

CLASS : XII , TERM : 1 (SYLLABUS) (2026-2027) , STREAM : SCIENCE

SUBJECT : ENGLISH CORE

Flamingo

The last lesson

Lost spring

Deepwater

The Rattrap

The Interview

My mother at sixty six

Keeping Quiet

A thing of beauty

Vistas

Third level

The Tiger King

Journey to the end of the earth

Writing Skills

Notice

Invitation

Article

Editorial letter

Comprehension

SUBJECT : PHYSICS

UNIT	CHAPTERS	TOPICS
Unit-I: 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. 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).
	Chapter-2: Electrostatic Potential and Capacitance	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 (no derivation, formulae only).
Unit-IV: Electromagnetic Induction and Alternating Currents	Chapter-6: Electromagnetic Induction	Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction.
	Chapter-7: Alternating Current	Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit (phasors only), resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer.

Unit-II: Current Electricity	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, V-I characteristics (linear and non-linear), 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 rules, Wheatstone bridge.
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
	Chapter-10: Wave Optics	Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen's 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 nth possible orbit, velocity and energy of electron in nth orbit, hydrogen line spectra (qualitative treatment only).
	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.

SUBJECT : CHEMISTRY

- 1. Solutions**
 - 2. Chemical Kinetics (till what has been taught in the class)**
 - 3. d and f block elements**
 - 4. Coordination compounds**
 - 5. Haloalkanes and Haloarenes**
 - 6. Alcohols, Phenol and Ethers**
 - 7. Aldehydes , Ketones and Carboxylic Acid (till what has been taught in the class)**
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SUBJECT : BIOLOGY

CH-1 : SEXUAL REPRODUCTION IN FLOWERING PLANTS

CH-2 : HUMAN REPRODUCTION

CH-3 : REPRODUCTIVE HEALTH

CH-4 ; PRINCIPLES OF INHERITANCE AND VARIATION

CH-5 : MOLECULAR BASIS OF INHERITANCE

CH-6 : EVOLUTION

CH-7 : HUMAN HEALTH AND DISEASES

CH-8 : MICROBES IN HUMAN WELFARE

CH-11 : ORGANISMS AND POPULATIONS

SUBJECT : MATHEMATICS

Unit-I: Relations and Functions

1. Relations and Functions
2. Inverse Trigonometric Functions

Unit:2- Algebra

1. Matrices
2. Determinants

Unit:3- Calculus

- 1.Continuity and Differentiability
2. Differentiation
- 3.Application of Derivatives
4. Selected portions of Integration

Unit:5- Linear programming problem

SUBJECT : PHYSICAL EDUCATION

1. Management of Sporting Events
 2. Children and Women in Sports
 3. Test and Measurement in Sports
 4. Training in Sports
 5. Biomechanics and Sports
 6. Psychology and Sports
 7. Sports and Nutrition
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SUBJECT : PSYCHOLOGY

1. Variations in Psychological Attributes
2. Self and Personality
3. Meeting Life Challenges
4. Psychological Disorders
5. Therapeutic Approaches

SUBJECT : COMPUTER SCIENCE

Unit 1: Computational Thinking and Programming – 2

- Revision of Python topics covered in Class XI.
- Functions: types of function (built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)
- Exception Handling: Introduction, handling exceptions using try-except-finally blocks
- Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths
- Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause, writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file
- Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file
- CSV file: import csv module, open / close csv file, write into a csv file using writer(),writerow(),writerows() and read from a csv file using reader()
- Data Structure: Stack, operations on stack (push & pop), implementation of stack using list.

Unit 3: Database Management

- 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)
- 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,

SUBJECT : HINDI

(आरोह पाठ्य पुस्तक)

काव्य

*आत्म परिचय ,दिन जल्दी-जल्दी ढलता है

*पतंग

*कविता के बहाने, बात सीधी थी पर

*कमरे में बंद अपाहिज

*उषा

(वितान पाठ्य पुस्तक)

*सिल्वर वेडिंग

*जूझ

गद्य

*भक्तिन

*बाजार दर्शन

*काले मेघा पानी दे

*पहलवान की ढोलक

(अभिव्यक्ति और माध्यम पाठ्य पुस्तक)

- *विभिन्न माध्यमों के लिए लेखन
- *पत्रकारीय लेखन के विभिन्न रूप और लेखन प्रक्रिया
- *विशेष लेखन स्वरूप और प्रकार
- * कैसे करें कहानी का नाट्य रूपांतरण
- * कैसे बनता है रेडियो नाटक
- * नए और अप्रत्याशित विषयों पर लेखन

Writing skills

अपठित - ग्यांश, पद्यांश

रचनात्मक लेखन

SUBJECT : BENGALI

- DHARMO (poem)
- TAR SANGE (poem)
- HOLUD PORA (story)
- NA NA RANGER DIN GULI (Drama)
- UTKARSHO & APAKARSHO (Grammar)
- WRITING – REPORT WRITING & ADVERTISEMENT
- + UNIT I SYLLABUS
