 منخرج الحروف
- 3/3 المفردات
- 4/4 الحروف القيسية و القمرية
- 5/5 الحركات
- 6/6 التركيب و التانيث
- 7/7 المفرد و ثنية و الجمع
- 8/1 تقسيم الكلمة إلى الاسم و ال عمل و الحرف
- 9/2 تقسيم الاسم إلى ال ذرة و المعرفة
- 10/3 اسم العلم
- 11/4 سم الضمير
- 12/5 اسم الإشارة
- 13/6 اسم الموصول
- 14/1 الماضي و تصريفه
- 15/2 المضارع و تصريفه
- 16/3 الامر و تصريفه
- 17/4 النهى و تصريفه
- 18/5 تقسيم الفعل إلى اللازم و المتعدي
- 19/6 تقسيم الفعل إلى المعروف و المجهول

- 20/1 الجملة الاسمية
- 21/2 الجملة الفعلية
- 22/3 المركب التوصيفي
- 23/4 المركب الإضافي
- 24/5 الأسماء الممنوعة من الصرف
- 25/1 الأعداد
- 26/2 أسماء الأيام
- 27/3 شهور السنة
- 28/4 فصول السنة
- 29/5 الآيات القرآنية
- 30/6 الأحاديث النبوية

- 31/1 القرآن الكريم
- 32/2 المسجد
- 33/3 تلميذ أمين
- 34/4 التعاون
- 35/5 مدرستي
- 36/6 الأشعار

ARABIC

Theory: 100 Marks

Time: 3 Hrs.

Part 1 Quran and Al-Hadith.

(4x6=24)

1. Translation of Quranic verses of the Prescribed Text book into Urdu or English with internal choice. (6)
2. Translation of Al-Hadith into Urdu or English with internal choice. (6)
3. Explain with reference to the context in Urdu or English (based on Suras prescribed in Text Book) with internal choice. (6)
4. Writing a brief note on Al-Quran in Arabic Prescribed in the Text Book. (6)

Part 2 Prose Section.

(4x6=24)

1. Translation of One Paragraph out of two into Urdu or English. (6)
2. Filling in the blanks with internal choice from prescribed Text Book. (6)
3. Explanation with reference to the context in Urdu or English based on passage extracted from the prescribed Text Book with internal choice. (6)
4. Difference of "SUN" and "MOON" letters based of different examples which are given in the prescribed Text Books. (6)

Part 3 Writing Skills

(22)

1. Five multiple choice questions from Lesson No. 08 to 10 of the prescribed Text Book. (5)
2. Translation of six words out of Twelve from the prescribed Text Book. (6)
3. Six Simple Questions in Arabic Language to be asked. (6)
4. Identification of different Nouns and Verbs. (5)

Part 4 Questions on applied Grammar

Topics are given below.

Marks: 30

الحركات - التذكير والتأنيث - المفرد والتثنية والجمع - اسم الزمير
 اسم الإشارة - اسم الموصول - الفعل الماضي - الفعل المضارع - فعل الأمر
 فعل النهي - الفعل اللازم - الفعل المتعدي - الفعل المرفوع
 الفعل المجهول - الجملة الفعلية - الجملة الاسمية - المربك التوضيحي
 المربك الإيضائي - الأسماء المنوعة من العرف - الأعداد -

Text Book Prescribed

Textbook of Arabic for Class 11th Published by J&K State Board of School Education

PERSIAN

زبان آموزی

درس ۱ تا ۶

بخش نثر

دلرا و سارا ۱ تا ۸

بخش نظم

راه مدرسه

زبان آموزی

درس ۷ تا ۱۰

بخش نثر

تخته سیاه

ماه و خورشید

بخش نظم

دهریقتراز مایر

ملکونکن

کتالبرخوب

زبان آموزی

درس ۱۱ تا ۱۴

بخش نثر

ماه و سال

لاک پشت و مرغابی

بخش نظم

صبح

درختکاری

PERSIAN

Theory: 100 Marks

Time: 3 Hrs.

There shall be one theory paper of 100 marks of 3 hours duration that contains three following points.

- | | |
|--|----------|
| 1. Language portion of the prescribed text book. | 40 Marks |
| 2. Prose portion of the prescribed textbook. | 30 Marks |

- ۱- دارا و سارایا تا ۸
- ۲- تخت و سیاه
- ۳- ماه و خورشید
- ۴- ماه و سال
- ۵- لاک پشت و مرغابی ها
- ۶- پیغمبر و قرآن

- | | |
|---|----------|
| 3. Poetry portion of the prescribed textbook. | 30 Marks |
| Selected Chapter | |

- | | |
|--------------------------------------|---------------------|
| ۱- راز مدرسه | ۲- مهربان شراز مادر |
| ۲- ماگودکان | ۳- کتاب خوب |
| ۵- صبح | ۴- درختکاری |
| ۶- شمع سندی شیرازی (مناجات - همدردی) | |

SYLLABUS CLASS XI

Scheme of Assessment:-

- Q.1. Translation of six persian sentences into English/Urdu out of eight sentences. 06 Marks
- Q.2. Translation of six English/ Urdu sentences into persian out of eight sentences. 06 Marks
- Q.3. Six questions of one marks each will be asked out of eight questions. 06 Marks
- Q.4. Coryugation of persian verbs will respect to past and present and future tense with internal choice. 06 Marks
- Q.5. Fill in the blanks with suitable persion words. 06 Marks
- Q.6. To write the meaning and sentences of five persian words into persian out of eight. 05 Marks
- Q.7. Arrangement of sentences. 05 Marks

Text Book Prescribed

Textbook of Persian for Class 11th Published by J&K State Board of School Education

Code : 212

URDU

M. Marks: 100

Time: 3Hrs.

سوال کے نمبرات	سوالات کا خاکہ	حصہ	نمبرات
۵	سوال نمبر ۱۔ کتاب کے نثری اسباق سے لے گئے دو اقتباسات میں سے ایک کو سیاق و سباق کے ساتھ سلیس لکھنا	الف	
۵	سوال نمبر ۲۔ دئے گئے دو غیر نصابی اقتباسات میں سے کسی ایک کے آخر پر دئے گئے تین سوالات کے جواب لکھنا		
۵	سوال نمبر ۳۔ کسی ایک نثری سبق کا خلاصہ لکھنا۔ (دو میں سے ایک)		
۳	سوال نمبر ۴۔ کتاب میں درج نثری اسباق کے آخر پر دئے گئے سوالات میں سے پوچھے گئے چار سوالات میں سے دو کے جواب لکھنا	ب	۲۵
۵	سوال نمبر ۵۔ شامل نصاب نثر نگاروں میں سے پوچھے گئے تین میں سے کسی ایک نثر نگار کے حالات زندگی یا ادبی خدمات پر نوٹ لکھنا		
۵	یا شامل نصاب نثری اصناف میں سے دو میں سے ایک پر نوٹ لکھنا		
۶	سوال نمبر ۶۔ شامل نصاب غزلیات میں سے پوچھے گئے ۱۵ اشعار میں سے تین کی تشریح کرنا		
۶	یا شامل غیر نثری اصناف میں سے پوچھے گئے دو بندوں میں سے کسی ایک بند کی تشریح کرنا	۲۵	
۵	سوال نمبر ۷۔ شامل نصاب شعراء میں سے سوالنامہ میں پوچھے گئے تین شعراء میں سے کسی ایک کے حالات زندگی یا ادبی خدمات کا جائزہ	شاعری	
۳	سوال نمبر ۸۔ شامل نصاب نظموں میں سے پوچھی گئی تین نظموں میں سے کسی ایک نظم کا خلاصہ لکھنا۔		
۳	سوال نمبر ۹۔ شامل نصاب شعری اصناف میں سے کسی ایک صنف پر نوٹ لکھنا۔ (تین میں سے ایک)		
۶	سوال نمبر ۱۰۔ دی گئی چھ شعری اصطلاحات میں سے تین کی مثالوں کے ساتھ وضاحت کرنا		
۱۰	سے متعلق ہونے چاہیے۔	تخلیقی	۲۵
۸	دئے گئے تین نثری نگاروں باری رو قلمی خطوط پر درخواست میں سے کسی ایک کو لکھنا۔	کام	
۷	انتخابی اشتہار یا رپورٹ تحریر کرنا۔		
۱۵	سوال نمبر ۱۱۔ شامل نصاب تحریکات، رجحانات، ادارہ جات وغیرہ سے متعلق پوچھے گئے چار سوالات میں سے دو کے مفصل جوابات لکھنا۔	قواعد	
۱۰	سوال نمبر ۱۲۔ معروف نثری سوالات۔ قواعد سے متعلق پانچ اور کتاب سے متعلق پانچ	اور ادبی	۲۵
		تاریخ	

Text Book Prescribed

Baharistan Urdu for Class 11th Published by J&K State Board of School Education

Introduction of public Administration

Unit : I Introduction

Meaning, scope and significance of Public Administration; Dichotomy of Politics and public Administration, Evolution of Public Administration, Public Administration management in NEW PUBLIC ADMINISTRATION.

Unit : II Approaches

Approaches: Classical approach, Human Relation approach and Ecological approach.

Unit : III Classical Thought

Management Thought: Henri Fayol - F.W Taylor, Classical Theory - Luther Gulick, Bureaucracy - Max Weber

Unit : IV Human Relations and behavioural thought

Human Relation school Elton Mayo; Decision making - Herbert Simon, Theory X and Y : McGregor, Hierarchy of needs : Abraham maslow

Unit : V Principles

Principle-1: Division of work and coordination, Principle-ii: Hierarchy, Unity of command and span of control, centralization and decentralization, Delegation, Line and Staff.

Unit : VI Concepts

Administrative planning, Leadership, Supervision, Communication, Public Relation

Unit : VII Public policy

Models of policy making, public policy formulation, Evaluation and review, limitations of evaluation, Role of Media

Unit : VIII Financial administration

Financial Administration - Meaning, purpose and significance; Budget - types of Budget

Unit : IX Accountability and citizen administration

Concepts of accountability and control, Legislative, Executive, and judicial control over administration, citizen and administration, citizen charter/public service guarantee Act 2011. Right to Information Act in India

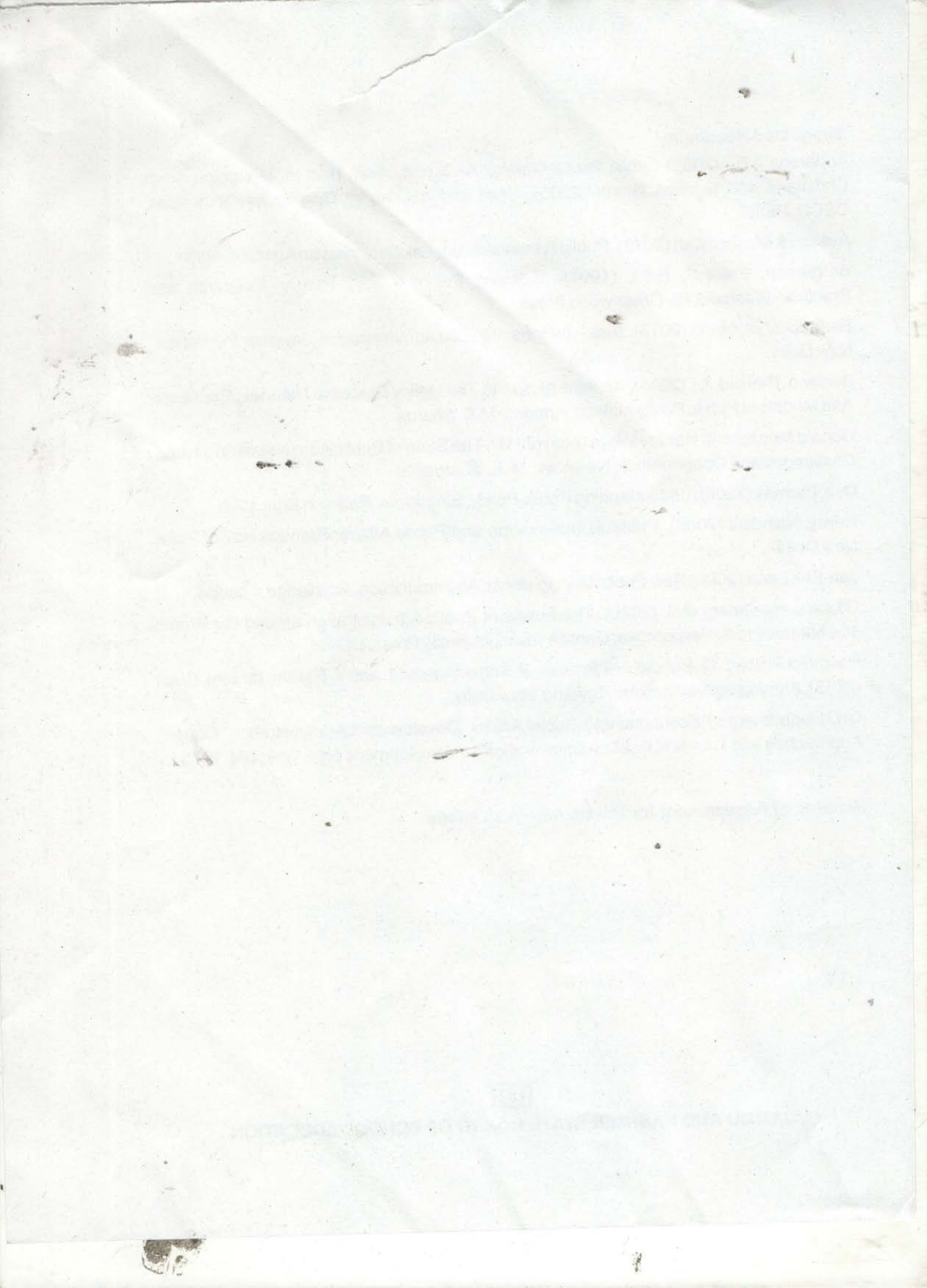
Unit : X Advancement

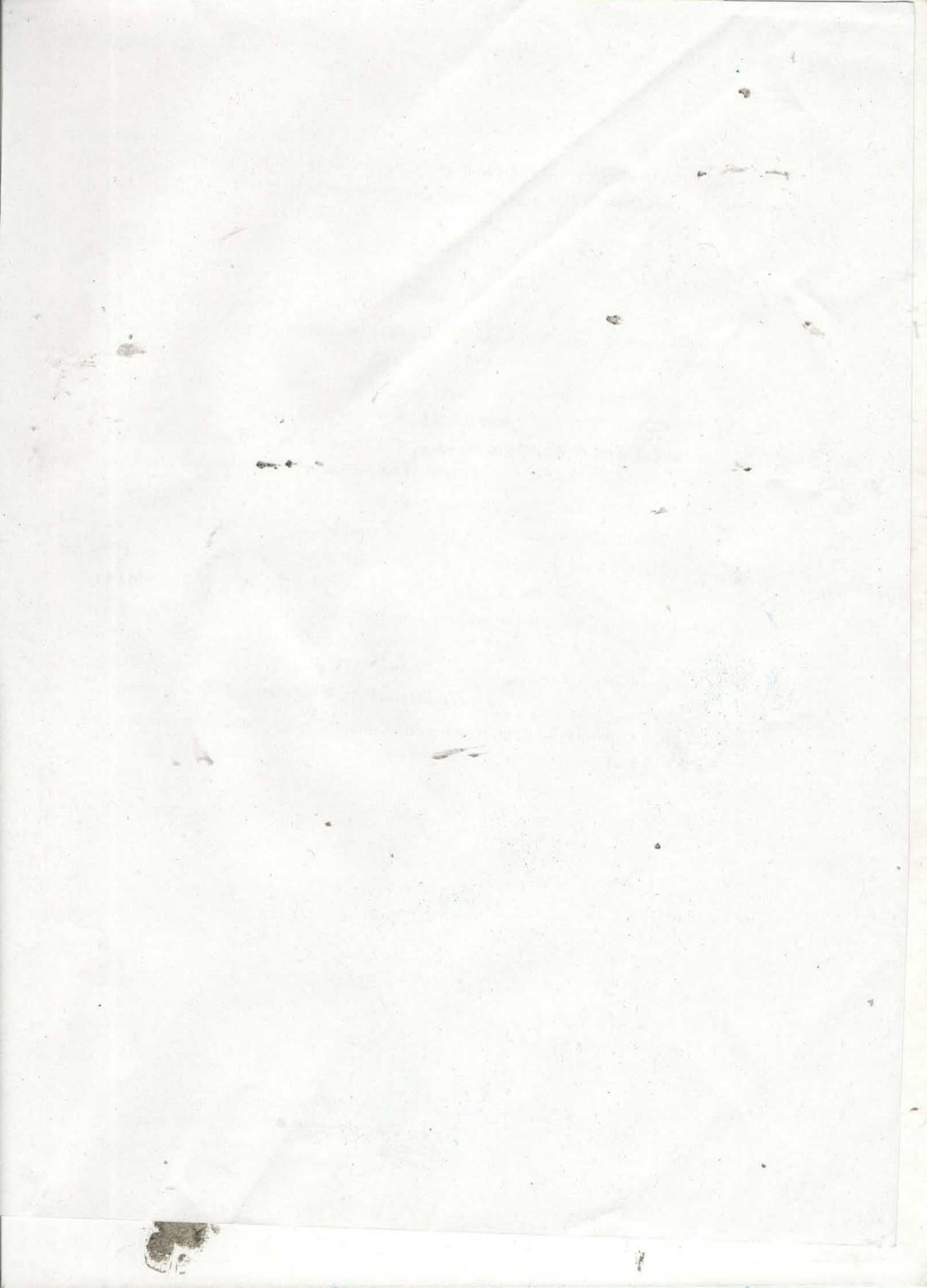
New Public Management, Globalization and Public Administration, Governance and Good Governance

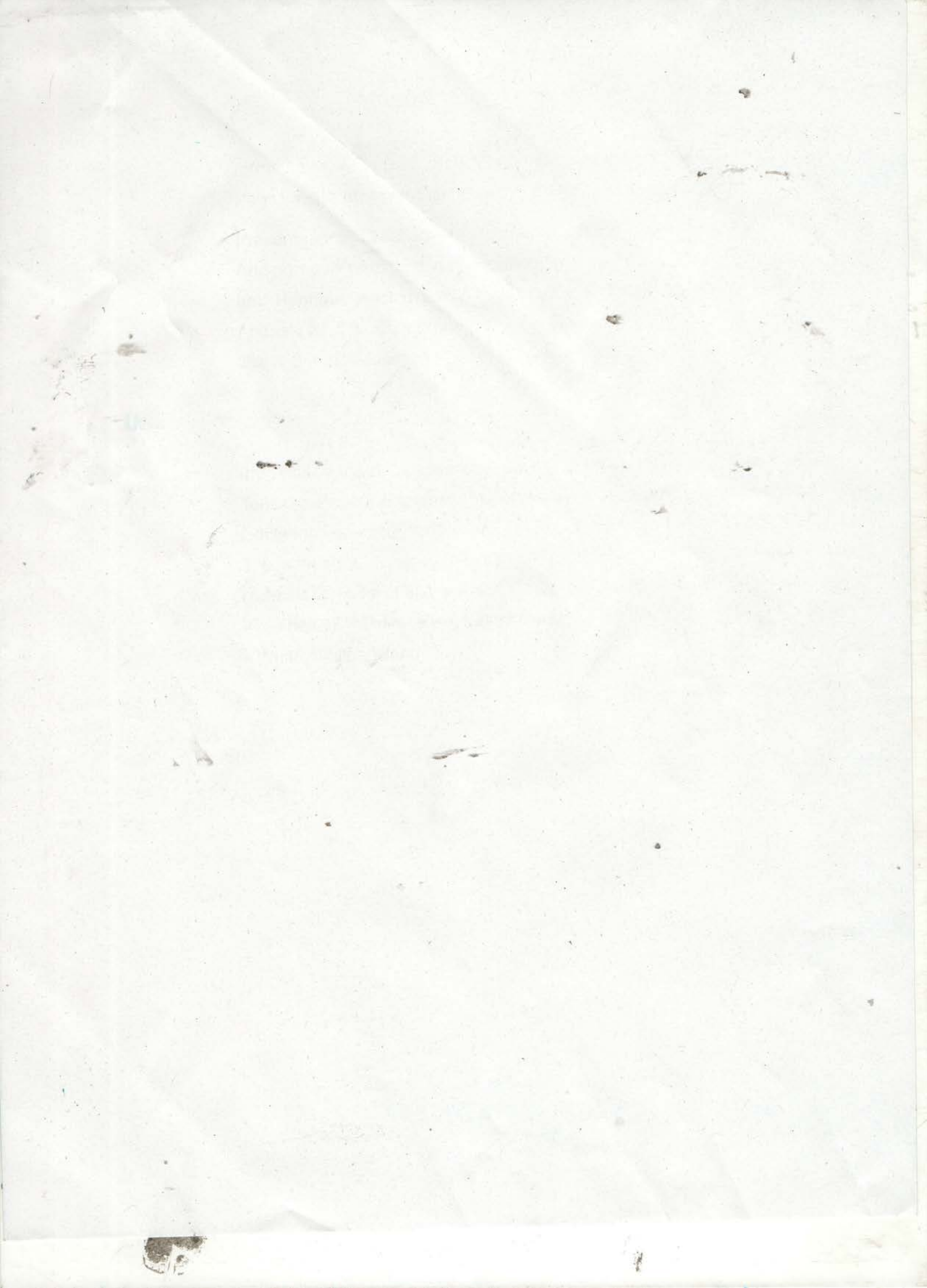
Suggested Readings


- Anderson J.E., (2006) Public Policy-Making: An introduction, Boston, Houghton Arndt
- Christiane and Charles Oman (2006), Uses and Abuses of Governance Indicators, OECD, Paris.
- Avasthi & Maheshwari (2012), Public Administration, Lakshminarayan Agarwal, Agra
- Bergerson, Peter J. (ed.), (1991), Teaching Public Policy: Theory, Research and Practice, - Westport, RI: Greenwood Press
- Bhattacharya, Mohit (2013), New Horizons of Public Administration, Jawahar Publishers, New Delhi.
- Birkland Thomas A., (2005), An Introduction to The Policy Process: Theories, Concepts, And Models of Public Policy Making, Armonk; M.E. Sharpe
- Donald Menzel and Harvey White (eds) (2011). The State of Public Administration: issues, Challenges and Opportunities, New York, M. E. Sharpe.
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- Henry, Nicholas (2006), Public Administration and Public Affairs, Prentice Hall of India, New Delhi.
- Jan-Erik Lane, (2000) New Public Management: An Introduction, Routledge, London.
- O'Leary, Rosemary et al. (2010), The Future of Public Administration around the World: The Minnowbrook Perspective, George Town university Press, DC
- Ravindra Prasad, D. Prasad, VS Prasad, P. Satyanarayana, and Y. Pardhasaradhi, (eds) (2013), Administrative Thinkers, Sterling, New Delhi.
- UN, Department of Economic and Social Affairs, Development Administration: Current Approaches and Trends in Public Administration for Development. New York, UN, 1975.

Scheme of Assessment for Public Administrations









SYLLABI AND COURSES OF STUDY

FOR
Class XI



The Jammu & Kashmir State Board of School Education