

MAHARAJA AGRASEN MODEL SCHOOL
MONTHLY SYLLABUS PLAN
SESSION: (2024-2025)
CLASS – XII
ENGLISH CORE(301)

Background

At the secondary stage of English language learning the textual materials and other resources should represent a wide range of learning experience. Literature has always played a significant role in learning language. However, it is felt that pupils should be apprised with contemporary issues, read authentic literature and experiences of people to reflect and build their personality traits. While there is a trend for inclusion of a wider range of contemporary and authentic texts, accessible and culturally appropriate pieces of literature should play a pivotal role at the secondary stage of education. The English class is meant for reading literature from different perspectives and to engage in activities for developing communicative competence, creativity and enrichment of language skills It should not be seen as a place merely to read poems and stories in, but an area of activities to develop the learner’s imagination as a major aim of language study, and to equip the learner with communicative skills to perform various language functions through speech and writing.

Objectives

Objectives of the course are to enable learners to:

- build greater confidence and proficiency in oral and written communication**
- develop the ability and knowledge required in order to engage in independent reflection and inquiry**
- use appropriate English to communicate in various social settings**

- equip learners with essential language skills to question and to articulate their point of view
- build competence in the different aspects of English
- develop sensitivity to, and appreciation of, other varieties of English, like Indian English, and the culture they reflect
- enable the learner to access knowledge and information through reference skills (consulting a dictionary / thesaurus, library, internet, etc.)
- develop curiosity and creativity through extensive reading
- facilitate self-learning to enable them to become independent learners
- review, organize and edit their own work and work done by peers
- integrate listening and speaking skills in the curriculum.
- give a brief oral description of events / incidents of topical interest
- retell the contents of authentic audio texts (weather reports, public announcements, simple advertisements, short interviews, etc.)
- participate in conversations, discussions, etc., on topics of mutual interest in non-classroom situations
- narrate a story which has been depicted pictorially or in any other non-verbal mode

Learning Outcomes at the Secondary Stage:

The students will be able to-

- a) develop an ability to construct meaning by drawing inferences and relating the texts with previous knowledge.
- b) develop the ability to express their thoughts effortlessly, confidently and in an organized manner.

c) write a coherent piece undergoing various stages and processes of writing.

d) develop imagination, creativity and aesthetic sensibility, and appreciation.

e) understand the overarching values embedded in the Indian constitution like equality, social justice, equity, scientific temper; imbibe values and apply.

f) respond to contemporary social concerns like violence against women, protection of environment, etc., think critically about various issues and concerns.

g) use language as a skill for real life purposes.

h) attain a level of proficiency in English language to meet the workplace requirements.

i) recognise and accept diversity in terms of language and culture.

j) be sensitive to people in difficult circumstances, children with special needs, needs of elderly people, etc.

k) realize the uniqueness of Indian culture, heritage and its contribution to world knowledge.

l) develop a global perspective on various issues through literature, ICT, media, etc.

m) develop multilingual competence through using multilingualism as a strategy for learning of languages and subjects.

n) develop grammatical competencies, moving from procedural knowledge (from use or meaning) to declarative knowledge

Methods and Techniques

The methodology is based on a multi-skill, activity-based, learner-centered approach. Care is taken to fulfill the functional

(communicative), literary (aesthetic) and cultural (sociological) needs of the learner. In this situation, the teacher is the facilitator of learning. She/he presents language items, creating situations which motivates the child to use English for purposes of communication and expression. Aural-oral teaching and testing are integral feature of the teaching-learning process. Electronic and print media could be used extensively. A few suggested activities are

- **Role play**
- **Simulating real life situations**
- **Dramatizing and miming**
- **Using newspaper clippings**
 - **Borrowing situations from the world around the learners, from books and from other disciplines**
- **Using language games, riddles, puzzles and jokes**
- **Interpreting pictures / sketches / cartoons**
- **Debating and discussing**
- **Narrating and discussing stories, anecdotes, etc.**
- **Reciting poems**
- **Working in pairs and groups**
 - **Using media inputs - computer, television, video cassettes, tapes, software packages**

Besides measuring learning outcomes, texts serve the dual purpose of diagnosing mistakes and areas of non-learning. To make evaluation a true index of learners' knowledge, each language skill is to be assessed through a judicious mixture of different types of questions.

1. Reading Section: Reading for comprehension, critical evaluation, inference, and analysis are to be tested.

2. Writing Section: All types of short and extended writing tasks will be dealt with.

INTERNAL ASSESSMENT

Listening and Speaking Competencies

assessment of Listening and Speaking Skills will be for 20 marks

Objectives of Assessment for Listening Skill

To enable learners to-

- a) understand a range of genres and contexts of spoken English including academic, personal and social aspects.
- b) understand detailed information for a purpose.
- c) understand and interpret a range of features of the given context.
- d) understand the topic and the main points and also distinguish the main points from the details.

Objectives of Assessment for Speaking Skill

To enable the learners to-

- a) express and respond to personal feelings and opinions.
- b) present oral reports or summaries; narrate incidents or events.
- c) present, adopt different strategies to convey ideas according to purpose, topic and audience, and to frame questions so as to elicit desired response.
- d) take part in group discussions, summarize ideas, elicit views of others, express and argue a point of view clearly.
- e) participate in spontaneous spoken courses.

The general objectives at this stage are to:

- listen and comprehend live as well as recorded oral presentations on a variety of topics

- develop greater confidence and proficiency in the use of language skills necessary for social and academic purpose to participate in group discussions and interviews, by making short oral presentation on given topics
- perceive the overall meaning and organization of the text (i.e., correlation of the vital portions of the text)
- identify the central/main point and supporting details, etc., to build communicative competence in various lexicons of English
- promote advanced language skills with an aim to develop the skills of reasoning, drawing inferences, etc. through meaningful activities
- translate texts from mother tongue(s) into English and vice versa
- develop ability and acquire knowledge required in order to engage in independent reflection and enquiry
- read and comprehend extended texts (prescribed and non-prescribed) in the following genres: science fiction, drama, poetry, biography, autobiography, travel and sports literature, etc.
- text-based writing (i.e., writing in response to questions or tasks based on prescribed or unseen texts), understanding and responding to lectures, speeches, etc.
- write expository / argumentative essays, explaining or developing a topic, arguing a case, etc, write formal/informal letters and applications for different purposes
- make use of contextual clues to infer meanings of unfamiliar vocabulary
- select, compile and collate information for an oral presentation
- produce unified paragraphs with adequate details and support
- use grammatical structures accurately and appropriately
- write items related to the workplace (minutes, memoranda, notices, summaries, reports etc.
- filling up forms, preparing CV, e-mail messages., making notes from reference materials, recorded talks etc.

The core course should draw upon the language items suggested for class IX-X and delve deeper into their usage and functions. Particular attention may, however, be given to the following areas of grammar:

- The use of passive forms in scientific and innovative writings.
- Convert one kind of sentence/clause into a different kind of structure as well as other items to exemplify stylistic variations in different discourses modal auxiliaries- uses based on semantic considerations.

Prescribed Books:

Flamingo

Vistas

Reference Books:

BBC, All in One

MONTHLY SYLLABUS PLAN

APRIL

FLAMINGO- THE LAST LESSON, MY MOTHER AT SIXTY-SIX, LOST SPRING, AUNT JENNIFER'S TIGERS

WRITING SKILLS- NOTICE, LETTERS TO EDITOR,

READING SKILLS- COMPREHENSION

MAY

FLAMINGO-THE RATRAP, DEEP WATER

WRITING SKILL- INVITATIONS AND REPLIES, ARTICLE

READING SKILLS- COMPREHENSION

JUNE/JULY

FLAMINGO - A ROADSIDE STAND, A THING OF BEAUTY

VISTAS- THE ENEMY

WRITING SKILL-LETTER to EDITOR, JOB APPLICATIONS, REPORT WRITING

READING SKILLS-COMPREHENSION AND PROJECT

AUGUST

FLAMINGO- THE INTERVIEW, GOING PLACES

VISTAS- ON THE FACE OF IT

WRITING SKILL- REPORT WRITING REVISION

READING SKILLS- COMPREHENSION

SEPTEMBER

FLAMINGO-POETS AND PANCAKES, INDIGO

VISTAS- THIRD LEVEL

WRITING SKILL –REVISION

READING SKILL- COMPREHENSION

OCTOBER

VISTAS JOURNEY TO THE END OF THE EARTH

FLAMINGO- REVISION

WRITING SKILL-REVISION

READING SKILL- COMPREHENSION

NOVEMBER

FLAMINGO- KEEPING QUIET

VISTAS- MEMORIES OF CHILDHOOD

WRITING SKILL –REVISION

READING SKILL COMPREHENSION

DECEMBER-

SAMPLE PAPERS

SYLLABUS BREAKUP - EXAM WISE

PERIODIC TEST – I April

FLAMINGO- THE LAST LESSON

WRITING SKILL- NOTICE, LETTERS TO EDITOR,

READING SKILL COMPREHENSION

PERIODIC TEST 2- AUGUST

FLAMINGO- MY MOTHER AT SIXTY-SIX, AUNT JENNIFER'S TIGERS, DEEP WATER, THE RATRAP, LOST SPRING

WRITING SKILLS- NOTICE, LETTERS TO EDITOR, INVITATIONS AND REPLIES

READING SKILLS- COMPREHENSION

PERIODIC TEST 3 OCTOBER

FLAMINGO POETS AND PANCAKES, INDIGO

VISTAS -THIRD LEVEL

MID TERM

Syllabus covered till date

PRE BOARD 1-NOVEMBER

COMPLETE SYLLABUS

WRITING SKILLS - ALL

PRE BOARD -2 December

COMPLETE SYLLABUS

MATHEMATICS (041)

Objectives:

The broad objectives of teaching Mathematics at senior school stage intend to help the students:

- to acquire knowledge and critical understanding, particularly by way of motivation and visualization, of basic concepts, terms, principles, symbols and mastery of underlying processes and skills.
- to feel the flow of reasons while proving a result or solving a problem.
- to apply the knowledge and skills acquired to solve problems and wherever possible, by more than one method.
- to develop a positive attitude to think, analyze and articulate logically.
- to develop interest in the subject by participating in related competitions.
- to acquaint students with different aspects of Mathematics used in daily life.
- to develop an interest in students to study Mathematics as a discipline.
- to develop awareness of the need for national integration, protection of the environment, observance of small family norms, removal of social barriers, elimination of gender biases.
- to develop reverence and respect towards great Mathematicians for their contributions to the field of Mathematics.

Prescribed Books:

- Mathematics Part I- Textbook for Class XII, NCERT Publication
- Mathematics Part II- Textbook for Class XII, NCERT Publication
- Mathematics Exemplar Problem for Class XII, NCERT Publication
- Mathematics Lab Manual for Class XII, NCERT Publication

Reference Book:

- Mathematics Class XII by Dr. R.D. Sharma Part-I & II (Dhanpat Rai Publications Private Limited)

NCERT EBooks:

- [Part 1](#)
- [Part 2](#)

Unit-wise Weightage:

No.	Units	No. of Periods	Marks
I.	Relations and Functions	30	08
II.	Algebra	50	10
III.	Calculus	80	35
IV.	Vectors and Three - Dimensional Geometry	30	14
V.	Linear Programming	20	05
VI.	Probability	30	08
	Total	240	80
	Internal Assessment		20

MONTH-WISE SYLLABUS BREAK-UP (2024-25)

APRIL & MAY 2024

Chapter 3: Matrices(25 Periods)

Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restricted to square matrices of order 2). Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).

Chapter 4: Determinants(25 Periods)

Determinant of a square matrix (up to 3×3 matrices), minors, cofactors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of systems of linear equations by examples, solving systems of linear equations in two or three variables (having unique solution) using inverse of a matrix.

Chapter 1: Relations and Functions(15 periods)

Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.

Chapter 2: Inverse Trigonometric Functions(15 periods)

Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions

Chapter 5: Continuity and Differentiability(20 periods)

Continuity and differentiability, chain rule, derivative of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives.

Maths Activity 1: To demonstrate a function which is one-one but not onto.

Maths Activity 2: To find analytically the limit of a function $f(x)$ at $x = c$ and also to check the continuity of the function at that point.

JULY 2024

Chapter 6: Applications of Derivatives(20 periods)

Applications of derivatives: rate of change of quantities, increasing/decreasing functions, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations).

Maths Activity 3: To understand the concept of decreasing and increasing functions.

Maths Activity 4: To understand the concepts of absolute maximum and minimum values of a function in a given closed interval through its graph.

Maths Activity 5: To construct an open box of maximum volume from a given rectangular sheet by cutting equal squares from each corner.

AUGUST 2024

Chapter 7: Integrals(20 periods)

Integration as an inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them.

Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by

partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them.

Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation

Fundamental Theorem of Calculus (without proof).Basic properties of definite integrals and evaluation of definite integrals.

SEPTEMBER 2024

Chapter 8: Applications of the Integrals(15 Periods)

Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only)

OCTOBER 2024

Chapter 9: Differential Equations(15 periods)

Definition, order and degree, general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type

$\frac{dy}{dx} + Py = Q$,where p and q are only functions of x or constants

$\frac{dx}{dy} + Px = Q$,where p and q are only functions of y or constants

NOVEMBER 2024

Chapter 10: Vectors(15 Periods)

Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors

Maths Activity 6: To verify geometrically that $\vec{c} \times (\vec{a} + \vec{b}) = \vec{c} \times \vec{a} + \vec{c} \times \vec{b}$ where $\vec{a}, \vec{b}, \vec{c}$ are vectors.

Maths Activity 7: To demonstrate that angle in a semicircle is 90 degrees using vectors.

Chapter 11: Three - Dimensional Geometry (15 periods)

Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, skew lines, shortest distance between two lines. Angle between two lines

Maths Activity 8: To locate the points to given coordinates in space, measure the distance between two points in space and then to verify the distance using distance formula.

Maths Activity 9: To measure the shortest distance between two skew lines and verify it analytically.

DECEMBER 2024

Chapter 12: Linear Programming(10 periods)

Introduction, related terminology such as constraints, objective function, optimization, graphical method of solution for problems in two variables,

feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).

Chapter 13: Probability(20 periods)

Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of a random variable.

Maths Activity 10: To explain the computation of conditional probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice.

Exam wise Break up

Periodic Test 1:

- Chapter 3: Matrices
- Chapter 4: Determinants till ex 4.2

Comprehensive Exam

- Chapter 1: Relations and Functions
- Chapter 2: Inverse Trigonometric Functions
- Chapter 3: Matrices
- Chapter 4: Determinants
- Chapter 5: Continuity and Differentiability

Periodic Test 2:

- Chapter 6: Application of Derivatives

Mid Term Exam:

- Chapters 1, 2, 3, 4, 5, 6, 7

Periodic Test 3:

- Chapter 8: Application of Integrals
- Chapter 9: Differential Equations

Pre-Board 1: Chapters 1 to 12

Pre-Board 2: Whole Syllabus

PHYSICS (042)

Learning Outcomes

1) Recognises the concepts of Physics related to various natural phenomena; such as, electrostatic force; electric and magnetic fields and flux; electrostatic potential; drift of electrons; electric current; resistance of materials; magnetic properties of materials; electromagnetic induction; reflection, refraction, interference, diffraction and polarization of light; formation of rainbow; radioactivity; nuclear fusion and nuclear fission.

2) Differentiates between certain physical quantities; such as, between electric field and electric potential; electrical resistance and resistivity; potential difference and emf of a cell; interference and diffraction; wave and particle nature of light; half-life and average life; Nuclear fusion and nuclear fission; conductors and bad conductors or dielectrics.

3) Uses International system of units (SI Units), symbols, nomenclature of physical quantities and formulations, conventions; such as, coulomb (C), farad (F), ampere (A), ohm (Ω), tesla (T).

4) Explains processes, phenomena and laws with the understanding of the relationship between nature and matter on scientific basis; such as, force between charges, electric field and potential due to charges; force on charges in an electric field; forces on moving charges in a magnetic field, torque on a rectangular current loop in a uniform magnetic field; eddy currents; formation of secondary rainbow; red shift and blue shift in Doppler effect; energy produced due to fusion, generation of emf by solar radiation.

5) Derives formulae and equations, such as, electrostatic forces and fields, potential energy of system of charges; torque on a dipole in uniform electric field; effective capacitance of combination of capacitors in series and in parallel; energy stored in a capacitor; magnetic field on the axis of a circular current loop; resonant frequency in series LCR circuit; thin lens formula, de Broglie

wavelength; equations for nuclear fission and fusion, beta decay, mass defect; fringe width in Young's double slit experiment.

6) Analyses and interprets data, graphs, and figures, and draws conclusion; such as, field due to a uniformly charged thin spherical shell is zero at all inside the shell; hysteresis loop; direction of induced current in the figure; position of image in ray diagrams; fringe pattern due to diffraction at single slit; V-I characteristics of a p-n junction diode; effect of potential on photoelectric current and effect of frequency of incident radiation on stopping potential for a given photosensitive material; plot of binding energy per nucleon versus mass number; logic gates.

7) Handles tools and laboratory apparatus properly; measures physical quantities using appropriate apparatus, instruments, and devices; such as, an electroscope to detect charge on a body; power supplies; voltmeter; ammeter; multimeter; rheostat; galvanometer; meter bridge; potentiometer; sonometer; traveling microscope; concave and convex lens, prism, glass slab.

8) Plans and conducts investigations and experiments to arrive at and verify the facts, principles, phenomena, relationship between physical quantities, or to seek answers to queries on their own; such as, verification of Ohm's law; determining specific resistance of a material; finding frequency of ac mains; designing an automatic traffic signal system using logic gates; study the image formation by points concave and convex lens; designing a voltage regulator circuit using zener diode; determine refractive index of a liquid using a convex lens and a plane mirror; draw I-V characteristics curves of a p-n junction diode.

9) Communicates the findings and conclusions in oral/written/ICT form that shows critical thinking, such as, appropriately conveying the critical angle in internal reflection by drawing ray diagrams to describe it.

10) Exhibits creativity and out-of-the-box thinking in solving challenging physics problems; such as, calculating the required range of variable capacitor of LC circuit of a radio for the radio to be able to tune over a given frequency range of broadcast band; assessing the depth of a pond in clear water using the knowledge of refractive index of water; calculating the energy released in fission or fusion process.

11) Applies concepts of physics in daily life with reasoning while decision-making and solving problems; such as, if a certain capacitance is

required in a circuit across a certain potential difference then suggesting a possible arrangement using minimum number of capacitors of given capacity which can withstand a given potential difference; selecting the appropriate wire for doing wiring at home keeping in view all considerations; use of polarized glass in spectacles; connecting LEDs properly in a circuit, using solar cells in circuits.

12) Takes initiative to learn about the newer research, discoveries and inventions in Physics; such as, accelerators, thermistors, electrical properties of materials, India's atomic energy programme; research on the possibility of static electricity charging electronic devices; improving magnetic bottles to keep high energy plasma in fusion under control, researches in the area of optics to increase the resolution power of microscope and telescope.

13) Recognises different processes used in Physics-related industrial and technological applications; such as, using electrostatic shielding in protecting sensitive instruments from outside electrical influences; use of superconducting magnets for running magnetically levitated superfast trains; applications of optical fibers for transmission of optical signals; use of controlled chain reaction in nuclear.

14) Realizes and appreciates the interface of Physics with other disciplines; such as, with Chemistry as various materials give rise to interesting properties in the presence or absence of electric field, making light sensitive cells using the applications of photoelectric effect; use of atomic and nuclear physics in medicine, use of electromagnetic radiations in communication, use of optical phenomenon in entertainment.

15) Develops a positive scientific attitude, and appreciates the role and impact of Physics and technology towards the improvement of quality of life and human welfare.

16) Exhibits values of honesty, objectivity, respect for life, rational thinking, and freedom from myth and superstitious beliefs while making decisions, etc..

Text Book for the Session: NCERT.

Reference Book: Fundamentals of Physics by S.L Arora.

MONTH WISE SYLLABUS PLAN

April:

Unit1: Electrostatics

Chapter-1: Electric Charges and Fields

Electric Charges; Conservation of charge, Coulomb's law-force between two point charges, forces between multiple charges; superposition principle and continuous charge distribution.

Chapter-2: Electrostatic Potential and Capacitance

Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field.

Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, Uniformly Charged infinite plane sheet and uniformly charged thin spherical shell(Field inside and outside the shell).

Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field.

Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor.

Chapter-3: Current Electricity

Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, electrical resistance, V-I characteristics (linear and nonlinear), electrical energy and power, electrical resistivity and conductivity, temperature dependence of resistance.

Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's laws and simple applications, Wheatstone bridge.

Practicals (Experiment)

1. To determine resistance per cm of a given wire by plotting a graph of potential difference

versus current.

2. To find resistance of a given wire using a meter bridge and hence determine the resistivity.

Activity

1.)To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.

May:

Unit III: Magnetic Effects of Current and Magnetism

Chapter-4: Moving Charges and Magnetism

Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to the current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight And toroidal solenoids (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields

Practicals(Experiment)

3. To verify the laws of combination (series) of resistances using a meter bridge.

OR

To verify the laws of combination (parallel) of resistances using a meter bridge.

4.)To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.

Activity

2.)To assemble the components of a given electrical circuit.

July:

Chapter-4: Moving Charges and Magnetism ... contd

Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque

experienced by a current loop in uniform magnetic field; moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.

Chapter–5: Magnetism and Matter

Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only), magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis (qualitative treatment only), torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines. Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.

Unit IV: Electromagnetic Induction and Alternating Currents

Chapter–6: Electromagnetic Induction

Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Eddy currents. Self and mutual induction.

Chapter–7: Alternating Current

Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LC oscillations (qualitative treatment only), LCR series circuit, resonance; power in AC circuits, AC generator and transformer.

Practicals(Experiment)

5. To find the focal length of a convex mirror, using a convex lens

Activity

3)To study the variation in potential drop with length of a wire for a steady current.

August:

Unit V: Electromagnetic waves

Chapter–8: Electromagnetic Waves

Basic idea of displacement current, Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only). Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.

Unit VI: Optics

Chapter–9: Ray Optics and Optical Instruments

Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and optical fibers, refraction at spherical surfaces, lenses, thin lens formula, lens maker's formula, magnification, power of a lens, combination of thin lenses in contact, refraction of light through a prism. Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.

Practicals(Experiment)

6. To draw the I-V characteristic curve of a p-n junction in forward bias and reverse bias.

Activity

4.)To study the effect of intensity of light (by varying distance of the source) on an LDR.

September:

Chapter–10: Wave Optics

Wavefront and Huygens principle, reflection and refraction of plane waves at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygens principle. Interference, Young's double slit experiment and expression for fringe width (No derivation final expression only), coherent sources and sustained interference of light, diffraction due to a single slit, width of central maxima (qualitative treatment only).

Unit VII: Dual Nature of Radiation and Matter

Chapter–11: Dual Nature of Radiation and Matter

Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light. Experimental study of photoelectric effect Matter waves-wave nature of particles, de-Broglie relation.

Unit VIII: Atoms and Nuclei

Chapter-12: Atoms

Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model of hydrogen atom, Expression for radius of n th possible orbit, velocity and energy of electron in n th orbit, hydrogen line spectra (qualitative treatment only).

Practicals(Experiment)

7. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.

Activity

5.)To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.

October:

Chapter-13: Nuclei

Composition and size of nucleus, nuclear force Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion.

Unit IX: Electronic Devices

Chapter-14: Semiconductor Electronics: Materials, Devices and Simple Circuits

Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Intrinsic and extrinsic semiconductors- p and n type, p-n junction Semiconductor diode - I-V characteristics in forward and reverse bias, application of junction diode -diode as a rectifier

Practicals(Experiment)

8. To find the focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$.

Activity

6.) To observe diffraction of light due to a thin slit

Exam wise Break up

Periodic Test I

Unit I Electrostatics

Comprehensive Exam:

1. Unit I Electrostatics
2. Unit II Current Electricity
3. Unit III Magnetic effect of current
4. Unit IV Electromagnetic Induction and Alternating current

Periodic Test II

Unit III Magnetic effect of current and Unit IV Electromagnetic Induction

Periodic Test III

Unit IV Optics

Mid Term

1. Unit I Electrostatics
2. Unit II Current Electricity
3. Unit III Magnetic effect of current & Magnetism
4. Unit IV Electromagnetic Induction and Alternating current
5. Unit V Electromagnetic Waves
6. Unit VI Optics

Pre-Board I

1. Unit I Electrostatics
2. Unit II Current Electricity
3. Unit III Magnetic effect of current & Magnetism
4. Unit IV Electromagnetic Induction and Alternating current
5. Unit V Electromagnetic Waves
6. Unit VI Optics
7. Unit VII Dual Nature of Matter

8. Unit VIII Atoms and Nuclei
9. Unit IX Electronic Devices

SECTION-A

Experiments

1. To determine resistance per cm of a given wire by plotting a graph for potential difference versus current.
2. To find resistance of a given wire using a meter bridge and hence determine the resistivity (specific resistance) of its material.
3. To verify the laws of combination (series) of resistances using a meter bridge.

OR

To verify the laws of combination (parallel) of resistances using a meter bridge.

4. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.

SECTION-B

Experiments

1. To find the value of v for different values of u in case of a convex lens and to find the focal length.
2. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.
3. To draw the I-V characteristic curve for a p-n junction in forward bias and reverse bias.
- 4.) To find the focal length of a convex mirror, using a convex lens.

ACTIVITY SECTION A

1. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
2. To assemble the components of a given electrical circuit.
3. To study the variation in potential drop with length of a wire for a steady current.

ACTIVITY SECTION B

1. To study the effect of intensity of light (by varying distance of the source) on an LDR.

2. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
3. To observe diffraction of light due to a thin slit.

CHEMISTRY (043)

General objectives:

The general objectives of teaching Chemistry at Senior Secondary Stage are:

- to promote understanding of basic facts and concepts in chemistry while retaining the excitement of chemistry.
- to make students capable of studying chemistry in academic and professional courses (such as medicine, engineering, technology) at tertiary level.
- to expose the students to various emerging new areas of chemistry and apprise them with their relevance in future studies and their application in various spheres of chemical sciences and technology.
- to equip students to face various challenges related to health, nutrition, environment, population, weather, industries and agriculture.
- to develop problem solving skills in students.
- to expose the students to different processes used in industries and their technological applications.
- to apprise students of the interface of chemistry with other disciplines of science such as physics, biology, geology, engineering etc.
- to acquaint students with different aspects of chemistry used in daily life.
- to develop an interest in students to study chemistry as a discipline.

TEXT BOOKS

- Chemistry Part -I, Class-XII, Published by NCERT.
- Chemistry Part -II, Class-XII, Published by NCERT.
- <https://ncert.nic.in/textbook.php?lech1=0-5>
- <https://ncert.nic.in/textbook.php?lech2=0-5>
- https://cbseacademic.nic.in/web_material/CurriculumMain25/SrSec/Chemistry_SrSec_2024-25.pdf

REFERENCE BOOKS

- MODERN'S abc of chemistry (Part-I and Part-II) By – Dr. S.P.Jauhar, Modern Publishers
- Pradeep's chemistry (Part-I and Part-II) By – S.C.Kheterpal and S.C.Dhawan
- NCERT Exemplar Class 12 Chemistry

Unit wise Mark's Distribution

Time : 3 Hours CLASS XII (2024-25) (THEORY) 70 Mark

S.No.	Title	No. of Periods	Marks
1	Solutions	10	7
2	Electrochemistry	12	9
3	Chemical Kinetics	10	7
4	d -and f-Block Elements	12	7
5	Coordination Compounds	12	7
6	Haloalkanes and Haloarenes	10	6
7	Alcohols, Phenols and Ethers	10	6
8	Aldehydes, Ketones and Carboxylic Acids	10	8
9	Amines	10	6
10	Biomolecules	12	7
Total			70

MONTHLY SYLLABUS PLAN

APRIL

Unit I: 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 vapor 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.

UnitII: Electrochemistry

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. 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, batteries, fuel cells, corrosion.

MAY

Unit III: 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.

Unit IV: "d" and "f" Block Elements

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, color, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$

Lanthanoids - Electronic configuration, oxidation states, lanthanoid contraction and its consequences.

Actinides - Electronic configuration, oxidation states and comparison with lanthanide.

JULY

Unit V: Coordination Compounds

Coordination compounds - Introduction, ligands, coordination number, color, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT

Unit VI: Haloalkanes and Haloarenes.

Haloalkanes: Nomenclature, nature of C -X bond. physical and chemical properties, mechanism of substitution reactions, optical rotation.

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.

AUGUST

Unit VI: Haloalkanes and Haloarenes(Contd...)

Unit VII: 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.

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.

Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration.

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.

Unit VIII: 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: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

SEPTEMBER

Unit VIII: Aldehydes, Ketones and Carboxylic Acids (Contd..)

OCTOBER

Unit IX: Organic compounds containing Nitrogen

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

Cyanides and Isocyanides - will be mentioned at relevant places in text.

UnitX: 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.

Nucleic Acids: DNA and RNA.

NOVEMBER

Unit X: Biomolecules(Contd....)

DECEMBER

REVISION

INVESTIGATORY PROJECT

PRACTICALS:

Exp:-1-Determination of concentration/ molarity of KMnO_4 solution by titrating it against a standard solution of:

- i) Oxalic acid,
- ii) Ferrous Ammonium Sulfate

(Students will be required to prepare standard solutions by weighing themselves).

Exp:-2-Tests for the functional groups present in organic compounds:

Alcoholic, phenolic, aldehydic, ketonic, carboxylic and amino (Primary) groups.

Exp:-3-Tests for the presence of Carbohydrates, fats and proteins in given food samples.

Exp:-4-Ascending paper Chromatography

Exp:-5-Qualitative analysis

Determination of one cation and one anion in a given salt.

EXAM WISE PLAN

PERIODIC TEST-1

1.Solutions

2.Electrochemistry

PERIODIC TEST-2

1.Chemical Kinetics

2.d and f block elements

PERIODIC TEST-3

1.Haloalkanes and Haloarenes

2.Alcohols,Phenols and Ethers

COMPREHENSIVE

1.Solutions

2.Electrochemistry

3.Chemical Kinetics

4.d and f block elements

MIDTERM EXAM

1.Solutions

2.Electrochemistry

3.Chemical Kinetics

4.d and f block elements

5.Coordination Compounds

6.Haloalkanes and Haloarenes

7.Alcohols,Phenols and Ethers

PRE BOARD I

Whole Syllabus as per CBSE guidelines

PRE BOARD II

Whole Syllabus as per CBSE guidelines

BIOLOGY (044)

SYLLABUS BREAK-UP CLASS XII SESSION (2024-25)

General Objectives:

- To promote understanding of basic principles of Biology.
- To encourage learning of emerging knowledge and its relevance to individual and society.
- To promote rational/scientific attitude to issues related to population, environment and development.
- To enhance awareness about environmental issues, problems and their appropriate solutions.
- To create awareness amongst the learners about diversity in the living organisms and developing respect for other living beings.
- To appreciate that the most complex biological phenomena are built on essentially simple processes.

References for the session (2024-25)

1. N.C.E.R.T- Biology textbook for class XII
2. Xam Idea Biology for class 12 ,Publisher-V.K Global Publications
3. <https://ncert.nic.in/textbook.php?lebo1=0-16>
4. <https://ncert.nic.in/exemplar-problems.php?ln=>

UNIT WISE MARKS DISTRIBUTION

Time : 3 Hours

MM-70

UNIT	TITLE	MARKS
I	Reproduction	16
II	Genetics and Evolution	20
III	Biology and Human Welfare	12
IV	Biotechnology and its Applications	12
V	Ecology and Environment	10

MONTH-WISE SYLLABUS BREAK-UP

APRIL

UNIT I

Chapter 1- Sexual reproduction in flowering plants: Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; outbreeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes-apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation.

Chapter 2- Human Reproduction: Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis - spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).

Chapter 3-Reproductive health: Need for reproductive health and prevention of sexually transmitted diseases (STD); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).

Practicals

- 1.Prepare a temporary mount to observe pollen germination.
- 2.Flowers adapted to pollination by different agencies (wind, insects, birds).
- 3.Pollen germination on stigma through a permanent slide or scanning electron micrograph.

MAY

Unit II: Genetics and Evolution

Chapter 5-Molecular basis of inheritance: Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central dogma; transcription, genetic code, translation.

Practicals

- 4.Prepare a temporary mount of onion root tip to study mitosis.

5. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice).
6. T.S. of blastula through permanent slides (Mammalian).

JUNE

INVESTIGATORY PROJECT DISCUSSION
PRACTICAL FILE WORK

JULY

Chapter 5-Molecular basis of inheritance (contd.) gene expression and regulation - lac operon; genome and human genome project; DNA fingerprinting.

Unit IV: Biotechnology and Its Applications

Chapter 9-Principles and processes of biotechnology: Genetic Engineering (Recombinant DNA Technology).

Practicals

7. Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.
8. Mendelian inheritance using seeds of different colour/sizes of any plant.
9. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness.

AUGUST

Chapter 10-Application of biotechnology in health and agriculture: Human insulin and vaccine production, gene therapy; genetically modified organisms -Bt crops; transgenic animals; biosafety issues, biopiracy and patents.

Unit III: Biology and Human Welfare

Chapter 7- Health and disease: Pathogens; parasites causing human diseases (malaria, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm); Basic concepts of immunology -vaccines; cancer, HIV and AIDS; Adolescence, drug and alcohol abuse, Antibiotics: production and judicious use.

Practicals

10. Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens. Comment on symptoms of diseases that they cause.
11. Controlled pollination - emasculation, tagging and bagging.
12. Meiosis in onion bud cell or grasshopper testis through permanent slides.

SEPTEMBER

Chapter 8-Microbes in human welfare: In household food processing, industrial production, sewage treatment, energy generation and as biocontrol agents and biofertilizers.

OCTOBER

Chapter-6: Evolution

Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy- Weinberg's principle; adaptive radiation; human evolution.

Unit V: Ecology and Environment

Chapter 11- Organisms and environment: Population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution. (Topics excluded: Organism and its Environment, Major Abiotic Factors, Responses to Abiotic Factors, Adaptations)

Practicals

13. Study the plant population density by quadrat method.
14. Study the plant population frequency by quadrat method.

NOVEMBER

Chapter-12: Ecosystem

Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy (Topics excluded: Ecological Succession and Nutrient Cycles).

Practicals

15. Models specimen showing symbiotic association in root modules of leguminous plants, Cuscuta on host, lichens.

16. Flash cards models showing examples of homologous and analogous organs.

DECEMBER

Chapter 13- Biodiversity and its conservation: Concept of biodiversity; patterns of biodiversity; importance of biodiversity; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, biosphere reserves, national parks and sanctuaries, Ramsar sites.

JANUARY

INVESTIGATORY PROJECT DISCUSSION
REVISION

FEBRUARY

PRACTICAL EXAM
REVISION

TEST-WISE SYLLABUS BREAK-UP

PERIODIC TEST I

Chapter 1- Sexual reproduction in flowering plants
Chapter 2- Human Reproduction

COMPREHENSIVE EXAM

Chapter 1- Sexual reproduction in flowering plants
Chapter 2- Human Reproduction
Chapter 3- Reproductive health
Chapter 4- Principles of Inheritance
Chapter 5- Molecular basis of Inheritance

MID-TERM

Chapter 1- Sexual reproduction in flowering plants
Chapter 2- Human Reproduction
Chapter 3- Reproductive health
Chapter 4- Principles of Inheritance
Chapter 5- Molecular basis of Inheritance
Chapter 9- Biotechnology- its Principles and its processes

Chapter 10-Application of biotechnology in health and agriculture

PERIODIC TEST II

Chapter 7- Health and disease

Chapter 8-Microbes in human welfare

Chapter 10-Application of biotechnology in health and agriculture

PERIODIC TEST III

Chapter 6- Evolution

Chapter 11- Organisms and environment

Chapter-12: Ecosystem

PREBOARD I

Chapter 1- Sexual reproduction in flowering plants

Chapter 2- Human Reproduction

Chapter 3-Reproductive health

Chapter 4- Principles of Inheritance

Chapter 5- Molecular basis of Inheritance

Chapter 6- Evolution

Chapter 7- Health and disease

Chapter 8-Microbes in human welfare

Chapter 9- Biotechnology- its Principles and its processes

Chapter 10-Application of biotechnology in health and agriculture

Chapter 11- Organisms and environment

Chapter-12: Ecosystem

PREBOARD II - Full syllabus

COMPUTER SCIENCE(083)

Learning Outcomes

Student should be able to

- a) apply the concept of function and recursion.
- b) create and use Python libraries.
- c) explain and use the concept of file handling.
- d) explain the concept of efficiency in algorithms and computing in general.
- e) use basic data structure: Stacks and Queues.
- f) explain the basics of computer networks.
- g) use Database concepts, SQL along with connectivity between Python and SQL.

Distribution of Marks:

Unit No.	Unit Name	Marks	Periods	
			Theory	Practical
I	Computational Thinking and Programming - 2 Revision Tour - Text File - Binary Files - CSV Files -	40	70	50
II	Computer Networks	10	15	---
III	Database Management	20	25	20
	Total	70	110	70

Text Book : Computer Science for Class XI, XII (NCERT) & self notes for the topics not mapped (CBSE & NCERT)

NCERT book <https://ncert.nic.in/textbook.php?lecs1=0-13>

Reference Book : Computer Science with Python for Class XII (Sumita Arora)

MONTH-WISE SYLLABUS BREAK-UP

April - May

Learning Outcomes:

Students will be able to :

- Learn how the internet began and evolved over time.
- Understand how messages are sent and received.
- Explore different ways data travels, like through wires or wirelessly.
- Identify network devices like modems and routers.
- Discover various types of networks, from personal to global.

Unit II: Computer Networks (**Chapter 10,11,12 - NCERT XII**)

- 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, Coaxial cable, Fiber-optic cable), Wireless media (Radio waves, Microwaves, 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

Unit I: Computational Thinking and Programming – 2

- Revision of Python topics covered in Class XI. (**NCERT - XI**)
- **Chapter 3 (NCERT XII)** Data Structure: Stack, operations on stack (push & pop), implementation of stack using list. Data Structure: Stack, operations on stack (push & pop), implementation of stack using list.

July

Learning Outcomes

Students will be able to :

- Understand how to read data from a text file using 'read()', 'readline()', and 'readlines()'.
• Learn how to write or append data to a text file using 'write()' and 'writelines()'.
• Explore methods to manipulate data in a text file efficiently.

- Gain an introduction to different types of files including text files, binary files, and CSV files.
 - Learn about relative and absolute paths for specifying file locations.
- **Chapter 2 (NCERT XII)** 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.
- Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths.
 - CSV file: import csv module, open / close csv file, write into a csv file using csv.writerow() and read from a csv file using csv.reader()

August

Learning Outcomes

Students will be able to :

- Understand basic operations like opening and closing binary files with different modes.
 - Learn to use the 'pickle' module for saving and loading Python objects.
 - Explore reading, writing, searching, appending, and updating data in binary files.
 - Recognize various types of functions, including built-in and user-defined ones.
 - Create your own functions to perform specific tasks in Python programs.
- **Chapter 2 (NCERT XII)** 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.
 - **(Chapter 7 - NCERT XI)** Functions: types of function (built-in functions, functions defined in module, user defined functions), creating user defined function,

September

Learning Outcomes

Students will be able to :

Understand how functions use arguments and parameters.

- Learn about default parameters and their role in functions.

- Explore how positional parameters are assigned values.
- Discover how functions can return values for further use.
- Understand the flow of execution within a program.
- Differentiate between global and local variable scopes.

CHAPTER - FUNCTIONS

- Functions Arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)

Practical File Completion (Python) & Project Work

October

Learning Outcomes

Students will be able to :

- Learn database basics and why they're crucial.
- Understand the relational model and its elements.
- Explore different types of keys in databases.
- Get introduced to SQL and its languages.
- Learn about SQL data types and constraints.
- Discover advanced SQL operations like joins and aggregate functions.

Unit III: Database Management

- **Chapter 8 (NCERT-XII)** Database concepts: introduction to database concepts and its need , Relational data model: relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key)
- **Chapter 9 (NCERT-XII)** 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

November

Learning Outcomes

Students will be able to :

- Learn how to connect Python with an SQL database.

- Understand how to use Python's cursor to execute insert, update, and delete queries.
- Explore methods like fetchone(), fetchall(), and rowcount to retrieve and manipulate data.
- Gain skills in creating database connectivity applications using Python.

CHAPTER - SQL CONNECTIVITY

- Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using fetchone(), fetchall(), rowcount, creating database connectivity applications

Practical File Completion (SQL & Python connectivity) , Project Completion

December & January

Revision & Practice of Sample Papers

PRACTICAL

S.No	Unit Name	Marks (Total=30)
1	Lab Test: 1. Python program (60% logic + 20% documentation + 20% code quality) 2. SQL queries (4 queries based on one or two tables)	8 4
2	Report file: <ul style="list-style-type: none"> • Minimum 15 Python programs. • SQL Queries – Minimum 5 sets using one table / two tables. • Minimum 4 programs based on Python - SQL connectivity 	7
3	Project (using concepts learnt in Classes 11 and 12)	8
4	Viva voce	3

Examwise Break up

PT-1 - Computer Networking (Chapter 10,11,12) , Revision Tour

PT-2 - Text Files , CSV Files , Binary Files

Mid Term : Revision of Class XI, Functions, Text File Handling , Binary File Handling, CSV File Handling , Data Structure (stack), Functions

PT -3 : SQL

PreBoard - 1 - Whole Syllabus

PreBoard - 2 - Whole Syllabus

INFORMATICS PRACTICES (065)

1. Learning Outcomes

At the end of this course, students will be able to:

- Create Series, Data frames and apply various operations.
- Perform aggregation operations, calculate descriptive statistics.
- Visualize data using relevant graphs.
- Design SQL queries using aggregate functions.
- Import/Export data between SQL database and Pandas.
- Learn terminology related to networking and the internet.
- Identify internet security issues and configure browser settings.
- Explain the impact of technology on society including gender and disability issues.

2. Text Book : Informatics Practices, NCERT

Download Link: <https://ncert.nic.in/textbook.php?leip1=ps-7>

3. Distribution of Marks and Periods

Unit No	Unit Name	Marks
1	Data Handling using Pandas and Data Visualization	25
2	Database Query using SQL	25
3	Introduction to Computer Networks	10
4	Societal Impacts	10
	Project	-
	Practical	30
	Total	100

4. Month Wise syllabus (2023-24)

April-May

Unit 3: Introduction to Computer Networks

Introduction to networks, Types of network: PAN, LAN, MAN, WAN. Network Devices: modem, hub, switch, repeater, router, gateway Network Topologies: Star, Bus, Tree, Mesh. Introduction to Internet, URL, WWW, and its applications- Web, email, Chat, VoIP. Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website. Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.

Unit 1: Data Handling using Pandas and Data Visualization

Chapter 2: Data Handling using

Pandas -I

Introduction to Python libraries- Numpy, Pandas, Matplotlib. Data structures in Pandas - Series and data frames.

Series: Creation of Series from - ndarray, dictionary, scalar value; mathematical operations; Head and Tail functions; Selection, Indexing and Slicing. Data Frames: creation - from dictionary of Series, list of dictionaries, Text/CSV files; display; iteration; Operations on rows and columns: add, select, delete, rename; Head and Tail functions; Indexing using Labels, Boolean Indexing;

July

Importing/Exporting Data between CSV files and Data Frames. *(for practicals only)*

Importing/Exporting Data between MySQL database and Pandas.

Data Visualization Purpose of plotting; drawing and saving following types of plots using Matplotlib - line plot, bar graph, histogram Customizing plots: adding label, title, and legend in plots.

August

Project Work The aim of the class project is to create tangible and useful IT applications. The learner may identify a real-world problem by exploring the environment. e.g. Students can visit shops/business places, communities or

other organizations in their localities and enquire about the functioning of the organization, and how data are generated, stored, and managed. The learner can take data stored in csv or database file and analyze using Python libraries and generate appropriate charts to visualize. Learners can use Python libraries of their choice to develop software for their school or any other social good. Learners should be sensitized to avoid plagiarism and violation of copyright issues while working on projects. Teachers should take necessary measures for this. Any resources (data, image etc.) used in the project must be suitably referenced. The project can be done individually or in groups of 2 to 3 students.

September

Unit 4: Societal Impacts Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act. E-waste: hazards and management. Awareness about health concerns related to the usage of technology.

October

Unit 2: Database Query using SQL

Revision of database concepts and SQL commands covered in class XI Math functions: POWER (), ROUND (), MOD (). Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM (). Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME (). Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*).

November

Unit 2: Database Query using SQL

Querying and manipulating data using Group by, Having, Order by. Working

with two tables using equi-join

DECEMBER & JANUARY

Revision of sample papers

5. Distribution of Practical Marks

SN o	Unit Name	Marks
1	Programs using Pandas and Matplotlib	8
2	SQL Queries	7
3	Practical file (minimum of 20 programs based on Pandas, 5 based on Matplotlib and 20 SQL queries must be included)	5
4	Project Work (using concepts learned in class XI and XII)	5
5	Viva-Voce	5
	TOTAL	30

Exam wise Break up

Periodic Test 1:

- **Chapter 5** Computer Network and web
- **Chapter 2** Data Handling using Pandas – I (only Series)

Periodic Test 2:

Chapter 2 Data Handling using Pandas – I

Mid Term Exam:

- Chapter 5: Computer Network and web
- Chapter 2: Data Handling using Pandas – I
- Chapter 4 Plotting Data using Matplotlib

Periodic Test 3:

- **Chapter 1** Querying and SQL Functions

Pre-Board 1: Full syllabus

Pre-Board 2: Full Syllabus

ECONOMICS (030)

General Objectives:

(a) Understanding of some basic economic concepts and development of economic reasoning which the learners can apply in their day to day life as citizens, workers and consumers.

(b) Realization of the learner's role in nation building and sensitivity to the economic issues that the nation is facing today.

(c) Development of understanding that there can be more than one view on any economic issue and necessary skills to argue logically with reasoning.

(d) Equip with basic tools of economics and statistics to analyze economic issues. This is pertinent even for those who may not pursue this course beyond senior secondary level.

Text book for the session (2024-25)

Indian Economic Development

NCERT

Macroeconomics

Author: Sandeep Garg

Publisher - Dhanpat Rai Publications

References:

Indian Economic Development by Sandeep Garg

Publisher - Dhanpat Rai Publications

LINK OF CURRICULUM BY CBSE

Curriculum for 2024-2

https://www.cbseacademic.nic.in/web_material/CurriculumMain25/SrSec/Economics_SrSec_2024-25.pdf

LINK OF NCERT TEXTBOOKS

<https://ncert.nic.in/textbook.php>

UNIT-WISE DISTRIBUTION OF MARKS

Theory: 80 Marks, Project: 20 Marks

Units		Marks	Periods
Part A	Introductory Macroeconomics		
Unit 1	National Income and Related Aggregates	10	30
Unit 2	Money and Banking	6	15
Unit 3	Determination of Income and Employment	12	30
Unit 4	Government Budget and the Economy	6	17
Unit 5	Balance of Payments	6	18
		40	100
Part B	Indian Economic Development		

Unit 6	Development Experience (1947-90) and Economic Reforms since 1991	12	28
Unit 7	Current Challenges facing Indian Economy	20	50
Unit 8	Development Experience of India – A Comparison with Neighbours	08	12
	Theory Paper (40+40 = 80 Marks)	40	100
Part C	Project Work	20	20

Month wise syllabus plan

APRIL

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- Understand the state of agriculture, industry and foreign trade during the British rule.
- To acquaint the students with the occupational structure, demographic conditions and infrastructure of India during the British rule.

Indian Economic Development

Ch. 1 State of Indian economy on the eve of Independence

State of agriculture, industry and foreign trade, Occupational structure, Demographic conditions, state of infrastructure

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- Understand the concepts of money and money supply.
- Understand the functions of money.
- List the components of money supply.
- Understand the process of credit creation.
- Familiarize with the functions of the Central Bank.
- Understand the working of the different types of monetary policy instruments.

Macro Economics

Unit-6 Money & Banking

Money- Its meaning, functions and Supply of money-Currency held by the public and net demand deposits held by the commercial banks. Money creation by commercial banking system. Central Bank and its functions (example of the Reserve Bank of India): Bank of Issue , Government Bank, Banker's Bank, Controller of Credit through Bank rate, CRR, SLR, Repo and Reverse Repo, Open Market Operations, Margin Requirement.

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- Differentiate between consumption and capital goods, intermediate and final goods, stocks and flows.
- Understand the two sector circular flow model.
- Calculate national income using output, income and expenditure methods.
- Distinguish between Nominal and Real GDP.
- Understand the limitations of GDP as a measure of welfare.

Unit-5 National Income and Related Aggregates

Some basic concepts: Consumption goods, capital goods, final goods , intermediate goods, stocks and flows, gross investment and depreciation

Circular flow of income (two sector model); Method 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 and Net Domestic Product(GDP and NDP)- at market price and factor cost; Real and Nominal GDP,GDP and Welfare.

MAY

Unit-5 National Income and Related Aggregates(continued)

JULY

Indian Economic Development

LEARNING OUTCOMES

- Compare the state of different sectors of an economy before Independence and after Independence till 1990.

Ch.2 Indian Economy (1950-1990)

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.

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- Understand the need for LPG policies.
- Familiarize with the liberalization policy measures undertaken after 1991.
- Appreciate the objectives of globalization.
- Critically appraise the LPG policies.

Ch.3 Economic Reforms since 1991

Need and main features - liberalization, globalization and privatization;

An appraisal of LPG policies

Concepts of demonetisation and GST

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- Explain the objectives of government budget.
- Differentiate between revenue and capital expenditure/receipts.
- Understand the different types of government budget.

Macro Economics

Unit-8 Government Budget & 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

AUGUST

LEARNING OUTCOMES

After going through this chapter, the student/ learner would be able to:

- Gain knowledge of the different sources of human capital formation.
- Appreciate the importance of human capital formation in the economic development of a country.
- Know the development of the education sector in India.

Unit 5: Current challenges facing Indian Economy:

Ch.5 Human Capital Formation in India

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

LEARNING OUTCOMES

After going through this chapter, the student/ learner would be able to:

- Critically appraise the role of agricultural credit in rural development.
- Understand the improvements in the field of agricultural marketing after Independence.
- Compare conventional and organic farming.

Ch.6 Rural Development

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

SEPTEMBER

LEARNING OUTCOMES

After going through this chapter, the student/ learner would be able to:

- Understand the growth and changing structure of employment in India.
- Distinguish between formal and informal sectors.
- Explain the different types of unemployment.
- Gain knowledge of the different employment generation programmes started in India.

Ch.7 Employment: Growth, Informalisation and Other Issues

Employment: Formal and informal, growth and other issues: Problems and policies.

Inflation: Problems and Policies

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- Define aggregate demand and aggregate supply.
- List the components of AD.
- Explain the relationship between MPC and MPS; APC and APS.
- Understand the concepts of excess demand and deficient demand.
- Understand the process of investment multiplier.

OCTOBER

Macro Economics

Unit-7 Determination of Income & 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.

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- List the sources of demand and supply of foreign exchange.
- Familiarize with the different exchange rate systems.
- Understand the determination of flexible exchange rate.
- Understand the structure of BOP.

Macro Economics

Unit-9 Balance of payment & foreign exchange

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

Project work

NOVEMBER

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- List the functions of the environment.
- Understand India's environmental problems.
- Define sustainable development.
- Understand the different strategies of sustainable development.

Ch.9 ENVIRONMENT & SUSTAINABLE DEVELOPMENT

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

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- Compare and contrast the developmental experiences of India, China and Pakistan.

Unit 6: Development Experience of India:

Ch.10 COMPARATIVE DEVELOPMENT EXPERIENCES OF INDIA AND ITS NEIGHBORS

A comparison with neighbors India and Pakistan, India and China Issues: growth, population, sectoral development and other factors.

Exam wise Plan

PT-1

Indian Economic Development

Ch. 1 State of Indian economy on the eve of Independence

Macro Economics

Unit-6 Money & Banking

Comprehensive Exam

Syllabus covered till May

PT-2

Macro Economics

Unit-5 National Income and Related Aggregates

Indian Economic Development

Ch.2 Indian Economy (1950-1990)

MID-TERM

Indian Economic Development

Ch. 1 State of Indian economy on the eve of Independence

Ch.2 Indian Economy (1950-1990)

Ch.3 Economic Reforms since 1991

Ch.5 Human Capital Formation in India

Macro Economics

Unit-5 National Income and Related Aggregates

Unit -6 Money & Banking

Macroeconomics

Unit-8 Government Budget & the economy

PT-3

Indian Economic Development

Ch.6 Rural Development

Ch.7 Employment: Growth, Informalisation and Other Issues

PRE BOARD- 1

Full Syllabus

PRE BOARD -2

Full Syllabus

BUSINESS STUDIES (054)

OBJECTIVES

- To develop students with an understanding of the processes of business and its environment.
- To acquaint students with the dynamic nature and interdependent aspects of business.
- To develop an interest in the theory and practice of business, trade and industry.
- To familiarize students with theoretical foundations of the process of organizing and managing the operations of a business firm.
- To help students appreciate the economic and social significance of business activity and the social cost and benefits arising there from.
- To acquaint students with the practice of managing the operations and resources of business.
- To enable students to act more effectively and responsibly as consumers, employers, employees and citizens.
- To inculcate business attitude and develop skills among students to pursue higher education, world of work including self employment.

TEXT BOOKS

- **NCERT : Business Studies Part I- Principles and Functions of Management**
- **NCERT : Business Studies Part II – Business Finance and Marketing**

REFERENCE BOOKS

- **Business Studies XII**
Part A Principles and Functions of Management
Author – Subhash Dey
Publisher - Shree Radhey Publications
- **Business Studies XII**
Part B Business Finance and Marketing
Author – Subhash Dey
Publisher - Shree Radhey Publications

LINK OF CURRICULUM BY CBSE.

https://cbseacademic.nic.in/web_material/CurriculumMain24/SrSec/BusinessStudies_SrSec_2023-24.pdf

LINK OF NCERT TEXTBOOK-

Part 1 -<https://ncert.nic.in/textbook.php?lebs1=0-8>

Part 2 - <https://ncert.nic.in/textbook.php?lebs2=0-3>

UNIT-WISE DISTRIBUTION OF MARKS

THEORY - 80 MARKS

PROJECT - 20 MARKS

UNITS		MARKS
Part A	Principles and Functions of Management	
1	Nature and Significance of Management	16
2	Principles of Management	
3	Business Environment	
4	Planning	14
5	Organising	
6	Staffing	20
7	Directing	
8	Controlling	
	TOTAL	50

Part B	Business Finance and Marketing	
9	Financial Management	15
10	Financial Markets	
11	Marketing Management	15
12	Consumer Protection	
	TOTAL	30
Part C	Project Work (One)	20

MONTH-WISE SYLLABUS BREAK-UP

APRIL

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- **Understand the concept of management.**
- **Explain the meaning of Effectiveness and Efficiency.**
- **Discuss the objectives of management.**
- **Describe the importance of management.**
- **Examine the nature of management as a science, art and profession.**
- **Understand the role of top, middle and lower levels of management.**
- **Discuss the concept and characteristics of coordination.**

- Explain the importance of coordination.

TOPICS

Unit 1 : Nature and Significance of Management

Management- concept, objectives and importance

Management as Science, Art and Profession

Levels of Management

Management functions- planning, organizing, staffing, directing and controlling

Coordination- concept and importance

LEARNING OUTCOMES

After going through this unit, the student/learner would be able to:

- Understand the concept and significance of principles of management.
- Discuss the principles of management developed by Fayol.
- Explain the principles and techniques of 'Scientific Management'.
- Compare the contributions of Fayol and Taylor.

TOPICS

Unit 2 : Principles of Management

Principles of Management- concept and significance

Fayol's principles of management

Taylor's Scientific Management- Principles and Techniques

LEARNING OUTCOMES

After going through this unit, the student/learner would be able to:

- Understand the concept of 'Business Environment'.
- Describe the importance of Business Environment
- Describe the various dimensions of 'Business Environment'.
- Understand the concept of Demonetization

TOPICS

Unit 3 : Business Environment

Business Environment- concept and importance

Dimensions of Business Environment- Economic, Social, Technological, Political and Legal
Demonetization - concept and features

MAY

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- **Understand the concept of marketing.**
- **Explain the features of marketing.**
- **Explain the marketing philosophies.**
- **Understand the concept of marketing mix.**
- **Describe the elements of the marketing mix.**
- **Understand the concept of product as an element of marketing mix.**
- **Understand the concept of branding, labeling and packaging.**
- **Understand the concept of price as an element of marketing mix.**
- **Describe the factors determining price of a product.**
- **Understand the concept of physical distribution.**
- **Explain the components of physical distribution.**
- **Describe the various channels of distribution.**
- **Understand the concept of promotion as an element of marketing mix.**
- **Describe the elements of the promotion mix.**
- **Understand the concept of advertising.**
- **Understand the concept of sales promotion.**
- **Discuss the concept of public relations.**
- **Discuss the functions of marketing.**

TOPICS

Marketing – Concept, functions and philosophies

Marketing Mix - Concept & elements.

Product-Concept, branding, labeling and packaging

Price- Concept, Factors determining price

Physical Distribution – concept, components and channels of distribution

**Promotion- Concept and elements; Advertising, Personal Selling, Sales Promotion and Public Relations
Functions of Marketing
Project Work**

JULY

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- **Understand the concept of planning.**
- **Describe the importance of planning.**
- **Understand the limitations of planning.**
- **Describe the steps in the process of planning.**
- **Develop an understanding of single use and standing plans**
- **Describe objectives, policies, strategy, procedure, method, rule, budget and programme as types of plans.**

TOPICS

Unit 4 - Planning

**Concept, importance, limitations
planning process**

Single use and standing plans: Objectives, Strategy, Policy, Procedure, Method, Rule, Budget and Programme

LEARNING OUTCOMES

After going through this unit, the student/learner would be able to:

- **Understand the concept of organizing as a structure and as a process.**
- **Explain the importance of organizing.**
- **Describe the steps in the process of organizing**
- **Describe functional and divisional structures of organization.**
- **Explain the advantages, disadvantages and suitability of functional and divisional structure.**
- **Understand the concept of formal and informal organization.**
- **Discuss the advantages and disadvantages of formal and informal organization.**
- **Understand the concept of delegation.**
- **Describe the elements of delegation.**
- **Appreciate the importance of delegation.**
- **Understand the concept of decentralization.**

- Explain the importance of decentralization.
- Differentiate between delegation and decentralization.

TOPICS

Unit 5- Organising

Concept and importance

Organising Process

Structure of organization- functional and divisional structure

Formal and informal organization - concept

Delegation: concept, elements and importance.

Decentralization: concept and importance

Project Work

AUGUST

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- Understand the concept of staffing.
- Explain the importance of staffing
- Understand the specialized duties and activities performed by Human Resource Management
- Describe the steps in the process of staffing
- Understand the meaning of recruitment.
- Discuss the sources of recruitment.
- Explain the merits and demerits of internal and external sources of recruitment.
- Understand the meaning of selection.
- Describe the steps involved in the process of selection.
- Understand the concept of training and development.
- Appreciate the importance of training to the organization and to the employees.
- Discuss the meaning of induction training, vestibule training, apprenticeship training and internship training.
- Differentiate between training and development.
- Discuss on the job and off the job methods of training.

TOPICS

Unit 6 - Staffing

Concept and importance of staffing

Staffing as a part of Human Resource Management – concept

Staffing Process

Recruitment- Sources

Selection –process

Training and Development- Concept and importance, Methods of training- on the job and off the job- Induction training, vestibule training, apprenticeship training and internship training.

LEARNING OUTCOMES

After going through this unit, the student/learner would be able to:

- **Describe the concept of directing.**
- **Discuss the importance of directing**
- **Describe the various elements of directing**
- **Understand the concept of motivation.**
- **Develop an understanding of Maslow's Hierarchy of needs.**
- **Discuss the various financial and non-financial incentives.**
- **Understand the concept of leadership.**
- **Discuss the various styles of leadership.**
- **Understand the concept of communication**
- **Understand the elements of the communication process.**
- **Discuss the concept of formal and informal communication.**
- **Discuss the various barriers to effective communication.**
- **Suggest measures to overcome barriers to communication.**

TOPICS

Unit 7 - Directing

Concept and elements of Directing

Motivation- concept, Maslow's hierarchy of needs, Financial and Non-financial incentives.

Leadership- concept, styles- authoritative, democratic and laissez faire

Communication-concept, formal and informal communication;barriers to effective communication, how to overcome the barriers

Importance of Directing

SEPTEMBER

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- **Understand the concept of financial management.**
- **Explain the role of financial management in an organization.**
- **Discuss the objectives of financial management**
- **Discuss the three financial decisions and the factors affecting them.**

TOPICS

Unit 9 - Financial Management

Concept, role and objectives of Financial Management

Financial Decisions: investment, financing and dividend- Meaning and factors affecting them

OCTOBER

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- **Describe the concept of financial planning and its objectives.**
- **Explain the importance of financial planning.**
- **Understand the concept of capital structure.**
- **Describe the factors determining the choice of an appropriate capital structure of a company.**
- **Understand the concept of fixed and working capital.**
- **Describe the factors determining the requirements of fixed and working capital.**

TOPICS

Unit 9 - Financial Management

Financial Planning- concept and importance

Capital Structure – Concept and factors affecting capital structure

Fixed and Working Capital - Concept and factors affecting their requirements

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- **Understand the concept of the financial market.**
- **Understand the concept of the money market.**
- **Discuss the concept of capital market.**
- **Explain primary and secondary markets as types of capital market.**
- **Differentiate between capital market and money market.**
- **Distinguish between primary and secondary markets**
- **Give the meaning of a stock exchange.**
- **Explain the functions of a stock exchange.**
- **Discuss the trading procedure in a stock exchange.**
- **Give the meaning of depository services and demat account as used in the trading procedure of securities.**
- **State the objectives of SEBI.**
- **Explain the functions of SEBI.**

TOPICS

Unit 10 - Financial Markets

Financial Markets: Concept

Money market: Concept

Capital market and its types (primary and secondary)

Stock Exchange- Functions and trading procedure

Securities and Exchange Board of India (SEBI)- objectives and functions

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- **Understand the concept of controlling.**
- **Explain the importance of controlling**
- **Describe the relationship between planning and controlling**
- **Discuss the steps in the process of controlling.**

TOPICS

Unit 8 - Controlling

Concept and importance

Steps in the process of control

Relationship between Planning and Controlling

NOVEMBER

LEARNING OUTCOMES

After going through this unit, the student/ learner would be able to:

- **Describe the importance of consumer protection.**
- **Understand the concept of consumer protection.**
- **Discuss the scope of Consumer Protection Act, 2019**
- **Understand the concept of a consumer according to the Consumer Protection Act, 2019.**
- **Explain the consumer rights**
- **Understand the responsibilities of consumers**
- **Understand who can file a complaint and against whom?**
- **Discuss the legal redressal machinery under Consumer Protection Act, 2019.**
- **Examine the remedies available to the consumer under Consumer Protection Act, 2019.**
- **Describe the role of consumer organizations and NGOs in protecting consumers' interests**

TOPICS

Unit 9 - Consumer Protection

Concept and importance of consumer protection

The Consumer Protection Act, 2019:

(Source: <http://egazette.nic.in/WriteReadData/2019/210422.pdf>)

Meaning of consumer

Rights and responsibilities of consumers

Who can file a complaint?

Redressal machinery

Remedies available

Consumer awareness - Role of consumer organizations and Non-Governmental Organizations (NGOs)

DECEMBER- FEBRUARY

Revision

EXAM WISE SYLLABUS BREAKUP

PERIODIC TEST 1

Nature and Significance of Management

Principles of Management

COMPREHENSIVE EXAM

Nature and Significance of Management

Principles of Management

Marketing Management

PERIODIC TEST 2

Business Environment

Planning

MID TERMS

Nature and Significance of Management

Principles of Management

Business Environment

Planning

Organising

Marketing Management

PERIODIC TEST 3

Staffing

Directing

PRE BOARDS

Full Syllabus

ACCOUNTANCY(055)

Objectives:According to NEP

- 1. To familiarize students with new and emerging areas in the preparation and presentation of financial statements.**
- 2. To acquaint students with basic accounting concepts and accounting standards.**
- 3. To develop the skills of designing a need based accounting database.**
- 4. To appreciate the role of ICT in business operations.**
- 5. To develop an understanding about recording of business transactions and preparation of financial statements.**
- 6. To enable students with accounting for Not-for-Profit organizations, accounting for Partnership Firms and company accounts.**

TEXTBOOK

T S GREWAL'S

Part A: Accounting for Partnership Firms and Companies

Part B: Financial Statement Analysis

REFERENCE BOOKS

Accountancy XII

Part A Volume I - Accounting for Partnership Firms

Part A Volume II - Company Accounts

Part B - Analysis of Financial Statements

Author – Dr S C Sharma

Publisher - Arya Book Depot

LINK OF CURRICULUM BY CBSE

https://cbseacademic.nic.in/curriculum_2025.html

LINK OF NCERT TEXTBOOK

<https://ncert.nic.in/textbook.php?leac1=0-5>

Theory: 80 Marks
Project: 20 Marks

3 Hours

Units		Periods	Marks
Part A	Accounting for Partnership Firms and Companies		
	Unit 1. Accounting for Partnership Firms	105	36
	Unit 2. Accounting for Companies	45	24
		150	60
Part B	Financial Statement Analysis		
	Unit 3. Analysis of Financial Statements	30	12
	Unit 4. Cash Flow Statement	20	8
		50	20
Part C	Project Work		
	Project work will include:		
	Project File	12 Marks	
	Viva Voce	8 Marks	

MONTH-WISE SYLLABUS BREAK-UP

APRIL

After going through this Unit, the students will be able to:

- state the meaning of partnership, partnership firm and partnership deed.
- describe the characteristic features of partnership and the contents of partnership deeds.
- discuss the significance of provision of Partnership Act in the absence of partnership deed.
- differentiate between fixed and fluctuating capital, outline the process and develop the understanding and skill of preparation of Profit and Loss Appropriation Account.
- develop the understanding and skill of preparation profit and loss appropriation account involving guarantee of profits.
- develop the understanding and skill of making past adjustments.
- state the meaning, nature and factors affecting goodwill
- develop the understanding and skill of valuation of goodwill using different methods.
- state the meaning of sacrificing ratio, gaining ratio and the change in profit sharing ratio among existing partners.
- develop the understanding of accounting treatment of revaluation assets and reassessment of liabilities and treatment of reserves and accumulated profits by preparing revaluation account and balance sheet.

Part A: Accounting for Partnership Firms and Companies

Unit 1: Accounting for Partnership Firms - Partnership: features, Partnership deed. Provisions of the Indian Partnership Act 1932 in the absence of partnership deed. Fixed v/s fluctuating capital accounts. Preparation of Profit & Loss Appropriation account division of profit among partners, Past adjustments (relating to interest on capital, interest on drawing, salary and profit sharing ratio), Guarantee of profits.

Goodwill: nature, factors affecting and methods of valuation - average profit, super profit and capitalization.

Change in the Profit Sharing Ratio among the existing partners - sacrificing ratio, gaining ratio, accounting for revaluation of assets and reassessment of liabilities and treatment of reserves, accumulated profits and losses. Preparation of revaluation account and Balance Sheet.

Admission of a partner - effect of admission of a partner on change in the profit sharing ratio, treatment of goodwill (as per AS 26)

MAY

After going through this Unit, the students will be able to:

- **state the meaning of sacrificing ratio, gaining ratio and the change in profit sharing ratio among existing partners.**
- **develop the understanding of accounting treatment of revaluation assets and reassessment of liabilities and treatment of reserves and accumulated profits by preparing revaluation account and balance sheet.**
- **explain the effect of changes in profit sharing ratio on admission of a new partner.**
- **develop the understanding and skill of treatment of goodwill, treatment of revaluation of assets and reassessment of liabilities, treatment of reserves and accumulated profits, and preparation of the balance sheet of the new firm.**
- **explain the effect of retirement / death of a partner on change in profit sharing ratio.**
- **develop the understanding of accounting treatment of goodwill, revaluation of assets and reassessment of liabilities and adjustment of accumulated profits and reserves on retirement / death of a partner.**
- **develop the skill of calculation of deceased partner's share till the time of his death and prepare deceased partner's executor's account.**

- **discuss the preparation of the capital accounts of the remaining partners and the balance sheet of the firm after retirement / death of a partner.**

Admission of a partner - treatment of goodwill (as per AS 26), treatment for revaluation of assets and re- assessment of liabilities, treatment of reserves, accumulated profits and losses, adjustment of capital accounts and preparation of capital, current account and Balance Sheet.

Project Work

Retirement and death of a partner: effect of retirement / death of a partner on change in profit sharing ratio, treatment of goodwill (as per AS 26), treatment for revaluation of assets and re - assessment of liabilities, adjustment of accumulated profits and reserves, adjustment of capital accounts and preparation of Balance Sheet. Preparation of loan account of the retiring partner.

JULY

Unit 1: Accounting for Partnership Firms

After going through this Unit, the students will be able to:

- **explain the effect by of retirement / death of a partner on change in profit sharing ratio.**
- **develop the understanding of accounting treatment of goodwill, revaluation of assets and reassessment of liabilities and adjustment of accumulated profits and reserves on retirement / death of a partner.**
- **develop the skill of calculation of deceased partner's share till the time of his death and prepare deceased partner's executor's account.**

- discuss the preparation of the capital accounts of the remaining partners and the balance sheet of the firm after retirement / death of a partner.
- understand the situations under which a partnership firm can be dissolved.
- develop the understanding of preparation of realization account and other related accounts

Retirement and death of a partner: effect of retirement / death of a partner on change in profit sharing ratio, treatment of goodwill (as per AS 26), treatment for revaluation of assets and re - assessment of liabilities, adjustment of accumulated profits and reserves, Calculation of deceased partner's share of profit till the date of death. Preparation of deceased partner's capital account and his executor's account.

Dissolution of partnership firms: meaning of dissolution of partnership and partnership firm, types of dissolution of a firm. Settlement of accounts - preparation of realization account, and other related accounts: capital accounts of partners and cash/bank a/c (excluding piecemeal distribution, sale to A company and insolvency of partner(s)).

(I) If the realized value of tangible assets is not given it should be considered as realized at book value itself.

(II) If the realized value of intangible assets is not given it should be considered as nil (zero value).

(iIi) In case, the realization expenses are borne by a partner, clear indication should be given regarding the payment thereof.

Unit -2 Accounting for Companies-Accounting for Share Capital

After going through this Unit, the students will be able to:

- state the meaning of share and share capital and differentiate between equity shares and preference shares and different types of share capital.
- understand the meaning of private placement of shares and Employee Stock Option Plan.
- explain the accounting treatment of share capital transactions regarding issue of shares.
- develop the understanding of accounting treatment of forfeiture and re-issue of forfeited shares.
- describe the presentation of share capital in the balance sheet of the company as per schedule III part I of the Companies Act 2013.

Share and share capital: nature and types. Accounting for share capital: issue and allotment of equity shares, private placement of shares, Public subscription of shares - over subscription and under subscription of shares; Issue at par and at premium and at discount, calls in advance and arrears (excluding interest), issue of shares for consideration other than cash. Accounting treatment of forfeiture and re-issue of shares. Disclosure of share capital in company's Balance Sheet

AUGUST

Unit -2 Accounting for Companies - Accounting for Share Capital

After going through this Unit, the students will be able to:

- state the meaning of share and share capital and differentiate between equity shares and preference shares and different types of share capital.
- understand the meaning of private placement of shares and Employee Stock Option Plan.

- explain the accounting treatment of share capital transactions regarding issue of shares.
- develop the understanding of accounting treatment of forfeiture and re-issue of forfeited shares.
- describe the presentation of share capital in the balance sheet of the company as per schedule III part I of the Companies Act 2013.
- explain the accounting treatment of different categories of transactions related to the issue of debentures.
- develop the understanding and skill of writing of discount / loss on issue of debentures.
- understand the concept of collateral security and its presentation in the balance sheet.
- develop the skill of calculating interest on debentures and its accounting treatment

Share and share capital: nature and types. issue of shares for consideration other than cash. Accounting treatment of forfeiture and re-issue of shares. Disclosure of share capital in company's Balance Sheet. Concept of Private Placement and Employee Stock Option Plan (ESOP), Sweat Equity.

Accounting for Debentures

Debentures: Meaning, types, Issue of debentures at par, at a premium and at a discount. Issue of debentures for consideration other than cash; Issue of debentures with terms of redemption; debentures as collateral security-concept, interest on debentures. Writing off discount / loss on issue of debentures.

Note: Discount or loss on issue of debentures to be written off in the year debentures are allotted from Security Premium Reserve (if it

exists) and then from Statement of Profit and Loss as Financial Cost (AS 16)

SEPTEMBER

Part B: Financial Statement Analysis _-:

After going through this Unit, the students will be able to:

- **develop the understanding and skill of preparation of comparative and common size financial statements.**
- **state the meaning and objectives of the cash flow statement.**
- **develop the understanding of preparation of Cash Flow Statement using indirect methods as per AS 3 with given adjustments.**

Cash Flow Statement - Meaning, objectives Benefits, Cash and Cash Equivalents, Classification of Activities and preparation (as per AS 3 (Revised) (Indirect Method only) Note: (i) Adjustments relating to depreciation and amortization, profit or loss on sale of assets including investments, dividend (both final and interim) and tax. (ii) Bank overdraft and cash credit to be treated as short term borrowings.(iii) Current Investments to be taken as Marketable securities unless otherwise specified.

Note: Previous years' Proposed Dividend to be given effect, as prescribed in AS-4, Events occurring after the Balance Sheet date. Current years' Proposed Dividend will be accounted for in the next year after it is declared by the shareholders.

OCTOBER

After going through this Unit, the students will be able to:

- **develop the understanding of major headings and subheadings (as per Schedule III to the Companies Act, 2013) of the balance sheet as per the prescribed norms / formats.**
- **state the meaning, objectives and limitations of financial statement analysis.**
- **discuss the meaning of different tools of 'financial statements analysis'.**
- **state the meaning, objectives and significance of different types of ratios.**
- **develop the understanding of computation of current ratio and quick ratio.**
- **develop the skill of computation of debt equity ratio, total asset to debt ratio, proprietary ratio and interest coverage ratio.**
- **develop the skill of computation of inventory turnover ratio, trade receivables and trade payables ratio and working capital turnover ratio.**
- **develop the skill of computation of gross profit ratio, operating ratio, operating profit ratio, net profit ratio and return on investment**

Financial Statements of a Company: Meaning, Nature, Uses and importance of financial Statement. Statement of Profit and Loss and Balance Sheet in prescribed form with major headings and subheadings (as per Schedule III to the Companies Act, 2013)

Note: Exceptional items, extraordinary items and profit (loss) from discontinued operations are excluded.

Financial Statement Analysis: Meaning, Significance Objectives, importance and limitations. Tools for Financial Statement Analysis:

Comparative statements, common size statements, Ratio analysis, Cash flow analysis.

Accounting Ratios Meaning, Objectives, Advantages, classification and computation. Liquidity Ratios: Current ratio and Quick ratio. Solvency Ratios: Debt to Equity Ratio, Total Asset to Debt Ratio, Proprietary Ratio and Interest Coverage Ratio. Debt to Capital Employed Ratio. Activity Ratios: Inventory Turnover Ratio, Trade Receivables Turnover Ratio, Trade Payables Turnover Ratio, Fixed Asset Turnover Ratio, Net Asset Turnover Ratio and Working Capital Turnover Ratio. Profitability Ratios: Gross Profit Ratio, Operating Ratio, Operating Profit Ratio, Net Profit Ratio and Return on Investment.

Note: Net Profit Ratio is to be calculated on the basis of profit before and after tax.

Project Work

NOVEMBER – REVISION

DECEMBER – REVISION

JANUARY – REVISION

FEBRUARY - REVISION

TEST-WISE SYLLABUS PLAN

PERIODIC TEST 1

Part A: Accounting for Partnership Firms

Unit 1: Accounting for Partnership Firms (Fundamentals)

COMPREHENSIVE EXAMINATION

Unit 1: Accounting for Partnership Firms (Fundamentals); Valuation of Goodwill ;Change in Profit sharing Ratio amongst the existing partners; Admission of a Partner ;Retirement of a Partner

PERIODIC TEST 2

Part A: Accounting for Partnership Firms

Accounting for Partnership Firms – Death of a partner ; Dissolution of a Partnership Firm

MID TERM

Part A: Accounting for Partnership Firms

Accounting for Partnership Firms – Fundamentals ;Valuation of Goodwill ; Change in the Profit Sharing Ratio among the existing partners ; Admission of a partner ; Retirement of a partner ; Death of a partner ; Dissolution of Partnership firm

PERIODIC TEST 3

Part B: Company Accounts

Accounting for Share Capital - Share and share capital

PRE BOARD 1

FULL SYLLABUS

PRE-BOARDS II (DECEMBER)

FULL SYLLABUS

POLITICAL SCIENCE (028)

RATIONALE

A discipline of Social Science, Political Science deals with understanding the social structures and methods used to manage a government or State. It also encompasses the historical, philosophical, constitutional, and legal foundation of the political system. It further provides scope to identify the political values and ideas, governing institutions and their policy making process. The subject enhances the ability to address the functions and processes of government and politics in international, national, and state levels. It ensures that students acquire citizenship skills and engage as active citizens by appreciating human diversity. This subject is interdisciplinary by nature and draws upon other social disciplines or branches of knowledge and is therefore influenced by them in many ways. At the Senior Secondary level, the curriculum of Political Science is organized in a systematic manner to facilitate students to have an understanding of political ideas, ideologies, institutions, policies, processes, and behavior, as well as groups, classes, government, law, peace and war which are the bedrock of human society and polity. The contents enrich student's writing, communication, data analysis skills and also develop knowledge about current and past political events across the world. An earnest effort is directed towards laying the foundation for a serious engagement with the discipline and developing competencies that prepare students for higher education, learning, and acquiring knowledge.

Prescribed Books:

1. Contemporary World Politics, Class XII, Published by NCERT
2. Politics in India since Independence, Class XII, Published by NCERT
3. Added Reference Material available with the document in the Annexure

LEARNING OUTCOMES

*Identify the basic features of the Soviet System. Discuss the background and outcome of disintegration of the Soviet Union. Examine the consequences of the unipolar world. Assess the features of Shock Therapy.

*Compare and contrast the importance of the European Union and ASEAN. Evaluate the extent of the rise of the Chinese economy and its impact on world politics. Summarize India's relations with China.

*Identify & locate the seven countries of the South Asian region. Appreciate the mixed record of democracy in the South Asian region. Examine the role of Political leaders .

Define International Organization

*Appreciate the role of the United Nations and its agencies Reflect on the events taking place in the post-cold war era. Understand the need for reforms in the United Nations.

*Recognize the causes of security threats Enhance analytical skills to provide solutions to security concerns. *Develop critical thinking about the role of various stakeholders in ensuring security today.

CLASS XII COURSE STRUCTURE

A-CONTEMPORARY WORLD POLITICS

- 1 The End of Bipolarity 6 marks
- 2 Contemporary Centres of Power 6 marks
- 3 Contemporary South Asia 6 marks
- 4 International Organizations 6 marks
- 5 Security in the Contemporary World 6 marks
- 6 Environment and Natural Resources 6 marks
- 7 Globalization 4 marks

TOTAL-40 marks

PART B-POLITICS IN INDIA SINCE INDEPENDENCE

- 1 Challenges of Nation-Building 6 marks
- 2 Era of One-Party Dominance 4 marks
- 3 Politics of Planned Development 2 marks
- 4 India's External Relations 6 marks
- 5 Challenges to and Restoration of the Congress System 4 marks
- 6 The Crisis of Democratic Order 4 marks
- 7 Regional Aspirations 6 marks
- 8 Recent Developments in Indian Politics 8 marks

40 MARKS

20 MARKS Project

Monthly Syllabus Plan

April

1.The End of Bipolarity Topics to be focused: a) The Soviet System b) Gorbachev and the disintegration c) Causes and Consequences of disintegration of Soviet Union d) Shock Therapy and its Consequences.

2. Contemporary Centres of Power Topics to be focused: a) European Union
b) Association of Southeast Asian Nations c) Rise of China as an economic power d) Japan and South Korea as emerging powers.

May

3. Contemporary South Asia : a) Military and Democracy in Pakistan and Bangladesh b) Monarchy and Democracy in Nepal c) Ethnic Conflict and Democracy in Sri Lanka d) India-Pakistan Conflicts e) India and its Neighbors f) Peace and Cooperation .

4. International Organizations a) Meaning and importance of International Organisations b) Evolution of the UN c) Structure and function of International Organisations d) Principal Organs of the UN.

5. Security in the Contemporary World.

July

6. Environment and Natural Resources

7. Globalisation

Book-II

1. Challenges of Nation Building

August

2. Era of One-Party Dominance

3. Politics of Planned Development

4. India's External Relations

September

5. Challenges to and Restoration of the Congress System

6. The Crisis of Democratic Order

October

7. Regional Aspirations

November

8. Recent Developments in Indian Politics

EXAMWISE SYLLABUS

Monday Test-I

Chapter- 1,2

Comprehensive Exam

Chapters-1,2,3,4,5

Monday Test-II

Chapters-6,7

Mid Term- Book-I

Pre-board I

BOOK-I

BOOK-II Chapters-1,2,3,4,5,6

Pre-board-II

Full Syllabus

(as given by CBSE,DoE)

Project overview:

The Project work will be implemented for 20 Marks. Out of 20 marks, 10 marks are to be allotted to viva voce and 10 marks for project work. For class XII, the evaluation for 20 marks project work should be done jointly by the internal and external examiners and for class XI the evaluation can be done by the internal examiner. The project can be individual/pair/group of 4-5 each. The Project can be made on any of the topics given in the syllabus of a particular class or any contemporary issues. The project work can be culminated in the form of films, albums, songs, storytelling, debate, Role Play, Skit, Presentation, Model, Field Survey, Mock Drills/Mock Event etc. The teacher should give enough time for preparation of the Project Work. The topics for Project Work taken up by the student must be discussed by the teacher in classroom.

PSYCHOLOGY (037)

MONTHLY SYLLABUS PLAN

Learning Outcomes:

- **Describes the construct of intelligence, theories of intelligence and Indian perspective.**
- **Explains variations in intelligence as entwined in both heredity and environment.**
- **Distinguishes among aptitude, intelligence, and creativity.**
- **Differentiates among aspects of self like self-concept, self-efficacy, self-esteem, and self-regulation, etc.**
- **Explains the theories of personality.**
- **Enumerates various techniques of personality assessment.**
- **Explains the nature, types and sources of stress.**
- **Describes strategies to cope with stress.**
- **Identifies life skills that help people to stay healthy.**
- **States the factors underlying abnormal behavior.**
- **Describes the major psychological disorders—anxiety, obsessive compulsive, trauma- and stressor related, somatic symptom, dissociative, depressive, bipolar, schizophrenia spectrum, psychotic, neurodevelopmental, disruptive, impulse-control and conduct, feeding and eating, and substance-related and addictive disorders.**
- **Enumerates the different types of therapies—psychodynamic, behavior, cognitive, humanistic existential, bio-medical, and alternative.**
- **Explores how people with mental disorders can be rehabilitated.**
- **Explains nature, formation and change of attitudes.**
- **Explains how people interpret the behavior of others and how the presence of others influences our behavior.**
- **Describes the concept of prosocial behavior and factors affecting it.**
- **Examines the nature, types, formation and influences of groups on individual behavior.**
- **Describes the nature of intergroup conflict and examines various conflict resolution strategies.**

- States the relationship between human beings and the environment.
- Interprets the causes and consequences of social problems from a psychological perspective.
- Identifies the possible remedies of problems such as poverty, aggression, and health.
- Explains the significance of developing communication skills, and the nature and process of counseling.
- Enumerates the importance of psychological testing skills in individual assessment.

TEXTBOOKS:

NCERT- Psychology Textbook for class XII

<https://ncert.nic.in/textbook.php?lepy1=0-7>

UNIT-WISE WEIGHTAGE :

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

MONTH-WISE PLAN OF SYLLABUS:

APRIL & MAY

Chapter-1 Variation in Psychological Attributes

Chapter-2 Self and Personality

Practical File Introduction

Practical-1 RSPM

JUNE - Case Study (Holiday HomeWork)

JULY & AUGUST

Chapter-3 Meeting Life Challenges

Chapter-4 Psychological Disorder

Practical 2 and 3 - MPI and SCAT

SEPTEMBER & OCTOBER

Chapter- 5 Therapeutic Approaches

Chapter-6 Attitude and Social Cognition

Practical 4 and 5- SCQ and AISS

NOVEMBER

Chapter-7 Social Influences and Group Processes

DECEMBER & JANUARY

- Revision of sample papers

PRACTICAL EXAMINATION :

• Practical (Experiments) file	05 Marks
• Case Study File	05 Marks
• Viva Voce (Project and experiments)	05 Marks
• Two experiment (05 marks for conduct of experiment and 10 marks for reporting)	15 Marks
Total	30 Marks

Exam Wise Syllabus Plan

Periodic Test 1:

- Chapter 1: Variation in Psychological Attributes

Periodic Test 2:

- Chapter 2: Self and Personality

Mid Term:

- Chapter 1: Variation in Psychological Attributes
- Chapter 2: Self and Personality
- Chapter 3: Meeting Life Challenges
- Chapter 4: Psychological Disorders

Periodic Test 3:

- Chapter 5: Therapeutic Approach
- Chapter 6: Attitude and Social Cognition

Pre- Boards 1:

- Chapter 1: Variation in Psychological Attributes
- Chapter 2: Self and Personality
- Chapter 1: Variation in Psychological Attributes
- Chapter 2: Self and Personality
- Chapter 3: Meeting Life Challenges
- Chapter 4: Psychological Disorders
- Chapter 5: Therapeutic Approach
- Chapter 6: Attitude and Social Cognition
- Chapter 7: Social Influences and Group Processes

Pre- boards 2 :

- Chapter 1: Variation in Psychological Attributes
- Chapter 2: Self and Personality
- Chapter 1: Variation in Psychological Attributes
- Chapter 2: Self and Personality
- Chapter 3: Meeting Life Challenges
- Chapter 4: Psychological Disorders
- Chapter 5: Therapeutic Approach
- Chapter 6: Attitude and Social Cognition
- Chapter 7: Social Influences and Group Processes

PHYSICAL EDUCATION(048)

MONTH-WISE SYLLABUS PLAN

APRIL

Unit I Management of Sporting Events

- **Functions of Sports Events Management (Planning, Organising, Staffing, Directing & Controlling)**
- **Various Committees & their Responsibilities (pre; during & post)**
- **Fixtures and its Procedures – Knock-Out (Bye & Seeding) & League (Staircase & Cyclic)**
- **Intramural and Extramural – Meaning, Objectives and its Significance**
- **Community Sports – Purpose and benefits**

MAY

Unit II Children & Women in Sports

- **Exercise guidelines of WHO for different age groups**
- **Common postural deformities-knock knees, flat foot, round shoulders, Lordosis, Kyphosis, Scoliosis and bow legs and their respective corrective measures.**
- **Women participation in Sports – Physical, Psychological and Social benefits**
- **Special consideration (menarche and menstrual dysfunction)**
- **Female athlete triad (osteoporosis, amenorrhea, eating disorders)**

JULY

Unit III Yoga as Preventive measure for Lifestyle Disease

- **Obesity: Procedure, Benefits & contraindications for Tadasana, Katichakrasana, Pawanmuktasana, Matsayasana, Halasana, Paschimottasana, Ardha Matsyendrasana, Dhanurasana, Ushtrasana, Surya Bhedana pranayama.**
- **Diabetes: Procedure, Benefits & contraindications for Katichakrasana, Pawanmuktasana, Bhujangasana, Shalabhasana, Dhanurasana, Suptavajrasan, Paschimottanasana, Ardha Matsyendrasana, Mandukasana, Yogmudra, Gomukhasana, Ushtrasana, Kapalbhathi**
- **Asthma: Procedure, Benefits & contraindications for Tadasana, Urdhwahastottasana, Uttan Mandukasana, Bhujangasana, Dhanurasana, Ushtrasana, Vakrasana, Kapalbhathi, Gomukhasana, Matsyasana, AnulomVilom.**
- **Hypertension: Tadasana, Katichakrasana, Uttanpadasana, Ardha Halasana, Sarla Matyasana, Gomukhasana, Uttan Mandukasana, Vakrasana, Bhujangasana, Makarasana, Shavasana, Nadi-Shodhan Pranayam, Sitlipranayam.**
- **Back Pain and Arthritis: Procedure, Benefits & Contraindications of Tadasana, Urdhawahastootansana, Ardha-Chakrasana, Ushtrasana, Vakrasana, Sarala Maysyendrsana, Bhujangasana, Gomukhasana, Bhadrasana, Makarasana, Nadi-Shodhana pranayama.**

Unit IV Physical Education & Sports for CWSN (Children with Special Needs -Divyang)

- **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 assessable for children with special needs**

AUGUST

Unit V Sports & Nutrition

- **Concept of Balanced Diet and Nutrition**
- **Macro and Micro Nutrients: Food sources and 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**

SEPTEMBER

Unit VI Test & Measurement in Sports

- **Fitness Test – SAI Khelo India Fitness Test in school [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, Modified Push-Ups for 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 for agility, Six Minute Walk Test for Aerobic Endurance;**
- **Johnsen – Methney Test of Motor Educability (Front Roll, Roll, Jumping Half-Turn, Jumping full-turn)**

Unit VII Physiology & Injuries in Sports

- **Physiological factors determining components of Physical Fitness**
- **Effect of exercise on Muscular System**
- **Effect of exercise on Cardio- Respiratory System**
- **Physiological changes due to aging**
- **Sports injuries: Classification (Soft Tissue Injuries – Abrasion, Contusion, Laceration, Incision, Sprain & Strain; Bone & Joint Injuries - Dislocation, Fractures - GreenStick, Comminuted, Transverse, Oblique & Impacted)**

OCTOBER

Unit VIII Biomechanics & Sports

- **Newton's Law of Motion & its application in sports.**
- **Types of Levers and their application in Sports.**
- **Equilibrium – Dynamic and Static and Centre of Gravity and its application in sports**
- **Friction and Sports**
- **Projectile in Sports**

NOVEMBER

Unit IX Psychology & Sports

- **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 Aggressions in Sports;**
- **Psychological Attributes in Sports – Self Esteem, Mental Imagery, Self Talk, Goal Setting**

DECEMBER

Unit X Training in Sports

- **Concept of Talent Identification and Talent Development in Sports**
- **Introduction to Sports Training Cycle – Micro, Meso, Macro Cycle.**
- **Types & Methods to Develop – Strength, Endurance, and Speed**
- **Types & Methods to Develop – Flexibility and Coordinative Ability**

EXAM-WISE SYLLABUS BREAK-UP

Periodic Test 1

Unit-1

Periodic Test 2

Unit -2 and 3

Periodic Test 3

Unit- 6 and 7

Midterm Examination

Unit-1,2,3,4 and 5

Pre Board Exam I

Unit- 1 to 9

Pre Board Exam II

Whole syllabus