

Class – XII (Science) (2023-24)
English

I Term

(April - September)

April

Familiarization with the course and marking scheme

Literature

1. My Mother at Sixty-Six
2. Keeping Quiet
3. A Thing of Beauty
4. Aunt Jennifer's Tigers
5. A Roadside Stand

Language

Writing: Report Writing

May

Literature

1. The last lesson
2. The Lost Spring
3. Deep Water
4. The Rattrap

Language

Writing Skills : Articles

July

Literature

1. Literature Indigo
2. The Interview
3. Poets and Pancakes

Language

Writing Skills Invitations & their replies ,
Noticing Writing Letters
Job Application

August

Literature

1. The Third Level
2. The Tiger King
3. Going Places

Language

ASSESSMENT OF LISTENING AND SPEAKING
(ASL)

September

Literature

1. Journey to the End of the Earth
- Revision

II Term

(October - February)

October

Literature

1. The Enemy
2. On the face of it

November

Literature

1. Memories of Childhood

Revision

December

Annual Exam

January

Preboard

Class 12 - Mathematics(2023-24)

Ist Term		(April - September)
April	1. Inverse Trigonometry 2. Continuity and Differentiability	
May	1. Applications of derivatives 2. Linear Programming Problems	
July	1. Integrals 2. Application of Integrals	
August	1. Differential equation 2. Matrices	
September	1. Determinants	
2nd Term		(October – December)
October	1. Vector Algebra 2. Three-dimensional Geometry	
November	1. Probability 2. Relations and function	
December	Revision	

Class XII - PHYSICS (2023-2024)

Ist Term		(March - September)
APRIL:	•ELECTROSTATICS PART 1 •ELECTROSTATIC PART 2 Electric charge and its properties, Electric field , Electric dipole, Electric potential, equipotential Surface, Gauss theorem and its applications . Electric capacitance and parallel plate capacitor.	
MAY:	CURRENT ELECTRICITY Current Electricity, Ohm’s law, Kirchhoff’s law, Resistors in series and in parallel, Measurement of current, resistance, e.m.f. Potential difference and internal resistance, Wheatstone bridge.	

JULY:	MAGNETIC EFFECT OF AN ELECTRIC CURRENT AND MAGNETISM Oerster's experiment, magnetic field and field lines, Ampere's circuital Law and its applications Biot savart law, moving coil galvanometer and its principle. Bar magnet and its field on axial and equatorial point, dia, para and ferromagnetic material, their properties
AUGUST:	ELECTROMAGNETIC INDUCTION AND ALTERNATING CURRENT CIRCUITS Electromagnetic emf and current, self and mutual induction, ac current in resistor, inductor and capacitor, LCR circuit, AC generator and transformer • EMW Idea about displacement current, emwaves and its properties, electromagnetic spectrum and uses of each wave.
SEPTEMBER:	REVISION DUAL NATURE OF MATTER AND RADIATION photoelectric effect, Einstein equation of photoelectric emission, DUAL Nature of radiation.

2nd Term **(October – December)**

OCTOBER:	RAY OPTICS WAVE OPTICS Reflection and refraction of light, Refractive index, mirror and lens formula, lens makers formula optical instruments, interference and diffraction of light, Huygens principal and its use in reflection and refraction of light
NOVEMBER:	ATOMS AND NUCLEI Structure of atom, Bohr's theory and radius of orbit, Velocity and energy of electron, nuclei, properties of Nuclear forces, binding energy and its variation with Mass number SEMICONDUCTOR Intrinsic and extrinsic semiconductor, band theory P and n type, pn junction diode and its use as a Rectifier.
DECEMBER:	REVISION

Class XII - CHEMISTRY(2023-24)

Ist Term **(March - September)**

March	Unit X : Haloalkanes and Haloarenes Haloalkanes: Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions. Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only). Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.
April	Unit XI : Alcohols, Phenols and Ethers Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol. Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols.

Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.

May **Unit XII: Aldehydes, Ketones and Carboxylic Acids**

Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses.

Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

July **Unit XIII : Amines**

Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.

Unit IV : Biomolecules

Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose) , polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates.

Proteins -Elementary idea of - amino acids, peptide bond, polypeptides, proteins, structure of proteins - primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes.

Hormones - Elementary idea excluding structure.

Vitamins - Classification and functions.

Nucleic Acids: DNA and RNA.

August **Unit II : Solutions**

Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, Raoult's law, colligative properties - relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor.

September Revision, First Term Exam

2nd Term

(October – December)

October **Unit III : Electro Chemistry**

Redox reactions, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion.

Unit IV : Chemical kinetics

Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half-life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation.

November**Unit VIII : D and F Block Elements Lanthanoids, Actinoids**

General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first-row transition metals – metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$.

Lanthanoids – Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences.

Actinoids - Electronic configuration, oxidation states and comparison with lanthanoids..

Unit IX : Coordination Compounds

Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT; structure and stereoisomerism, the importance of coordination compounds (in qualitative analysis, extraction of metals and biological system)

December

Revision
Annual Examination

January

Pre Board Examination

Class 12 – BIOLOGY(2023-2024)**Zoology(2023-24)****Ist Term****(April - September)****March**

CHAPTER 3 – HUMAN REPRODUCTION
Male & Female Reproductive Systems, Gametogenesis, Menstrual Cycle, Fertilization, Implantation, Pregnancy & Embryonic development, Parturition, Lactation

May

CHAPTER 4 – REPRODUCTIVE HEALTH
Reproductive health – Problems and Strategies , Population explosion , Birth Control , Medical termination of Pregnancy , Sexually transmitted diseases , Infertility .

CHAPTER 15 – BIODIVERSITY AND CONSERVATION
Biodiversity , Biodiversity and conservation.

July

CHAPTER 6--- MOLECULAR BASIS OF INHERITANCE
The DNA, The search for genetic material, RNA world, Replication, Transcription, Genetic code, Translation, Regulation of Gene

expression, Human Genome Project, DNA fingerprinting .

August	CHAPTER 6--- MOLECULAR BASIS OF INHERITANCE(Contd.....) CHAPTER 13 – ORGANISMS AND POPULATIONS Organisms and its environment . Populations , Niche.
September	CHAPTER 13 – ORGANISMS AND POPULATIONS(Contd...) Revision Half Yearly Examination

.2nd Term **(October – February)**

October	CHAPTER 11 – BIOTECHNOLOGY : PRINCIPLES AND PROCESSES Principles of Biotechnology , Tools of Recombinant D.N.A Technology , Processes of Recombinant D.N.A Technology . CHAPTER 12 – BIOTECHNOLOGY & ITS APPLICATIONS Biotechnological applications in medicine , Transgenic Animals . Ethical issues
----------------	--

November	CHAPTER 8--- HUMAN HEALTH & DISEASES Common diseases in humans, Immunity, AIDS, Cancer, Drugs & alcohol Abuse
-----------------	--

December	Revision Annual Examination
-----------------	--------------------------------

January	Pre-Board Examination
----------------	-----------------------

Prescribed Books:

1. CHEMISTRY, Class XII, Published by NCERT

Botany(2023-24)

Ist Term **(April - September)**

March	Chapter 1. Sexual reproduction in flowering plants Pre-fertilization-structure and events; double fertilization; Post fertilization-structure and events; Apomixis and Polyembryony.
April	Chapter 1. Continuing....
May	Chapter 4. Principles of inheritance and variation. Mendel's laws of inheritance; inheritance of one gene; inheritance of two genes; Pleiotropy; sex determination; genetic disorders.
July	Chapter 4. continuing...
August	Chapter 6. Evolution

Origin of life; Evolution of life forms-a theory; What are the evidences for evolution; What is adaptive radiation? Biological evolution; mechanism of evolution; Hardy-Weinberg principle; brief account of evolution; origin and evolution of man.

Revision.

September

First Terminal Examination

.2nd Term

(October – February)

October

CHAPTER 8 – MICROBES IN HUMAN WELFARE

Microbes in household products. Microbes in industrial products. Microbes in sewage treatment . Microbes in production of biogas . Microbes as biocontrol agents. Microbes as biofertilizers.

Chapter 12. ECOSYSTEM

Ecosystem- structure and function; productivity; decomposition; energy flow; ecological pyramids; ecological succession; nutrient cycling; ecosystem services

November

Chapter 13. BIODIVERSITY AND CONSERVATION

Biodiversity; Biodiversity conservation;

Revision

December

Annual Examination

PreBoard Examination

Class 12 - Computer Science(083) – 2023-24

1st Term	(March-September)
<u>March</u>	<p>UNIT 1: Computational Thinking and Programming – 2</p> <ul style="list-style-type: none"> • Revision of the basics of Python covered in Class XI. • Functions: scope, parameter passing, mutable/immutable properties of data objects, passing strings, lists, tuples, dictionaries to functions, default parameters, positional parameters, return values, functions using libraries: mathematical and string function
<u>April – May</u>	<p>Unit III: Database Management</p> <ul style="list-style-type: none"> • Database Concepts: Introduction to database concepts and its need. • Relational data model: Concept of domain, relation, tuple, attribute, degree, cardinality, key, primary key, candidate key, alternate key and foreign key; • Structured Query Language: introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int, float, date), constraints (not null, unique, primary key), create database, use database, show databases, drop database, show tables, create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete, select, operators (mathematical, relational and logical), aliasing, distinct clause, where clause, in, between, order by, meaning of null, is null, is not null, like, update command, delete command, aggregate functions (max, min, avg, sum, count), group by, having clause, joins: cartesian product on two tables, equi-join and natural join • Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using connect(), cursor(), execute(), commit(), fetchone(),

fetchall(), rowcount, creating database connectivity applications, use of %s format specifier or format() to perform queries

Interface of Python with an SQL database:

- Connecting SQL with Python
- Creating Database connectivity Applications
- Performing Insert, Update, Delete queries
- Display data by using fetchone(),fetchall(),rowcount
- creating database connectivity application

Board Project: The aim of the class project is to create something that is tangible and useful using Python file handling/ Python-SQL connectivity. This should be done in groups **of two to three** students and should be started by students at least 6 months before the submission deadline. The aim here is to find a real world problem that is worthwhile to solve. Students are encouraged to visit local businesses and ask them about the problems that they are facing. For example, if a business is finding it hard to create invoices for filing GST claims, then students can do a project that takes the raw data (list of transactions), groups the transactions by category, accounts for the GST tax rates, and creates invoices in the appropriate format. Students can be extremely creative here. They can use a wide variety of Python libraries to create user friendly applications such as games, software for their school, software for their disabled fellow students, and mobile applications, of course to do some of these projects, some additional learning is required; this should be encouraged. Students should know how to teach themselves. The students should be sensitized to avoid plagiarism and violations of copyright issues while working on projects.

** Python with MySQL Board Project and detailed Assignment on the above topics

July **UNIT 1: Computational Thinking and Programming - 2** (Continued.....)

- Exception Handling: Introduction, handling exceptions using try-except-finally blocks
 - Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths
 - Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause, writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file
 - Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file

August **UNIT 1: Computational Thinking and Programming - 2** (Continued.....)

- CSV file: import csv module, open / close csv file, write into a csv file using writer(),writerow(),writerows() and read from a csv file using reader()
- Data Structure: Stack, operations on stack (push & pop), implementation of stack using list.

September Revision

2nd Term

(October -February)

October **Unit II: Computer Networks**

- Evolution of networking: introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET)
- Data communication terminologies: concept of communication, components of data communication (sender,receiver, message, communication media, protocols), measuring capacity of communication media (bandwidth, data transfer rate), IP address, switching techniques (Circuit switching, Packet switching)
- Transmission media: Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Micro waves, Infrared waves)
- Network devices (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway,

WIFI card)

- Network topologies and Network types: types of networks (PAN, LAN, MAN, WAN), networking topologies (Bus, Star, Tree)
- Network protocol: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP
- Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting

*****Final Board Project Submission (The Source Code), Demonstration and its Assessment**

November

- Revision
- Board Project Report file submission and Final Assessment

Class 12 - PSYCHOLOGY (2023-24)

One Theory Paper Marks: 70

Units	Topics	Marks
I	Variations in Psychological Attributes	13
II	Self and Personality	13
III	Meeting Life Challenges	9
IV	Psychological Disorders	12
V	Therapeutic Approaches	9
VI	Attitude and Social Cognition	8
VII	Social Influence and Group Processes	6
	Total	70

COURSE CONTENT

March	Unit I	Variations in Psychological Attributes <i>The topics in this unit are:</i> <ol style="list-style-type: none">1. Introduction2. Individual Differences in Human Functioning3. Assessment of Psychological Attributes4. Intelligence5. Theories of Intelligence: Psychometric Theories of Intelligence, Information Processing Theories, Theory of Multiple Intelligences, Triarchic Theory of Intelligence, Planning, Attention-Arousal and Simultaneous Successive Model of Intelligence6. Individual Differences in Intelligence7. Culture and Intelligence8. Emotional Intelligence9. Special Abilities: Aptitude: Nature and Measurement10. Creativity
--------------	---------------	--

April / May	Unit II	<p>Self and Personality</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction
		<ol style="list-style-type: none"> 2. Self and Personality 3. Concept of Self 4. Cognitive and Behavioural Aspects of Self 5. Culture and Self 6. Concept of Personality 7. Major Approaches to the Study of Personality <ul style="list-style-type: none"> • Type Approach • Trait Approach • Psychodynamic Approach • Behavioural Approach • Cultural Approach • Humanistic Approach 8. Assessment of Personality <ul style="list-style-type: none"> • Self-report Measures • Projective Techniques • Behavioural Analysis
July	Unit III	<p>Meeting Life Challenges</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction 2. Nature, Types and Sources of Stress 3. Effects of Stress on Psychological Functioning and Health <ul style="list-style-type: none"> • Stress and Health • General Adaptation Syndrome • Stress and Immune System • Lifestyle 4. Coping with Stress <ul style="list-style-type: none"> • Stress Management Techniques 5. Promoting Positive Health and Well-being <ul style="list-style-type: none"> • Stress Resistant Personality • Life Skills • Positive Health
August	Unit IV	<p>Psychological Disorders</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction 2. Concepts of Abnormality and Psychological Disorders

		<ul style="list-style-type: none"> • Historical Background <ol style="list-style-type: none"> 3. Classification of Psychological Disorders 4. Factors Underlying Abnormal Behaviour 5. Major Psychological Disorders <ul style="list-style-type: none"> • Anxiety Disorders • Obsessive-Compulsive and Related Disorders • Trauma-and Stressor-Related Disorders • Somatic Symptom and Related Disorders • Dissociative Disorders • Depressive Disorder • Bipolar and Related Disorders • Schizophrenia Spectrum and Other Psychotic Disorders • Neurodevelopmental Disorders • Disruptive, Impulse-Control and Conduct Disorders • Feeding and Eating Disorders • Substance Related and Addictive Disorders
September / October	Unit V	<p>Therapeutic Approaches</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Nature and Process of Psychotherapy <ul style="list-style-type: none"> • Therapeutic relationship 2. Types of Therapies <ul style="list-style-type: none"> • Psychodynamic Therapy • Behaviour Therapy • Cognitive Therapy • Humanistic-Existential Therapy • Biomedical Therapy • Alternative Therapies 3. Rehabilitation of the Mentally Ill
November	Unit VI	<p>Attitude and Social Cognition</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction 2. Explaining Social Behaviour 3. Nature and Components of Attitudes 4. Attitude Formation and Change <ul style="list-style-type: none"> • Attitude Formation

		<ul style="list-style-type: none"> • Attitude Change • Attitude-Behaviour Relationship <ol style="list-style-type: none"> 5. Prejudice and Discrimination 6. Strategies for Handling Prejudice 7. Social Cognition 8. Schemas and Stereotypes 9. Impression Formation and Explaining <ul style="list-style-type: none"> • Behaviour of Others through Attributions • Impression Formation • Attribution of Causality 10. Behaviour in the Presence of Others 11. Pro-social Behaviour <ul style="list-style-type: none"> • Factors Affecting Pro-social Behaviour
December	Unit VII	<p>Social Influence and Group Processes</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction 2. Nature and Formation of Groups 3. Type of Groups 4. Influence of Group on Individual Behaviour <ul style="list-style-type: none"> • Social Loafing • Group Polarisation
		<p>Practical Marks 30</p> <ul style="list-style-type: none"> • 5 Psychological Test • 1 Case Profile

Prescribed Books:

1. Psychology, Class XII, Published by NCERT

Class 12 - Economics(2023-24)

Ist Term

(April - September)

March/April

Part A: Introductory Macroeconomics

Unit 1: National Income and Related Aggregates

What is Macroeconomics?

Basic concepts in macroeconomics: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation.

Circular flow of income (two sector model); Methods of calculating National Income - Value Added or Product method, Expenditure method, Income method.

Aggregates related to National Income:

Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP) and Net Domestic Product (NDP) - at market price, at factor cost; Real and Nominal GDP.

GDP and Welfare

May

Unit 2: Money and Banking

Money – meaning and functions, supply of money - Currency held by the public and net demand deposits held by commercial banks.

Money creation by the commercial banking system.

Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Control of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.

July

Unit 3: Determination of Income and Employment

Aggregate demand and its components.

Propensity to consume and propensity to save (average and marginal). Short-run equilibrium output; investment multiplier and its mechanism. Meaning of full employment and involuntary unemployment.

Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply.

August

Unit 4: Government Budget and the Economy

Government budget - meaning, objectives and components.

Classification of receipts - revenue receipts and capital receipts;

Classification of expenditure – revenue expenditure and capital expenditure.

Balanced, Surplus and Deficit Budget – measures of government deficit.

Unit 5: Balance of Payments

Balance of payments account - meaning and components;

Balance of payments – Surplus and Deficit

Foreign exchange rate - meaning of fixed and flexible rates and managed floating.

Determination of exchange rate in a free market, Merits and demerits of flexible and fixed exchange rate.

Managed Floating exchange rate system

Part B: Indian Economic Development

September

Unit 6: Development Experience (1947-90) and Economic Reforms since 1991

A brief introduction of the state of Indian economy on the eve of independence. Indian economic system and common goals of Five Year Plans.

Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy), industry (IPR 1956; SSI – role & importance) and foreign trade.

2nd Term

(October – December)

October

Economic Reforms since 1991

Features and appraisals of liberalisation, globalisation and privatisation (LPG policy); Concepts of demonetization and GST

Unit 7: Current challenges facing Indian Economy

Human Capital Formation: How people become resource; Role of human capital in economic development; Growth of Education Sector in India

Rural development: Key issues - credit and marketing - role of cooperatives; agricultural diversification; alternative farming - organic farming

Employment: Growth and changes in work force participation rate in formal and informal sectors; problems and policies

Sustainable Economic Development: Meaning, Effects of Economic Development on Resources and Environment, including global warming

November

Unit 8: Development Experience of India

A comparison with neighbours : India and Pakistan , India and China

Issues: economic growth, population, sectoral development and other Human Development Indicators

December

Part C : Project in Economics Annual Examination

January

Revision Pre-Board Examination

Class 12 - PHYSICAL EDUCATION (048) (2023-24)

Ist Term

(March - September)

March	UNIT 1 - Management of Sporting Events <ul style="list-style-type: none">• Functions of Sports Events Management (Planning, Organising, Staffing, Directing & Controlling)• Various Committees & their Responsibilities (pre; during & post)• Fixture and it's Procedures - Knock - Out (Bye & Seeding) & League (Staircase & Cyclic)• Intramural & Extramural tournaments – Meaning, Objectives & Its Significance• Community sports program (Sports Day, Health Run, Run for Fun, Run for Specific Cause & Run for Unity)
April/May	UNIT 2 - Children & Women in sports <ul style="list-style-type: none">• Exercise guidelines of WHO for different age groups.• Common Postural Deformities- Knock knee; Bow legs; Flat foot; Round shoulders; Lordosis, Kyphosis , and Scoliosis and their corrective measures• Women’s participation in Sports – Physical, Psychological, and social benefits.• Special consideration (Menarche & Menstrual Dysfunction)• Female Athletes Triad (Osteoporosis, Amenorrhea, Eating Disorders)
July	UNIT 3 - Yoga as Preventive measure for Lifestyle Disease <ul style="list-style-type: none">• Obesity: Procedure, Benefits and Contraindications for Vajrasana, Hastasana, Trikonasana, Ardh-Matseyendrasana• Diabetes: Procedure, Benefits & Contraindications for Bhujangasana, Pashimottasana, Pavan Muktasana, Ardh Matsyendrasana Kapalbhathi• Asthma: Procedure, Benefits & Contr. for Sukhasana, Chakrasana, Gomukhasana, Parvatasana, Bhujangasana, Pashimottasana, Matsyasana, Anulom- Vilom• Hypertension: Procedure, Benefits , Contraindications Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana, Shavasana UNIT 4 - Physical Education and Sports for CWSN (Children with Special Need- Divyang) <ul style="list-style-type: none">• Organizations promoting Disability Sports (Special Olympics; Paralympics; Deaflympics)• Concept of Classification and Divisioning in Sports.• Concept of Inclusion in sports, its need, and Implementation;• Advantages of Physical Activities for children with special needs.• Strategies to make physical Activities accessible for children with special need. UNIT 5 - Sports & Nutrition <ul style="list-style-type: none">• Concept of balance diet and nutrition• Macro and Micro Nutrients: Food sources & functions• Nutritive and Non - Nutritive Components of Diet• Eating for Weight control – A Healthy Weight, The Pitfalls of Dieting, Food Intolerance, and Food Myths• Importance of Diet in Sports-Pre, During and Post competition Requirements
August	UNIT 6 - Test & Measurement in Sports <ul style="list-style-type: none">• Fitness Test - SAI Khelo India Fitness Test in School:<ul style="list-style-type: none">○ Age group 5-8 yrs/ class 1-3: BMI, Flamingo Balance Test , Plate Tapping Test○ Age group 9- 18 yrs/ class 4- 12: BMI, 50mt Speed test ,600mt Run/walk, Sit & Reach flexibility test,○ Strength Test (Abdominal Partial Curl up, Push ups for boys. Push ups (Girls))

- Measurement of Cardio Vascular Fitness –Harvard Step Test –Duration of the Exercise in Seconds x100/5.5 X Pulse count of 1-1.5 Min after Exercise.
- Computing Basal Metabolic Rate (BMR)
- Rikli & Jones- senior citizen fitness test....
 - Chair stand test for lower body strength
 - Arm curl test for upper body strength
 - Chair sit & reach test for lower body flexibility
 - Back scratch test for upper body flexibility
 - Eight foot up & go test agility
 - Six minute walk test for aerobic endurance

September Revision

2nd Term

(October – February)

October	<p>UNIT 7 - Physiology & Injuries in sports</p> <ul style="list-style-type: none"> • Physiological factor determining component of Physical Fitness • Effect of exercise on muscular system • Effect of exercise on Cardio- Respiratory System • Physiological changes due to aging • Sports injuries: Classification (SoftTissues Injuries -Abrasion , Contusion , Laceration, Incision, Sprain & Strain; Bones& Joints Injuries - Dislocation , comminuted, Transverse Oblique & Impacted) <p>UNIT 8- Biomechanics & Sports</p> <ul style="list-style-type: none"> • Newton’s Law of Motion & its application in sports • Types of Levers and their application in Sports. • Equilibrium - Dynamic & Static and Centre of Gravity and its application in sports • Friction & Sports • Projectile in Sports
November	<p>UNIT 9 - Psychology & Sports</p> <ul style="list-style-type: none"> • Personality; its definition & types (jung Classification & BIG five Theory) • Motivation, its type & techniques. • Exercise Adherence: Reasons, Benefits & Strategies for Enhancing it • Meaning ,Concept & Types of Aggression in Sports • Psychological Attributes in Sports -Self Esteem , Mental Imagery , Self Talk , Goal Setting <p>UNIT 10 - Training in Sports</p> <ul style="list-style-type: none"> • Concept of Talent Identification and Talent Development in Sports • Introduction to Sports Training Cycle - Micro , Meso , Macro Cycle . • Type & Method to Develop- Strength, Endurance , and Speed • Type & Method to Develop- Flexibility and Coordinative Ability • Circuit Training -Introduction & its importance
December	Annual Examination
January	Preboard Examination