

Class – XII (Science) (2026-27)
Detailed Syllabus - 2026 -2027

ENGLISH CORE
Subject Code – 301
Classes XII (2026-27)

One Theory Paper

Marks: 80

Section	Competencies	Total Marks
Reading Skills	Conceptual understanding, decoding, Analyzing, inferring, interpreting, appreciating, literary, conventions and vocabulary, summarizing and using appropriate format/s.	22
Creative Writing Skills	Conceptual Understanding, application of rules, Analysis, Reasoning, appropriate style and tone, using appropriate format and fluency, inference, analysis, evaluation and creativity.	18
Literature Text Book and Supplementary Reading Text	Recalling, reasoning, appreciating literary convention, inference, analysis, creativity with fluency, Critical Thinking.	40
	TOTAL	80
Internal Assessment	Assessment of Listening and Speaking Skills <ul style="list-style-type: none">• Listening• Speaking	10 5+5
	Project Work	10
	GRAND TOTAL	80

COURSE STRUCTURE

Learning Objectives

- 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 organisation 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), understand and respond 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 of forms, preparing CV, e-mail messages., making notes from reference materials, recorded talks etc

Month	Topic
March	<ol style="list-style-type: none"> 1. My mother at sixty – six 2. Aunt Jennifer’s Tigers 3. The Last Lesson
April/ May	<ol style="list-style-type: none"> 1. Keeping Quiet 2. A Thing of Beauty 3. A Roadside Stand 4. Notice Writing 5. Lost Spring 6. Deep Water 7. Invitations & Replies
July	<ol style="list-style-type: none"> 1. The Rattrap 2. Indigo 3. The Interview 4. Articles 5. Reports
August	<ol style="list-style-type: none"> 1. Going Places 2. The Third Level 3. The Tiger King
September	<ol style="list-style-type: none"> 1. Letter Writing 2. Revision 3. A.L.S
October	<ol style="list-style-type: none"> 1. Journey to the end of the Earth 2. On the face of it 3. Poets & Pancakes
November	<ol style="list-style-type: none"> 1. The Enemy 2. Memories of Childhood 3. A.L.S 4. Revision
December	Pre - Board
January	Final A.L.S

Prescribed Books:

1. Flamingo, Class XII, Published by NCERT
2. Vistas, Class XII, Published by NCERT

XII ABCD

ASSESSMENT	SYLLABUS
PA 1 (20 Marks)	<ol style="list-style-type: none"> 1. My mother at sixty – six 2. Aunt Jennifer’s Tigers 3. Keeping Quiet 4. A Thing of Beauty 5. A Roadside Stand 6. Notice Writing
HALF YEALY EXAM (80 Marks)	<p>All the chapters from Flamingo</p> <p>From Vistas</p> <ol style="list-style-type: none"> 1. Tiger King 2. The Third Level 3. Writing Skills
PA 2 (20 Marks)	<ol style="list-style-type: none"> 1. Letter Writing 2. Report Writing 3. Invitations & Replies 4. Journey to the end of the Earth
ANNUAL EXAM THEORY (80 MARKS)	Full Syllabus

Class 12 - Mathematics(2026-27)

No.	Units	Marks
I.	Sets and Functions	23
II.	Algebra	25
III.	Coordinate Geometry	12
IV.	Calculus	08
V.	Statistics and Probability	12
	Total	80
	Internal Assessment	20

LEARNING OUTCOMES

September	Ch-12 Linear Programming <ul style="list-style-type: none"> 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).
October	Ch-10 Vectors <ul style="list-style-type: none"> Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors ,addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. properties and application of scalar (dot) product of vectors, vector (cross) product of vectors. Ch-11 Three Dimensional Geometry <ul style="list-style-type: none"> 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. Ch-13 Probability <ul style="list-style-type: none"> Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable.
November	Ch-3 Matrices <ul style="list-style-type: none"> Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operations on matrices: Addition and multiplication and multiplication with a scalar. Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries). Ch-4 Determinants <ul style="list-style-type: none"> Determinant of a square matrix (up to 3 x 3 matrices), minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix. Ch-1 Relations and Functions <ul style="list-style-type: none"> Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.
December	Revision & Pre Board
January	• Revision
February	• Board exam
	INTERNAL ASSESSMENT 20 MARKS Periodic Test :- 10 Marks Mathematics Activities :- 10 Marks PRESCRIBED BOOKS 1. Mathematics Part I - Textbook for Class XII, NCERT Publication 2. Mathematics Part II - Textbook for Class XII, NCERT Publication 3. Mathematics Lab Manual class XII, published by NCERT

ASSESSMENT PLANNER : SESSON 2026- 2027

SUBJECT : Mathematics

CLASS : XII

TEST	MAX.	SYLLABUS
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	MARKS	
PERIODIC ASSESSEMENT 1	20	<ul style="list-style-type: none"> • Inverse trigonometry • Continuity and differentiability
MID TERM EXAMS	80	<ul style="list-style-type: none"> • Inverse trigonometry • Continuity and differentiability • Application of derivatives • Integration • Application of Integration • Differential equation <ul style="list-style-type: none"> • Linear programming problems
PRE BOARD	80	<ul style="list-style-type: none"> • Relation and Functions • Inverse trigonometry • Matrices • Determinants • Continuity and Differentiability • AOD • Integration • AOI • Differential equations • Vectors • 3D • Linear programming problems • Probability

**DETAILED SYLLABUS
PHYSICS (042)
CLASS XII D**

Theory paper- 70 marks

Practical Exam – 30 marks

UNIT	CHAPTER	MARKS
1	Electrostatics	8
2	Current Electricity	8
3	Magnetic Effects Of Electric Current and Magnetism	9
4	Electromagnetic Induction and Alternating Current	8
5	Electromagnetic Waves	4
6	Optics	14
7	Dual Nature of Matter and Radiation	6
8	Atoms and Nuclei	6
9	Electronic Devices	7

TOTAL 70marks

Learning objectives:

Learning of physics will help students to –

1. Understand the importance of SI units , scientific symbol as per the international standards .
2. Develop basic conceptual understanding of content and acquire understanding of key concepts.
3. Develop the skill in performing experiments tabulating observations, plotting graph and resulting from graph .
4. Develop scientific temper and scientific attitude.
5. Apply the knowledge gained to their daily life situation

DETAILED SYLLABUS

MONTH	NAME OF THE CHAPTER
APRIL	<p>Chapter- Electrostatics</p> <ul style="list-style-type: none"> • Electric charges • Coulomb's Law in Electrostatic • Electric field and Electric lines of forces • Electric dipole and field due to dipole • Gauss theorem and its applications. • Electric potential and equipotential surfaces. • Capacitors and capacitance of parallel plate capacitor.
MAY	<p>Chapter – Current Electricity</p> <ul style="list-style-type: none"> • Current and emf • Drift velocity of electrons • Ohm's law and its applications • Kirchoff's laws and Electric networks <p>Chapter – Magnetic Effects Of Electric Current</p> <ul style="list-style-type: none"> • Oerster's experiment and Magnetic field. • Lorentz force.
JULY	<p>Chapter – Magnetic Effects Of Electric Current-</p> <ul style="list-style-type: none"> • Biot Savart law and its applications • Magnetic field inside a solenoid. • Force on a current carrying conductor • Construction and working of moving coil galvanometer. • Magnetic terms and different types of Magnetic materials . <p>Chapter – Electromagnetic Induction and Alternating Current</p> <ul style="list-style-type: none"> • Faradays Experiments of EMI • Self and Mutual Induction
AUGUST	<p>Chapter – Electromagnetic Induction and Alternating Current</p> <ul style="list-style-type: none"> • Mean and average value of current and emf • Circuit of resistor, inductor and capacitor with ac source • Impedance and resonance condition • Power factor for ac Circuit <p>Chapter- Electromagnetic Waves</p> <ul style="list-style-type: none"> • Definition and source of EMWs • Electromagnetic spectrum • Source of different waves and their uses.
SEPTEMBER	<p>MID TERM EXAMINATION</p> <p>Chapter- Optics</p> <ul style="list-style-type: none"> • Wave nature of light • Huygens principle and its use to verify laws of reflection and refraction . • Interference and Young's double slit experiment. • Diffraction of light
OCTOBER	<p>Chapter – Optics</p> <ul style="list-style-type: none"> • Light as a ray (reflection of light) • Total internal reflection

	<ul style="list-style-type: none"> • Refraction through spherical surface • Lens makers formula • Refraction through glass prism
NOVEMBER	<p>Chapter- Dual Nature of Matter and Radiation</p> <ul style="list-style-type: none"> • Photoelectric effect • Variation of photo current with intensity , frequency and potential applied. <p>Chapter – Atoms and Nuclei</p> <ul style="list-style-type: none"> • Structure of Atom • Bohr’s model • Binding Energy
DECEMBER	<p>Pre Board Exam</p> <p>Revision for practical Exam</p>
JANUARY	<p>Board Practical Exam</p>

BOOK TO BE FOLLOWED - NCERT BOOK PART 1 AND PART 2

ASSESSMENT PLANNER-

Exam	Content
PT1	<ul style="list-style-type: none"> • Electric charge and Electric field • Electrostatic potential and capacitance
MID TERM EXAMINATION	<ul style="list-style-type: none"> • Electric charge and Electric field • Electrostatic potential and capacitance • Current Electricity • Magnetic Effects of Electric Current and Magnetism • Electromagnetic Induction and Alternating Current • Electromagnetic Waves
PRE BOARD	FULL PORTION

CHEMISTRY
Subject Code – 043
Class XII (2026-27)

One Theory Paper

Marks: 70

Units	Topics	Marks
VI	Haloalkanes and Haloarenes	6
VII	Alcohols phenols and ethers	6
VIII	Aldehydes ketones and carboxylic acids	8
IX	Amines	6
X	Biomolecules	7
I	solutions	7
II	Electrochemistry	9
III	Chemical kinetics	7
IV	D and F block	7
V	Coordination compounds	7
	Total	70

Learning Objectives

A study of chemistry will inculcate among the pupils a few skills and thus, at the end of the session the students will be:

- Develop a basic conceptual knowledge and understanding of content and acquire a clear understanding of the laws, principles basic facts, and key concepts.
- Develop a better insight into the subject and thus encourage them to do further reference reading.
- Develop aesthetic sensibilities, process skills, creative and critical thinking, decision – making, communication, analytical, problem solving and drawing skills.
- Develop investigatory skills, the skills in performing experiments, tabulating observations, plotting graphs, and drawing inferences.
- Develop a scientific temperament and appreciation of scientific facts, a spirit of enquiry, a systematic, creative, ethical, and meticulous approach towards problem solving.
- Apply the knowledge gained to daily life situation and problems, thus making chemistry learning more relevant, meaning, and interesting.
- Apply the knowledge gained to integrate physical principles with music, dance, art, sports, tricks, and magic.
- Be able to collaborate, innovate, organize, brainstorm, and communicate new ideas and technology.

COURSE CONTENT

Month	Topic
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<p>April</p>	<p>Unit VI Haloalkanes and Haloarenes.</p> <p><i>The topics in this unit are:</i></p> <p>Haloalkanes: Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions.</p> <p>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</p>
<p>April /May</p>	<p>Unit VII Alcohols, Phenols and Ethers</p> <p><i>The topics in this unit are:</i></p> <p>Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol.</p> <p>Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses phenols.</p> <p>Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.</p> <p>Unit VIII Aldehydes, Ketones and Carboxylic Acids</p> <p><i>The topics in this unit are:</i></p> <p>Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses.</p> <p>Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.</p>
<p>July</p>	<p>UNIT IX Amines</p> <p><i>The topics in this unit are:</i></p> <p>Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.</p> <p>Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry</p> <p>UNIT X Biomolecules</p> <p><i>The topics in this unit are:</i></p> <p>Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates.</p> <p>Proteins -Elementary idea of - amino acids, peptide bond, polypeptides, proteins, structure of proteins - primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes.</p> <p>Hormones - Elementary idea excluding structure. Vitamins - Classification and functions. Nucleic Acids: DNA and RNA.</p>

<p>August</p>	<p>Unit I Solutions</p> <p><i>The topics in this unit are:</i></p> <p>Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, Raoult's law, colligative properties - relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor</p>
<p>September</p>	<p>Revision and mid term exams</p>
<p>October</p>	<p>Unit II Electrochemistry</p> <p><i>The topics in this unit are:</i></p> <p>Redox reactions, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion</p> <p>UNIT III Chemical Kinetics</p> <p><i>The topics in this unit are:</i></p> <p>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.</p>
<p>November</p>	<p>UNIT IV d and f Block Elements</p> <p><i>The topics in this unit are:</i></p> <p>General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first-row transition metals – metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$.</p> <p>Lanthanoids – Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences.</p> <p>Actinoids - Electronic configuration, oxidation states and comparison with lanthanoids..</p> <p>UNIT V Coordination Compounds</p> <p><i>The topics in this unit are:</i></p> <p>Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT; structure and stereoisomerism, the importance of coordination compounds (in qualitative analysis, extraction of metals and biological system)</p>
<p>December</p>	<p>Pre-Board</p>

ASSESSMENT PLANNER 2026-27**SUBJECT –CHEMISTRY****CLASS XII D**

TEST	SYLLABUS
First periodic Test (20 Marks)	Halolkanes and Haloarenes
Class Test (20 Marks)	Alcohols, Phenols and Ethers
Mid term exam (70 Marks)	1.Halaolkanes and Haloarenes 2. Alcohols, Phenols and Ethers 3. Aldehydes, Ketones and Carboxylic Acids 4. Amines 5. Biomolecules 6. Solutions
Second periodic test (20 Marks)	1.Aldehydes, Ketones and Carboxylic Acids 2. Electro Chemistry
Class Test (20 Marks)	Coordination Compounds
Pre board examination (70 Marks)	Full syllabus

BIOLOGY**Subject Code-044****Class- XII D(2026-27)****One Theory Paper****Marks: 70**

Units	Topics	Marks
VI	Reproduction	16
VII	Genetics and Evolution	20
VIII	Biology and Human Welfare	12
IX	Biotechnology and its Applications	12
X	Ecology and Environment	10
	Total	70

Learning outcomes:

Promote understanding of basic principles of Biology. Encourage learning of emerging knowledge and its relevance to individual and society. Promote rational/scientific attitude towards issues related to population, environment and development. Enhance awareness about environmental issues, problems and their appropriate

solutions. Create awareness among the learners about the diversity in the living organisms and developing respect for other living organisms. Appreciate that the most complex biological phenomenon is built on essential simple process.

COURSE CONTENT

Month:	Topic:
March: & April:	<p><u>Chapter 1.</u> Sexual reproduction in flowering plants. Pre-fertilization: Structure and events; double fertilization; post fertilization: structure and events; Apomixis and polyembryony.</p> <p><u>Chapter 4.</u> Principles of inheritance and variation. Mendel's laws of inheritance; inheritance of one gene</p>
May:	<p><u>Chapter 6.</u> Evolution. Origin of life; evolution of life forms- a theory; evidences for evolution; adaptive radiation; biological evolution; Hardy-Weinberg principle; brief account of evolution; origin and evolution of man.</p> <p><u>Chapter 7.</u> Human health and diseases. Common diseases in humans; immunity; AIDS; Cancer; Drugs and Alcohol abuse.</p> <p><u>Chapter 8.</u> Microbes in human welfare. Microbes in house hold products; in industrial products; in sewage treatment; as biocontrol agents; as biofertilizers.</p>
July:	<p><u>Chapter 5.</u> Molecular basis of inheritance. The DNA; Search for the genetic material; RNA world; Transcription; genetic code; translation; regulation of gene expression; human genome project; DNA finger printing.</p> <p><u>Chapter 12.</u> Ecosystem. Structure and function; productivity; decomposition; energy flow; ecological pyramids.</p>
August:	<p><u>Chapter 9.</u> Biotechnology: Principles and processes. Principles of biotechnology; tools of recombinant DNA technology; processes of recombinant DNA technology.</p> <p><u>Chapter 10.</u> Biotechnology and its applications. Applications in agriculture; in medicine; transgenic animals; ethical issues.</p>
September:	Mid-term examination.
October:	<p><u>Chapter 2.</u> Human reproduction. Male reproductive system; gametogenesis; menstrual cycle; fertilization and implantation; pregnancy and embryonic development; parturition and lactation.</p> <p><u>Chapter 3.</u> Reproductive health: Problems and strategies; population stabilization and birth control; medical treatment of pregnancy; sexually transmitted infections; infertility.</p>
November:	<p><u>Chapter 11.</u> Organisms and populations. Population attributes; population growth; life history variation; population interactions.</p> <p><u>Chapter 13.</u> Biodiversity and conservation. Biodiversity; conservation.</p>
December:	Preboard examination.
Practical Marks 30	<p>Core Experiments: 5</p> <p>Spottings: 11</p> <p>Practical Record</p> <p>Investigatory Project File</p> <p>Activity File (Art integrated learning)</p>

Prescribed Books:

1. **Biology, Class XII, Published by NCERT.**
2. **Comprehensive Laboratory Manual in Biology for Class XII.**

TEST	SYLLABUS
PA 1(20 Marks)	Chapter 1. Sexual reproduction in flowering plants. Chapter 4. Principles of inheritance and variation(till page no. 59).
MID TERM EXAM (70 Marks)	Chapter 1. Sexual reproduction in flowering plants. Chapter 4. Principles of inheritance and variation. Chapter 5. Molecular basis of inheritance. Chapter 6. Evolution. Chapter 7. Human health and diseases. Chapter 8. Microbes in human welfare. Chapter 9. Biotechnology: Principles and processes. Chapter 10. Biotechnology and its applications. Chapter 12. Ecosystem.
PRE – BOARD (70 Marks)	Chapter 1. Sexual reproduction in flowering plants. Chapter 2. Human reproduction. Chapter 3. Reproductive health. Chapter 4. Principles of inheritance and variation. Chapter 5. Molecular basis of inheritance. Chapter 6. Evolution. Chapter 7. Human health and diseases. Chapter 8. Microbes in human welfare. Chapter 9. Biotechnology: Principles and processes. Chapter 10. Biotechnology and its applications. Chapter 11. Organisms and populations. Chapter 12. Ecosystem. Chapter 13. Biodiversity and conservation.

COMPUTER SCIENCE

Subject Code – 083

Classes XII (2026-27)

Theory Paper

Units	Topics	Marks
1	COMPUTATIONAL THINKING AND PROGRAMMING-2	40
2	COMPUTER NETWORKS	10
3	DATABASE MANAGEMENT	20
	Total	70

1. Prerequisites

Computer Science- Class XI

2. Learning Outcomes

Student should be able to

- a) apply the concept of function.
- b) explain and use the concept of file handling.
- c) use basic data structure: Stacks
- d) explain basics of computer networks.
- e) use Database concepts, SQL along with connectivity between Python and SQL.

March UNIT I : Computational Thinking and Programming – 2

- Revision of the basics of Python covered in Class XI.

UNIT I: Computational Thinking and Programming – 2

- 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

April – May**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, operators (mathematical, relational and logical), aliasing, distinct clause, where clause, in, between, order by, meaning of null, is null, is not null, like, update command, delete command, aggregate functions (max, min, avg, sum, count), group by, having clause, joins: cartesian product on two tables, equi-join and natural join
 - Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using connect(), cursor(), execute(), commit(), fetchone(), fetchall(), rowcount, creating database connectivity applications, use of %s format specifier or format() to perform queries.
 - **Board Project:** The aim of the class project is to create something that is tangible and useful using Python file handling/ Python-SQL connectivity. This should be done in groups of two to three students and should be started by students at least 6 months before the submission deadline. The aim here is to find a real world problem that is worthwhile to solve.
 - Students are encouraged to visit local businesses and ask them about the problems that they are facing. For example, if a business is finding it hard to create invoices for filing GST claims, then students can do a project that takes the raw data (list of transactions), groups the transactions by category, accounts for the GST tax rates, and creates invoices in the appropriate format. Students can be extremely creative here. They can use a wide variety of Python libraries to create user friendly applications such as games, software for their school, software for their disabled fellow students, and mobile applications, of course to do some of these projects, some additional learning is required; this should be encouraged. Students should know how to teach themselves. The students should be sensitized to avoid plagiarism and violations of copyright issues while working on projects.
 - Group formation for Board Project and detailed discussion on selection of project title, partners and implementation of it for Board Practical exam
 - Synopsis submission of Board Project by each group

** Detailed Assignment on the above topics given as Summer break holiday homework.

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

- 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

August

- 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

September

- Revision
- Mid Term Examination

2nd Term

(October -November)

October UNIT 1: Computational Thinking and Programming – 2

- 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()
- Sample project on file handling
- Data Structure: Stack, operations on stack (push & pop), implementation of stack using list.

November UNIT 2: Computer Networks

- Evolution of networking: introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET)
 - Data communication terminologies: concept of communication, components of data communication (sender,receiver, message, communication media, protocols), measuring capacity of communication media (bandwidth, data transfer rate), IP address, switching techniques (Circuit switching, Packet switching)
 - Transmission media: Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Micro waves, Infrared waves)
 - Network devices (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card)
 - Network topologies and Network types: types of networks (PAN, LAN, MAN, WAN), networking topologies (Bus, Star, Tree)
 - Network protocol: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP
 - Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting
- Assessment of raw formation of Board project source code with/without bugs
Detailed assignment on the whole syllabus for revision.
- ***Final Board Project Submission (The Source Code) , Demonstration and its Assessment**
- Revision
 - Board Project Report file submission and Final Assessment

ASSESSMENT PLANNER

SUBJECT: **COMPUTER SCIENCE (083)**

CLASS: **XII**

**TES
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**SYLLAB
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Periodic Test – 1 20 Marks	<ol style="list-style-type: none"> 1. REVISION OF PYTHON COVERED IN CLASS XI 2. FUNCTIONS 3. EXCEPTION HANDLING
Revision Test 20 Marks	<ol style="list-style-type: none"> 1. DATABASE CONCEPTS 2. RELATIONAL DATABASE MODEL 3. SQL 4. INTERFACE OF PYTHON WITH SQL DATABASE
Mid Term Exam Theory / Practical 70 / 30	<ol style="list-style-type: none"> 1. REVISION OF PYTHON COVERED IN CLASS XI 2. FUNCTIONS 3. EXCEPTION HANDLING 4. DATABASE CONCEPTS 5. RELATIONAL DATABASE MODEL 6. SQL 7. INTERFACE OF PYTHON WITH SQL DATABASE 8. FILE HANDLING(TEXT FILE,BINARY FILE)
Revision Test 20 Marks	<ol style="list-style-type: none"> 1. FILE HANDLING(CSV FILE) 2. DATA-STRUCTURES 3. COMPUTER NETWORKS
Pre-Board Examination Theory / Practical 70 / 30	<ol style="list-style-type: none"> 1. REVISION OF PYTHON COVERED IN CLASS XI 2. FUNCTIONS 3. EXCEPTION HANDLING 4. DATABASE CONCEPTS 5. RELATIONAL DATABASE MODEL 6. SQL 7. INTERFACE OF PYTHON WITH SQL DATABASE 8. FILE HANDLING(TEXT FILE,BINARY FILE,CSV FILE) 9. DATA-STRUCTURES 10. COMPUTER NETWORKS
Books / Reference Material	COMPUTER SCIENCE WITH PYTHON NCERT TEXTBOOK(as reference) & SULTANCHAND & SONS(as main course book)

PSYCHOLOGY
Subject Code – 037
Classes XII (2026-27)

One Theory Paper

Marks: 70

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

Learning Objectives

- To help students understand the nature of psychological knowledge and its relevance to different aspects of life.
- To encourage students to be observant, socially aware, and reflective.
- To reduce stigma and increase awareness of psychological well-being by educating students about mental health.
- To help students understand their own thoughts, emotions and behaviors fostering personal growth and resilience, preparing them to become responsible global members of society.

COURSE CONTENT

Month	Topic
April	Unit 1 Variations in Psychological Attributes <i>The topics in this unit are:</i> <ol style="list-style-type: none">1. Introduction2. Individual Differences in Human Functioning3. Assessment of Psychological Attributes4. Intelligence5. Theories of Intelligence: Psychometric Theories of Intelligence, Information Processing Theories, Theory of Multiple Intelligences, Triarchic Theory of Intelligence, Planning, Attention-Arousal and Simultaneous Successive Model of Intelligence6. Individual Differences in Intelligence7. Culture and Intelligence8. Emotional Intelligence9. Special Abilities: Aptitude: Nature and Measurement10. Creativity
May/ July	Unit II Self and Personality <i>The topics in this unit are:</i> <ol style="list-style-type: none">1. Introduction2. Self and Personality3. Concept of Self4. Cognitive and Behavioural Aspects of Self5. Culture and Self6. Concept of Personality7. Major Approaches to the Study of Personality<ol style="list-style-type: none">a. Type Approachb. Trait Approachc. Psychodynamic Approachd. Behavioural Approache. Cultural Approachf. Humanistic Approach

	8. Assessment of Personality <ol style="list-style-type: none"> a. Self-report Measures b. Projective Techniques c. Behavioural Analysis
July	<p>Unit III Meeting Life Challenges</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction 2. Nature, Types and Sources of Stress 3. Effects of Stress on Psychological Functioning and Health <ul style="list-style-type: none"> • Stress and Health • General Adaptation Syndrome • Stress and Immune System • Lifestyle 4. Coping with Stress <ul style="list-style-type: none"> • Stress Management Techniques 5. Promoting Positive Health and Well-being <ul style="list-style-type: none"> • Stress Resistant Personality • Life Skills • Positive Health
July/August	<p>Unit IV Psychological Disorders</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction <ul style="list-style-type: none"> • Concepts of Abnormality and Psychological Disorders <ul style="list-style-type: none"> • Historical Background 3. Classification of Psychological Disorders 4. Factors Underlying Abnormal Behaviour 5. Major Psychological Disorders <ul style="list-style-type: none"> • Anxiety Disorders • Obsessive-Compulsive and Related Disorders • Trauma-and Stressor-Related Disorders • Somatic Symptom and Related Disorders • Dissociative Disorders • Depressive Disorder • Bipolar and Related Disorders • Schizophrenia Spectrum and Other Psychotic Disorders • Neurodevelopmental Disorders • Disruptive, Impulse-Control and Conduct Disorders • Feeding and Eating Disorders • Substance Related and Addictive Disorders

<p>August</p>	<p>Unit V Therapeutic Approaches</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Nature and Process of Psychotherapy <ul style="list-style-type: none"> • Therapeutic relationship 2. Types of Therapies <ul style="list-style-type: none"> • Psychodynamic Therapy • Behaviour Therapy • Cognitive Therapy • Humanistic-Existential Therapy • Biomedical Therapy • Alternative Therapies <p>Rehabilitation of the Mentally Ill</p>
<p>October</p>	<p>Unit VI Attitude and Social Cognition</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction 2. Explaining Social Behaviour 3. Nature and Components of Attitudes 4. Attitude Formation and Change <ul style="list-style-type: none"> • Attitude Formation • Attitude Change • Attitude-Behaviour Relationship 5. Prejudice and Discrimination 6. Strategies for Handling Prejudice
<p>November</p>	<p>Unit VII Social Influence and Group Processes</p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> 1. Introduction 2. Nature and Formation of Groups 3. Type of Groups 4. Influence of Group on Individual Behaviour <ul style="list-style-type: none"> • Social Loafing • Group Polarisation
<p>December</p>	<p>Pre-Board</p>

Practical Marks 30

- 5 Psychological Test
- 1 Case Profile

Prescribed Books:

1. Psychology, Class XII, Published by NCERT

PSYCHOLOGY - ASSESSMENT PLANNER -2026-27

XII ABD

TEST	SYLLABUS
PA 1 (20 Marks)	Unit -1 Variations in Psychological Attributes Unit – 2 Self and Personality
MID TERM EXAM (70 Marks)	Unit -1 Variations in Psychological Attributes Unit – 2 Self and Personality Unit – 3 Meeting Life Challenges Unit – 4 Psychological Disorders
PRE-BOARD (70 Marks)	Unit -1 Variations in Psychological Attributes Unit – 2 Self and Personality Unit – 3 Meeting Life Challenges Unit – 4 Psychological Disorders Unit – 5 Therapeutic Approaches Unit – 6 Attitude and Social Cognition Unit – 7 Social Influence and Group processes

PHYSICAL EDUCATION

Subject Code – 048

Classes XII (2026-27)

One Theory Paper

Marks: 70

Unit s	Topics	Marks
I	Management of Sporting Events	9

II	Children & Women in sports	7
III	Yoga as Preventive measure for Lifestyle Disease	7
IV	Physical Education and Sports for CWSN	8
V	Sports & Nutrition	7
VI	Test and Measurement in Sports	8
VII	Physiology & Injuries in Sport	8
VIII	Biomechanics & Sports	10
IX	Psychology and Sports	7
X	Training and in Sports	9
Total	Theory 70 + Practical 30	Theory 70 Practical- 30 Total - 100 marks

COURSE STRUCTURE

Learning Objectives

- *Physical Education plays an essential role in the overall development of a child by supporting physical, intellectual, emotional, social, personal, and moral growth.
 - * It helps build a positive attitude toward physical education as a career and develops skills required for organizing sports events, while also improving motor abilities such as strength, speed, endurance, coordination, and flexibility.
 - *It also provides an understanding of the human body and how it functions during physical activity, along with knowledge about growth and its relationship to physical health.
 - *The subject contributes to socio-psychological development by promoting emotional stability, balanced behavior, leadership skills, teamwork, and the ability to follow instructions effectively.
- Moreover,
- * It examines the effects of physical and physiological training, especially in relation to women athletes, and encourages the practice of yoga, including asanas and pranayama, to help prevent lifestyle-related diseases. It also emphasizes the importance of proper nutrition and maintaining a balanced diet.
 - *In addition, Physical Education includes the application of basic physics principles in sports, addresses the needs of children with special requirements through adapted activities, and provides methods for conducting physical and physiological fitness

COURSE CONTENT

Month	Topic
April	Unit I Management of Sporting Events * Functions of Sports Events Management (Planning, Organising, Staffing, Directing & Controlling) * Various Committees & their Responsibilities (pre; during & post) * Fixture and it's Procedures - Knock - Out (Bye & Seeding) & League (Staircase, Cyclic and Tabular Method) * Intramural & Extramural tournaments – Meaning, Objectives & Its Significance *Community sports program (Sports Day, Health Run, Run for Fun, Run for Specific Cause

	<p>& Run for Unity</p> <p>Unit II Children & Women in sports</p> <ul style="list-style-type: none"> * Exercise guidelines of WHO for different age groups. * Common Posture Deformities - knock knees, flat foot, round shoulders, Lordosis, Kyphosis, Scoliosis, and bow legs and their respective corrective measures. * Women's participation in Sports – Physical, Psychological, and social benefits * Special consideration (menarche and menstrual dysfunction) * Female athlete triad (osteoporosis, amenorrhea, eating disorders).
<p>May</p>	<p>Unit III Yoga as Preventive measure for Lifestyle Disease</p> <ul style="list-style-type: none"> * Obesity: Procedure, Benefits & Contraindications for Tadasana, Katichakrasana, Pavanmuktasana, Matsayasana, Halasana, Pachimottansana, Ardha – Matsyendrasana, Dhanurasana, Ushtrasana, Suryabedhan pranayama. * Diabetes: Procedure, Benefits & Contraindications for Katichakrasana, Pavanmuktasana, Bhujangasana, Shalabhasana, Dhanurasana, Supta vajarasana Paschimottanasana, Ardha-Mastendrasana, Mandukasana, Gomukasana, Yogmudra, Ushtrasana, Kapalabhati. * Asthma: Procedure, Benefits & Contraindications for Tadasana, Urdhwastottansana, Uttan Mandukasan-Bhujangasana, Dhanurasana, Ushtrasana, Vakrasana, Kapalabhati, Gomukhasana Matsyaasana, Anuloma Viloma. * Hypertension: Procedure, Benefits & Contraindications for Tadasana, Katichakrasana, Uttanpadasana, Ardha Halasana, Sarala Matyasana, Gomukhasana, Uttan Mandukasan-a, Vakrasana, Bhujangasana, Makarasana, Shavasana, Nadi shodhan pranayam, Sitlipranayam . * Back Pain and Arthritis: Procedure, Benefits & Contraindications of Tadasana, Urdhwastottansana, Ardh-Chakrasana, Ushtrasana, Vakrasana, Sarala Matsyendrasana, Bhujangasana, Gomukhasana, Bhadrasana, Makarasana, Nadi Shodhana pranayama <p>Unit IV Physical Education and Sports for CWSN (Children with Special Need-Divyang)</p> <ul style="list-style-type: none"> * Organizations promoting Disability Sports (Special Olympics; Paralympics; Deaflympics) * Concept of Classification and Divisioning in Sports. * Concept of Classification and Divisioning in Sports. * Advantages of Physical Activities for children with special needs * Strategies to make Physical Activities accessible for children with special needs.
<p>July</p>	<p>Unit V Sports & Nutrition</p> <ul style="list-style-type: none"> * Concept of balanced diet and nutrition * Macro and Micro Nutrients: Food sources & functions

	<p>*Nutritive & 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</p> <p>Unit VI Test, Measurement in Sports * Fitness Test – SAI Khelo India Fitness Test in school:Age group 5-8 years/ class 1-3: BMI, Flamingo Balance Test, Plate Tapping Test Age group 9-18yrs/ class 4-12: BMI, 50mt Speed test, 600mt Run/Walk, Sit & Reach flexibility test, Strength Test (Partial Abdominal Curl Up, Push Ups for boys, Modified Push-Ups for girls).</p> <p>*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)</p> <p>* 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</p> <p>*Johnsen – Methney Test of Motor Educability (Front Roll, Roll, Jumping , Half Turn, Jumping Full Turn)</p>
<p>August</p>	<p>Unit VII Physiology & Injuries in Sport * Physiological factors determining components of physical fitness *Effect of exercise on the Muscular System *Effect of exercise on the 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 -Green Stick, Comminuted, Transverse Oblique And impacted)</p> <p>Unit VIII Biomechanics & Sports * Newton’s Law of Motion & its application in sports *Types of Levers and their application in Sports. * Equilibrium – Dynamic & Static and Centre of Gravity and its application in sports *Friction & Sports * Projectile in Sports</p>
<p>September</p>	<p>Unit IX Psychology and 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.</p> <p>MID TERM EXAM (70 Marks)</p>

October /November	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. * Circuit Training -Introduction & its importance & * REVISION
December	PRE-BOARD
Prescribed Books	PHYSICAL EDUCATION CLASS X11 , PUBLISHED BY S P
Practical (30 marks) Viva + Practical(Physical fitness test , Yoga and record File.	

PHYSICAL EDUCATION - ASSESSMENT PLANNER -2026-27
XII ABC&D

ASSESSMENT	SYLLABUS
PA 1 (20 Marks)	Unit -1 Management of Sporting Events Unit -2 Children & Women in sports
MID TERM EXAM (70 Marks)	Unit -1 Management of Sporting Events Unit -2 Children & Women in sports Unit -3 Yoga as Preventive measure for Lifestyle Disease Unit -4 Physical Education and Sports for CWSN Unit -5 Sports & Nutrition
PRE BOARD EXAM. (70 MARKS)	Unit -1 Management of Sporting Events Unit -2 Children & Women in sports Unit -3 Yoga as Preventive measure for Lifestyle Disease Unit -4 Physical Education and Sports for CWSN

	<p>Unit -5 Sports & Nutrition</p>
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Unit- 6 Test and Measurement in Sports

Unit -7 Physiology & injuries in Sports

Unit -8 Biomechanics and Sports

Unit -9 Psychology and Sports

UNIT-10 Training in Sports