ASANSOL NORTH POINT SCHOOL

Affiliated to C.B.S.E, New Delhi, Affiliation No- 2430153
Higher Secondary School, C.B.S.E [10 + 2]
(Run & Managed By Parbati Educational Society)

Our School is associated with: SOF NIIT Next Education FIT INDIA SCHOOL

CLASS XII SCIENCE (2022-2023)
MONTH WISE SYLLABUS SPLIT UP & ACTIVITIES/ ASSESSMENTS

SUBJECT: ENGLISH CORE (301)

Name of the Books

1. FLAMINGO- ENGLISH READER FOR CLASS XII CORE COURSE (NCERT)
2. VISTAS- SUPPLEMENTARY READER IN ENGLISH FOR CLASS XII CORE COURSE (NCERT)
3. ALL IN ONE ENGLISH CORE FOR CLASS XII (ARIHANT PUBLICATION)

SL NO.	CHAPTERS	MONTH
1.	CH:1 THE LAST LESSON (ENG READER-FLAMINGO) **LEARNING OUTCOMES:** Students will Acquire the ability to listen and understand, and should be able to employ non-verbal clues to make connections and draw inferences They will learn how patriotism also means love for one's language and other aspects of culture. Never to take one's freedom of expression for granted- a historical perspective & understand that language is a key to prison.	**APRIL**
2.	CH:1 MY MOTHER AT SIXTY SIX (POEM-ENG READER FLAMINGO) **LEARNING OUTCOMES:** Students will be able to read the poem with proper expressions, pauses and voice modulation. They will be able to employ her/his communicative skills, with a range of styles, and engage in a discussion in an analytical and creative manner. They will understand the pain and agony of separation from loved ones.	**APRIL**
3.	CH:1 THE THIRD LEVEL (ENG SUPPLEMENTARY READER VISTAS) **LEARNING OUTCOMES:** They will develop communicative skill. The students will know the theme of escapism.	**APRIL**
4.	WRITING SKILL:- NOTICE WRITING, ARTICLE WRITING & EDITORIAL	**MAY**

	LETTERS **LEARNING OUTCOMES:** The students will be able to use the formats of Notice, Article Writing & Editorial Letters. They will learn to divide work into paragraphs and make a smooth transition from the introduction to the conclusion.	
5.	READING SKILL:- READING PASSAGES **LEARNING OUTCOMES:** Students will get acquainted with Reading Skill They will develop the habit of Reading for information and pleasure Read critically and develop the confidence to ask and answer questions.	**MAY**
6.	CH:2 LOST SPRING (ENG READER-FLAMINGO) **LEARNING OUTCOMES:** Students will be able to read silently with comprehension and to identify the complexity of ideas in an argumentative text ; and relate learning with personal. They will learn the complications of class exploitations and the trials and sufferings of the poor. They will Understand the miserable plight of street children forced into labor early in life Understand that they are denied the opportunity to go to school.	**MAY**
7.	WRITING SKILL: FORMAL AND INFORMAL INVITATIONS & REPLIES **LEARNING OUTCOMES:** Students will get to know about the format of Formal Invitations & Replies	**JUNE**
8.	CH:2 THE TIGER KING (ENG SUPPLEMENTARY READER-VISTAS) **LEARNING OUTCOMES:** Students will understand, enjoy and appreciate a wide range of text (different genres) They will understand the use of literary devices to make the story humorous and interesting. They will also able to understand that there is a need of a new system for the age of ecology ie. a system which is embedded in the care of all people and also in the care of the Earth and all life upon it.	**JUNE**
9.	CH: 3 KEEPING QUIET(ENGLISH READER FLAMINGO) **LEARNING OUTCOMES:** Students will be able to understand the subjective responses to the language of poetry, appreciate the images and symbols, understand the critical appreciation of the poem based on rhyme, content, theme, genre and literary elements They will understand that introspection makes us find our flaws and give us the opportunity to rectify them, will be able to think critically, and understand not to harm others.	**JUNE**
10.	WRITING SKILL- EDITORIAL LETTERS(REVISION)	**JULY**

	LEARNING OUTCOMES : Students will develop write ups with clarity, using appropriate vocabulary , relevant thoughts and presents with title and subtitles. They will get to know about the format of Editorial Letters.	
11.	CH:3. DEEP WATER (ENGLISH READER FLAMINGO) **LEARNING OUTCOMES:** Students will understand first person narrative style, understand phrases/catchy lines from the text They will understand that most challenging situations could be overcome with immense courage and determination. Will get to know the various types of water sports.& understand that there is terror only in the fear of death and at death there is peace	**JULY**

12.	CH:3 JOURNEY TO THE END OF THE EARTH (ENG SUPPLEMENTARY READER-VISTAS) **LEARNING OUTCOMES:** Students will learn the manner in which geological phenomena enable us to trace the history of mankind.	**JULY**
13.	CH: 4 THE ENEMY (ENG SUPPLEMENTARY READER-VISTAS) **LEARNING OUTCOMES:** Students will comprehend the chapter and to enhance their vocabulary. They will communicate their ideas with a lot of conviction They will inculcate values like care and concern, fulfilling duties, compassion, humaneness in war, responsibility, patriotism and equality.	**JULY**
14	15. WRITING SKILL- APPLICATION FOR JOB, REPORT WRITING **LEARNING OUTCOMES:** Students will get to know the format of Job Application, and Report Writing.	**JULY**
15	ASSESSMENT OF SPEAKING AND LISTENING SKILLS **LEARNING OUTCOMES:** Students will develop speaking and listening skills	**JULY**
16	CH: 4 THE RATTRAP (ENG READER FLAMINGO) **LEARNING OUTCOMES:** Students will become compassionate and help to develop a flair for reading different genres, understanding that everybody must get a chance to undo the wrong. They will understand different characters and to identify them in their vicinity learn new phrases and their usage think, analyze and observe understand not to be revengeful rather have a different approach to deal with the person and awaken him	**AUG**
17.	CH:5 SHOULD WIZARD HIT MOMMY (ENG SUPPLEMENTARY READER-VISTAS **LEARNING OUTCOMES:** Students will communicate their ideas with a lot of conviction, appreciate the theme and the message conveyed. They will recognise the character traits, appreciate the fact that elders will realize that	**AUG**

	the children have their own identity, views and attitudes. They will develop the habit of Reading for information and pleasure They will get to know that the parents must respect and accept the ideas and opinions of their children. accept that we should honor, value and accept all creatures.	
18.	READING SKILL:- READING COMPREHENSION PASSAGES(Revision) **LEARNING OUTCOMES:** Students will develop Reading Skill. They will develop the habit of reading for information and pleasure They will develop the confidence to ask and answer questions	**AUG**
19.	CH:5 INDIGO (ENG READER FLAMINGO) **LEARNING OUTCOMES:** Students will understand the meanings of the quotations used in the lesson ii) to know the vocabulary used in legal procedures. Students will get acquainted with the legal vocabulary, they will understand the role of a leader to understand the importance of rights They will get to know the sufferings and contributions of freedom fighters to understand that freedom from fear is a prerequisite for justice	**AUG**
20.	CH:6 ON THE FACE OF IT (ENG SUPPLEMENTARY READER- VISTAS) **LEARNING OUTCOMES:** Students will analyze the situations and characters, they will express themselves effectively in the written form. They will communicate their ideas with a lot of conviction They will Understand the need to develop the right attitude towards the specially challenged, the need to incorporate them into the social mainstream and also realize the true beauty that lies within a person and not in one's physical appearance.	**AUG**
21.	CH:4 A THING OF BEAUTY (POEM-ENG READER FLAMINGO) **LEARNING OUTCOMES:** Students will understand the critical appreciation of the poem based on rhyme, content, theme, genre, literary elements & identify the figures of speech used in the poem & appreciate aesthetic writing Get an insight into the variety of characters in different hues, different situations and also to the follies of human nature. Students will learn to perceive beauty as a source of inspiration and joy, also learn to develop a taste for Greek Mythology They will understand that beauty dwells inside us and gives us happiness 3. to appreciate and admire the beauty of nature 4. to understand varied definitions of beauty	**AUG**
22	WRITING SKILL- FORMAL AND INFORMAL INVITATION AND REPLIES, AND NOTICE WRITING (REVISION)) **LEARNING OUTCOMES:**	**SEPT**

	Students will get to know the format of Formal and Informal Invitation and Replies and Notice Writing.	
23	CH:6 POETS AND PANCAKES (ENG READER FLAMINGO) **LEARNING OUTCOMES:** Students will get to know about the caste system made the upper class people think themselves to be superior to others. They will develop speaking skill	**SEPT**
24	CH:5 A ROADSIDE STAND (POEM-ENG READER FLAMINGO) **LEARNING OUTCOMES:** Students will be able to read the poem with proper expressions, pauses and voice modulation , and comprehend the poem. They will understand and find out the figures of speech in the poem Students will get to know about the life of people that they are deprived and mindlessly ignored by the city bred people.	**SEPT**
25	READING SKILL(READING PASSAGES) **LEARNING OUTCOMES** Students will develop Reading Skill They will develop the habit of Reading for information and pleasure Read critically and develop the confidence to ask and answer questions.	**OCT**
26	CH : 7 THE INTERVIEW (ENGLISH READER FLAMINGO) **LEARNING OUTCOMES:** Students will be able to know that an interview can make a lasting impression. They will develop vocabulary and communicative skill.	**OCT**
27	CH:8 GOING PLACES (ENG READER FLAMINGO) **LEARNING OUTCOMES:** Students will comprehend the text and to read between the lines Students will know the certain metaphorical expressions, to notice words used in an informal way and to understand that hard work is required to differentiate between unrealistic and realistic dreams. To get an insight into the life and works of the middle class caught in a web of mediocrity and the desire of youngones.dreaming to escape it. An objective study to assess the form and style of tackling issues of social discontent leading to an escapist mindset	**OCT**
28	CH:6 AUNT JENNIFER'S TIGERS (POEM ENG READER FLAMINGO) **LEARNING OUTCOMES:** Students will understand the critical appreciation of the poem based on rhyme, content, theme, genre and literary elements , appreciate the beauty of language and understand the rhyme scheme iii) know about the poet and his work/genre earn about Feminist trend in literature, about the suppression of women in a male-dominated society.	**NOV**

	To empathize with the victims of male chauvinism, be prepared to face such oppressions boldly and to raise voice against domestic violence.	
29	CH:8 MEMORIES OF CHILDHOOD (ENGLISH SUPPLEMENTARY READER VISTAS) **LEARNING OUTCOMES** Students will have have profound and detailed understanding of the text, express the ideas of the passage orally and in writing Students will learn to appreciate one's stand against social and racial indiscrimination and support social justice,	**NOV**
30	WRITING SKILL- ARTICLE WRITING, FORMAL AND INFORMAL INVITATIONS & REPLIES (REVISION) **LEARNING OUTCOMES:** Students will be able to use the formats about Article writing notices, & Formal and Informal invitations & replies	**NOV**
31	ASSESSMENT OF SPEAKING AND LISTENING SKILLS **LEARNING OUTCOMES:** The students will develop speaking and listening skills	**DEC**
32	REVISION OF THE PREVIOUS CHAPTERS, WRITING SKILLS AND READING SKILLS	**DEC**

LIST OF ACTIVITIES & ASSESSMENTS
Class XII ENGLISH CORE: (22-23)

SL NO.	Details of Activity	Month	Marks
1.	**What is the activity**-- Writing Skill (Report Writing/ Review) **How to do the activity** (hints)--- The students are asked to write a report/ a review of a cultural program organized by our school. The amount collected from the sale of tickets is to be donated for the welfare of an old age home.(Word Limit :500 words) Note: Use A4 sheets of paper & insert it in a channel file. **Materials required(hints)**-- A4 Size Papers, Channel File, Blue Pen, Highlighter, Scale	**APR- JUNE**	**10 marks**
2.	**What is the activity**-- Writing Skill (Formal Invitation) **How to do the activity (hints)**--- The students are asked to design & draft a Formal Invitation: Card Form- (2) Topic 1: Marriage/ Wedding Ceremony Topic 2: School Annual Function	**JULY-AUG**	**10 marks**

	Materials required(hints)-- Color Paper, Sketch Pens, Scale, Pencils, Highlighter		
3.	**What is the activity**-- Speaking and Listening Activity **How to do the activity** (hints)--- Speaking: Speak fluently and correctly with proper pronunciation, pause and intonation. Listen to audio and write the answers. **Materials required(hints)**-- Listening aids, papers.	**SEP-NOV**	**10 marks**
4.	**What is the activity**-- Writing Skill: (ALS INTERVIEW/RESEARCH BASED PROJECT) **How to do the activity (hints)**--- The students are asked to take interviews & to prepare a detail Report & get ready in recorded for Viva. **Materials required(hints)**-- Charts, Interview Questionnaire Write up of Podcast, Survey Reports	**DEC-FEB**	**10 marks**

Details of assessment

1.	**BENCHMARK TEST I :** CH 1 (ENG READER FLAMINGO) CH 1 (POEM-ENG READER FLAMINGO) CH 1(ENG SUPPLEMENTARY READER- VISTAS) WRITING SKILL: NOTICE WRITING & EDITORIAL LETTERS READING SKILL(READING PASSAGES)	**MAY**	**40**
2.	**BENCHMARK TEST II:** CH 2 & 3 (ENG READER FLAMINGO) CH 3 & 4 (POEM-ENG READER FLAMINGO) CH 2 & 3 (ENG SUPPLEMENTARY READER VISTAS) WRITING SKILL- FORMAL & INFORMAL INVITATIONS & REPLIES, JOB APPLICATION	**JULY**	**40**
3.	**MID TERM:** CH 1,2,3,4 & 5 (ENG READER FLAMINGO) CH 1,3 & 4 (POEM:ENG READER FLAMINGO) CH 1,2,3,4 & 5 (ENG SUPPLEMENTARY READER VISTAS) WRITING SKILL-NOTICE WRITING FORMAL & INFORMAL INVITATION & REPLIES, EDITORIAL LETTERS, JOB APPLICATION , ARTICLE WRITING, & REPORT WRITING READING SKILL- (READING PASSAGES)	**SEPT**	**80**
4.	**BENCHMARK TEST III:**	**OCT/NOV**	**40**

	CH: 6 (ENGLISH READER FLAMINGO) CH: 5 POEM: (ENGLISH READER FLAMINGO) CH: 8 (ENG SUPPLEMENTARY READER VISTAS) WRITING SKILL: NOTICE WRITING, ARTICLE WRITING & REPORT WRITING READING SKILL(READING PASSAGES)		
5.	**PRE BOARD I:** WHOLE SYLLABUS	**DEC**	**80**
6.	**PRE BOARD II**: WHOLE SYLLABUS	**JAN**	**80**

SUBJECT: PHYSICS

Name of the Books

1. 1. **Ncert Physics Class12-Volume1 & Volume 2**
2. **New Simplified Physics A Reference Book For Class 12By S L ARORA**
3. **Concepts of physics by - H.C Verma**

SL NO.	Name of Chapter(s) / Topic(S)	MONTH
1.	**Chapter –1: Electric Charges and Fields** **Learning Objectives:** **Students will learn about: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).**	**APRIL**
2.	**Chapter –2: Electrostatic Potential and Capacitance** Learning Objectives: **Students will learn about: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).**	**APRIL**

3.	Chapter –3: Current Electricity Learning Objectives: Students will learn about: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.	MAY
4.	Chapter –4: Moving Charges and Magnetism Learning Objectives: Students will learn about:Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight solenoid (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields. 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; Current loop as a magnetic dipole and its magnetic dipole moment, moving coil galvanometerits current sensitivity and conversion to ammeter and voltmeter	JUNE
5.	Chapter –5: Magnetism and Matter Learning Objectives: Students will learn about: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.	JULY
6.	Chapter –6: Electromagnetic Induction Learning Objectives: Students will learn about:Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction.	JULY
7.	Chapter-7: Alternating currents Learning Objectives: Students will learn about: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.	JULY- AUG
8.	Chapter–8: Electromagnetic Waves Learning Objectives: Students will learn about: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.	AUG
9.	Chapter –9: Ray Optics and Optical Instruments Learning Objectives: Students will learn about:Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and optical fibers, refraction at	AUG

	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.	
10.	Chapter –10: Wave Optics Learning Objectives: Students will learn about: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).	SEPT
11.	Chapter –11: Dual Nature of Radiation and Matter Learning Objectives: Students will learn about: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.	OCT
12.	Chapter –12: Atoms Learning Objectives: Students will learn about: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 his orbit, of hydrogen line spectra (qualitative treatment only).	NOV
13.	Chapter –13: Nuclei Learning Objectives: Students will learn about: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.	NOV
14.	Chapter –14: Semiconductor-Electronics: Materials,Devices and Simple Circuits. Learning Objectives: Students will learn about: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.	DEC

LIST OF ACTIVITIES / PRACTICALS & ASSESSMENTS
Class XII: PHYSICS (22-23)

SL NO.	Details of Activity	Month
1.	1.To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.	APR
2.	2.To assemble the components of a given electrical circuit.	MAY
3.	3. To draw the diagram of a given open circuit comprising at	JUNE

	least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.	
4.	4. To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.	AUG
5	5. To study effect of intensity of light (by varying distance of the source) on an LDR.	OCT
6	6. To study the nature and size of the image formed by a (i) convex lens, (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).	NOV
	Details of Practicals	
1.	To determine resistivity of two / three wires by plotting a graph for potential difference versus current.	APR
2.	To find resistance of a given wire / standard resistor using metre bridge	APR
3.	To verify the laws of combination (series) of resistances using a metre bridge. OR To verify the laws of combination (parallel) of resistances using a metre bridge.	MAY
4.	To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.	JUNE
5.	To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same. OR To convert the given galvanometer (of known resistance and figure of merit) into an ammeter of desired range and to verify the same.	JULY-AUG
6.	To find the value of v for different values of u in case of a concave mirror and to find the focal length.	AUG
7.	To find the focal length of a convex lens by plotting graphs between u and v or between 1/u and 1/v.	AUG-SEPT
8.	To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.	SEPT
9.	To determine refractive index of a glass slab using a traveling microscope	OCT
10.	To draw the I-V characteristic curve for a p-n junction diode in forward bias and reverse bias.	NOV

Details of Assessments				
SL NO	NAME OF THE EXAM	CHAPTERS	MONTH	MARKS
1	BENCHMARK TEST 1	CH 1 & CH 2	MAY	40
2	BENCHMARK TEST 2	CH3 & CH 4	JULY	40
3	MID TERM EXAM	CH 1,CH 2, CH 3, CH 4, CH 5, CH 6, CH 7, CH 8	SEPT	70
4	BENCHMARK TEST 3	CH 9,CH 10 & CH 11	NOV	40
5	1ST PRE BOARD EXAM	FULL SYLLABUS	DEC	70
6	2ND PRE BOARD EXAM	FULL SYLLABUS	JAN	70
7	FINAL TERM BOARD EXAMINATION BY CBSE	FULL SYLLABUS	MARCH	70

SUBJECT: CHEMISTRY

Name of the Books

1.NCERT TEXT BOOK for Class XII (Part 1 and 2)
2.MODERN ABC CHEMISTRY (Part 1 and 2)
3.COMPREHENSIVE CHEMISTRY, (Part 1 and 2)

SL NO.	Name of Chapter(s) / Topic(S)	MONTH

1.	**CHAP- 2 SOLUTIONS** **Learning Objectives:** **Students will learn about:Solutions,Types of Solutions Expressing concentration of Solutions,Solubility,Vapour Pressure of Liquid Solutions,Ideal and Non-ideal Solutions,Colligative Properties and Determination of Molar Mass,Abnormal Molar Masses**	**April**
2.	**CHAP- 3 ELECTRO-CHEMISTRY** **Learning Objectives:** **Students will learn about: Electrochemical cell and differentiate between galvanic and electrolytic cell,define standard potential of the cell,Learners will be able to understand the differences,between galvanic and electrolytic cell.Use Nernst equation for calculating the emf of galvanic cell Develop relation between standard potential of the cell and Gibbs energy of reaction,and its equilibrium constant.**	**May**
3.	**CHAP- 10-HALOALKANES and HALOARENES** **Learning Objectives:** **Students will learn about:IUPAC nomenclature: Develops skill in writing trivial and IUPAC,nomenclature of Haloalkanes and Haloarenes.Preparation of haloalkanes and haloarenes,List the reactions,involved in the preparation of Haloalkanes and Haloarenes Physical and chemical properties and nature of C-X bond in haloalkanes and haloarenes.Describe and explain their physical and chemical properties.Stereo chemistry of nucleophilic substitution reaction.** **Understand the mechanism and stereo chemistry involved in nucleophilic substitution reaction.**	**June**

4.	**CHAP- 4-CHEMICAL KINETICS** **Learning Objectives:** **Students will learn about: General Introduction & Rate of reaction Define the rate of reaction Learners will be able to know about chemical kinetics & rate of reaction,Avg. rate and instantaneous rate· Define the average and instantaneous rate of a reaction and express it in terms of change in concentration of either of the reactants or product with time.Order and molecularity · Distinguish between elementary (one step) and complex reactions (multiple steps)Rate law · Describe the molecularity of elementary reactions and order of simple and complex reactions.Integrated rate expression for zero and first order reaction,Co relate half life with rate constant and initial concentration of one of the reactants.Describe the temperature dependence of rate constant in terms of Arrhenius equation.**	**July**
5	**CHAP- 11 ALCOHOLS PHENOLS AND ETHER** **Learning Objectives:** **Students will learn about:IUPAC nomenclature · Name of alcohols,phenols and ethers according to trivial and IUPAC system of nomenclature.Learners will be able to knowhow to write the trivial and IUPAC name of alcohols ,phenols,ethers,Preparation& properties of alcohols.Describe and explain the reactions involved in the Preparation & properties of alcohols,Preparation& properties of phenols.Describe and explain the reactions involved in the Preparation & properties of phenols .Preparation & properties of ethers,· Describe and explain the reactions involved in the Preparation & properties of ethers Lab activity to test alcohols, phenols and ethers.Learners will be able to Understand the Preparation& properties of ethers Uses of alcohols, phenols and ethers.Explain the uses of alcohols,phenols and ethers.**	**July**

6.	**CHAP 8-THE d and f- BLOCK ELEMENTS** **Learning Objectives:** **Students will learn about: General Introduction & Electronic configuration Justify the position of the d-and f-blocks of elements in the periodic table Learners will be able to understand the position of the d- and f-blocks of elements in the periodic table & its electronic configurations·Learn the electronic configurations of d-and f-block elements. Characteristics of d and f block elements properties of the transition elements.with special reference to group trends.Learners will be able to understand the general properties of the transition elements Preparation and properties of K2Cr2O7,Describe the preparation and properties of, K2Cr2O7, KMnO4 Learners will be able to learn the preparation and properties of, K2Cr2O7, KMnO4 Preparation and properties of , KMnO4 Lanthanides contraction & Actinides Describe the properties of f-block elements (lanthanides and actinides). Learners will be able to understand the general properties of f-block elements: Lanthanides & Actinides contraction.**	**August**
7.	**CHAP 9-COORDINATION COMPOUNDS** **Learning Objectives:** **Students will learn about:Some Important Terms used in Co-ordination compounds.Know the meaning of the terms: co-ordination entity (complex) central atom,ligand, co-ordination number, co- ordination polyhedron, oxidation number, denticity and chelation Learners will be able to knowthe meaning of some important terms Nomenclature · Learn the rules of nomenclature of co- ordination compounds.Write the formulae and names of mononuclear co- ordination compounds.Isomerism · Describe and predict the different types of isomerism in coordination compounds.Learners will be able to Understand the different types of isomerism in coordination compounds.Bonding in coordination compounds: Werner's,Valance bond and crystal field theory of Co-ordination compounds Understand the nature of bonding in co-ordination compounds in terms of Werner's, Valence Bond and Crystal Field theories. Learners will be able to Understand the nature of bonding in co-ordination compounds in terms of Werner's, Valence Bond and Crystal Field theories Stability of coordination compound,Explain the stability of co- ordination compounds.Metal carbonyls, · Briefly describe the bonding in metal organometallic compounds.Preparation of Inorganic Compounds Learners will be able to Understand the Metal carbonyls, Application of coordination compounds in our life Application of coordination Appreciate the importance and applications of co- ordinationcompounds.**	**September**

8.	**CHAP 12-ALDEHYDES, KETONES AND CARBOXYLIC ACIDS** **Learning Objectives:** **Students will learn about:IUPAC nomenclature, · Write the trivial and IUPAC names of aldehydes,ketones,Learners will be able to knowhow to write the trivial andIUPAC name of aldehydes,ketones.preparation& properties aldehydes ketones,· Describe the important methods of their preparation and reactions of aldehydes &ketones.Learners will be able to Understand the Preparation& properties of aldehydes &ketones distinction between aldehydes & ketones · Understand the chemical reactions of these classes of compounds Lab activity to distinguish between aldehydes & ketones Learners will be able to distinguish between aldehydes &ketones.preperation of carboxylic acid· Describe and explain the reactions involved in the preparation of carboxylic acid.properties of carboxylic acid · Understand the chemical reactions of carboxylic acid.Some important members of aldehydes,ketones and carboxylic acid ·**	**October**
9.	**CHAP 13-AMINES** **Learning Objectives:** **Students will learn about: IUPAC nomenclature, · Write the trivial and IUPAC names of amines.Learners will be able to knowhow to write the trivial andIUPAC name of amines preparation of Amines · Describe the important methods of preparation of Amines Learners will be able to Understand the Preparation& properties of amines properties of Amines Basic character of Amines.Reaction with Electrophiles and miscellaneous Reactions.Preparation and properties of Diazo Compounds.Describe the important methods of preparation of Diazo compounds Learners will be able to Understand the Preparation& properties of amines Reactions involving Displacement of Diazo group,and Retention of Diazo group Test of Amines Distinguish between the primary,secondary and tertiary amines.Lab activity to distinguish between solution,colloids& suspension.**	**October**

10.	**CHAP 14-BIO-MOLECULES** **Learning Objectives:** **Students will learn about:Carbohydrates, Learn about the preparation,structure,properties and uses of carbohydrates Learners will be able to learn the preparation, structure,properties and uses of carbohydrates proteins Describe the primary,secondary and tertiary structures of proteins List their functions in human body.A Learners will be able to learn the structures of proteins and its function in human body.nucleic acid · Differentiate between DNA and RNA. Learners will be able to understand the differences between DNA and RNAand its functions in life.Describe the double helical structure.of DNA.** **Vitamin, Classify Vitamins and appreciate its importance and also list the disease caused by the deficiency of these vitamins.Learners will be able to understand the various types of Vitamins,its importance and also list the diseases caused by the deficiency of these vitamins.**	**November**

Details of Practicals: CHEMISTRY (XII)

SL NO.	TOPICS	MONTH
1.	To prepare M/20, 250 ml Solution of Mohr's Salt	JUNE
2.	To find the strength of KMnO4 solution supplied by titrating it against standard solution of Mohr's Salt	JUNE
3.	To prepare M/20, 250 ml Solution of Oxalic Acid	JULY
4.	To find the strength of KMnO4 solution supplied by titrating it against standard solution of Oxalic Acid	JULY
5.	Systematic Qualitative analysis of Salt 1	AUG
6.	Systematic Qualitative analysis of Salt 2	AUG

7.	Systematic Qualitative analysis of Salt 3	AUG
8.	Systematic Qualitative analysis of Salt 4	SEP
9.	Systematic Qualitative analysis of Salt 5	SEP
10.	Systematic Qualitative analysis of Salt 6	SEP
11.	To test the presence of functional group in organic sample A	OCT
12.	To test the presence of functional group in organic sample B	OCT
13.	To test the presence of functional group in organic sample C	OCT

LIST OF ACTIVITIES & ASSESSMENTS

SL NO.	Details of Activity	Month	Marks

1.	What is the activity--"To study the adulterants in food stuff."To detect the presence of adulterants in fat, oil, Butter ,sugar ,chilli powder and pepper. How to do the activity (hints)---Study the above topic and prepare it in channel file Materials required(hints)-- fat, oil, butter ,sugar ,chilli powder and pepper.	APR-JUN	10
2.	What is the activity--Preparation of Toilet Soaps How to do the activity (hints)---Study the above topic and prepare it in Chemistry lab Materials required(hints) COCONUT OIL – 1200mL • STONE POWDER -200g • CAUSTIC SODA -100g • PERFUME -10mL • Water -600Ml • COLOUR -200g	AUG	10

3.	What is the activity–"Sterilization of Water Using Bleaching Powder" How to do the activity (hints)Study the above topic and prepare it in channel file. Materials required(hints)250ml measuring flask, weight box, Burette, titration flask, 100ml graduated cylinder glazed tile, glass wool, bleaching Powder, 10% KI solution, Glass wool, Sodium thiosulfate solution (0.1 N Na2S2O3), different samples of water, starch solution.	SEPT - NOV.	10
4.	What is the activity--"Study of oxalate ion content in Guava fruit" Study the oxalate ion content in different stags of ripening of guava How to do the activity (hints)--- Study the above topic and prepare it in channel file Materials required(hints)-- Mortar pestle, titrating flask, burette, funnel and guava	DEC- FEB	10
	Details of Assessment		
Benchmark Test 1	Chap 2:(Solutions)	MAY	40

Benchmark Test 2	**Chap 3:(Electrochemistry)** **Chap 10:(Haloalkanes and Haloarenes)**	**JULY**	**40**
Half Yearly exam	**Chap 2:(Solutions)** **Chap 3:(Electrochemistry)** **Chap 10:(Haloalkanes and Haloarenes)** **Chap 4:(Chemical Kinetics)** **Chap 11:(Alcohols Phenols and Ethers)**	**SEP**	**70**
Benchmark Test 3	**Chap 8:(d and f block elements)** **Chap 9:(Coordination Compounds)** **Chap 12:(Aldehydes ketones and Carboxylic acids)**	**NOV**	**40**
Pre-Board I	**Whole Syllabus**	**DEC**	**70**
Pre-Board II	**Whole Syllabus**	**JAN**	**70**

SUBJECT: BIOLOGY

Name of the Books

1. NCERT TEXT BOOK CLASS 12 BIOLOGY
2. ALL IN ONE BIOLOGY BOOK (ARIHANT PUBLICATION)
3. CHAPTERWISE SOLVED PAPER (ARIHANT)

SL NO.	Name of Chapter(s) / Topic(S)	MONTH
1.	**Chapter –2: SEXUAL REPRODUCTION IN FLOWERING PLANT** **LEARNING OUTCOME:** **Student will learn about differentiates organisms, phenomena and processes based on certain characteristics and salient features, such as reproduction in organisms, reproductive parts of commonly available flowers; autogamy and geitonogamy.parthenocarpic fruits polyembryony seminiferous tubules, parthenogenesis, pericarp, microsporangia, geitonogamy, diagram and ICT tools, etc. gather data for calculating different physical quantities, such as determination of population density, productivity, percentage of pollen germination, etc, which can be shared and discussed in groups or with peers. Uses rubrics to assess the conversion of units and reporting results. Draw diagrams / sketches/ flow charts, concept maps, floral diagrams, painting etc, of organisms and processes etc; albuminous seeds, apomixis.**	APRIL
2.	**Chapter –3:HUMAN REPRODUCTION** **LEARNING OUTCOMES :** **Students will learn about related processes and phenomena with causes and effects, such as, diseases with symptom, production with use of fertilizers, menstruation and hygiene; pregnancy and embryonic development, etc.**	APRIL-MAY
3.	**Chapter –4: REPRODUCTIVE HEALTH** **LEARNING OUTCOMES:** **Students will learn about application of scientific terminology for organisms, processes, and phenomena based on internationally accepted conventions such as medical termination of pregnancy (MTP), select and use appropriate devices for understanding of structural and physiological and other intricacies of human being.**	MAY
4.	**Chapter –5: PRINCIPLES OF INHERITANCE AND VARIATION** **LEARNING OUTCOMES:** **Students will learn about mendelian and chromosomal disorders, human genome project, replication of retrovirus, population interactions, energy flow in ecosystem, succession of plants, use of DNA fingerprinting in forensic science, process of evolution etc**	MAY-JUNE
5.	**Chapter –6: MOLECULAR BASIS OF INHERITANCE** **LEARNING OUTCOMES:** **Students will learn about:describes contribution of scientists/researchers all over the world in systematic evolution of concepts, scientific discoveries and inventions in the field of biology based on historical scientific events/ timelines etc; such as; Mendelian genetics to Morgan's work for linkage and recombination, Hershey and Martha Chase's experiment to establish the concept that the DNA is genetic material, Watson and Crick model of DNA, etc**	JUNE
6.	**Chapter-7: EVOLUTION** **LEARNING OUTCOME:** **Students will learn about: divergent and convergent evolution; homologous and analogous organs;human evolution.**	JULY
7.	**Chapter–8: HUMAN HEALTH AND DISEASES** **LEARNING OUTCOMES:**	JULY-AUG

	Students will learn about Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ringworm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.	
8.	Chapter –10: MICROBES IN HUMAN WELFARE LEARNING OBJECTIVES: Students will learn about Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use	AUG
9.	Chapter –11: BIOTECHNOLOGY : PRINCIPLES AND PROCESSES LEARNING OBJECTIVES: students will learn about Genetic Engineering (Recombinant DNA Technology).	AUG-SEP
10.	Chapter –12: BIOTECHNOLOGY AND ITS APPLICATIONS LEARNING OBJECTIVES : Students will learn about Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents.	SEP
11.	Chapter –13: ORGANISMS AND POPULATION LEARNING OBJECTIVES: Students will learn about Organisms and environment: Habitat and niche, population and ecological adaptations; population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution.	SEP-OCT
12.	Chapter –14: ECOSYSTEM LEARNING OBJECTIVES: Students will learn about ecosystem, observe and describe habitats, identify organisms with similar needs, describe environmental changes.	OCT-NOV
13.	Chapter: 15 BIODIVERSITY AND CONSERVATION LEARNING OBJECTIVES: Students will learn about Biodiversity - Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.	NOV

Details of Practicals

Class:XII BIOLOGY (22-23)

SL NO.	TOPIC	Month
1.	MAJOR EXPERIMENT:	APR

	DNA ISOLATION FROM PLANT MATERIAL.	
2.	MINOR EXPERIMENT: STUDY THE PLANT POPULATION DENSITY BY QUADRAT METHOD.	MAY
3.	STUDY THE PLANT POPULATION FREQUENCY BY QUADRAT METHOD	MAY
4.	SLIDE PREPARATION: PREPARE A TEMPORARY MOUNT TO OBSERVE POLLEN GERMINATION.	JUNE
5.	PREPARE A TEMPORARY MOUNT OF ONION ROOT TIP TO STUDY MITOSIS.	JUNE
6.	SPOTTING: IDENTIFICATION OF AGENTS POLLINATION(WINDS,INSECTS,BIRDS)	JULY
7.	IDENTIFICATION OF POLLEN GERMINATION ON STIGMA THROUGH PERMANENT SLIDES	JULY
8.	IDENTIFICATION OF T.S OF OVARY,TESTIS(MAMMALS) THROUGH PERMANENT SLIDE	AUG
9.	IDENTIFICATION OF MEIOSIS CELL STAGE IN ONION BUD /GRASSHOPPER	AUG
10.	IDENTIFICATION OF T.S BLASTULA	AUG
11.	IDENTIFICATION OF MENDELIAN INHERITANCE USING SEEDS OF DIFFERENT COLOR/SIZE	SEP
12.	PEDIGREE CHART ANALYSIS	SEP
13.	IDENTIFICATION OF CONTROLLED POLLINATION-BAGGING,TAGGING,EMASCULATION	OCT
14.	IDENTIFICATION OF DIFFERENT MICROORGANISMS(PATHOGENS) THROUGH PERMANENT SLIDES	NOV
15.	MODELS SPECIMEN SHOWING SYMBOLIC ASSOCIATION IN ROOT NODULES OF LEGUMINOUS PLANTS, CUSCUTA ON HOST , LICHENS.	DEC
16.	FLASH CARD MODELS SHOWING EXAMPLES OF HOMOLOGOUS AND ANALOGOUS ORGANS.	DEC
.	DETAILS OF ACTIVITIES Class XII: BIOLOGY (22-23)	
1	What is the activity-- " Amniocentesis - A boon or bane". How to do the activity (hints)--- Investigate this topic and find out how	JUN

	society is using or misusing this process for their benefits and prepare it on the channel file. Materials required(hints)-- Medical journal, NCERT book, Internet source, A4 white pages, Channel file, Pen (Black & blue), Pencil etc.	
2.	What is the activity-- Study about DNA Fingerprinting and its facility. How to do the activity (hints)--- Investigate about this topic and find out how it's used in the Forensics field and prepare it on the file. Materials required(hints)-- NCERT book, Forensics case study available in Internet sources, A4 white pages, Channel file, Pen(Black & blue), Pencil etc.	AUG
3.	What is the activity-- Study about different population interactions. How to do the activity (hints)---Investigate about this topic and find out its impact on the living world and prepare it on the channel file. Materials required(hints)--NCERT book, Internet sources, A4 white pages, Channel file, Pen(Black & blue), Pencil etc	OCT
4.	What is the activity-- COVID 19 outbreak: History, mechanism, transmission, structural studies and therapeutics How to do the activity (hints)--- Investigate this topic and find out its impact on the human world and prepare it on the channel file. Materials required(hints)-- internet source, Medical journal, A4 white pages, Channel file, Pen (black& blue), Pencil etc.	JAN

Details of Assessments
CLASS XII: BIOLOGY

sl.No	Syllabus	Month	Marks
Benchmark Test I:	CHP: 2,3,4	MAY	40
Benchmark Test II	CHP: 5,6,7	JUL	40
Half Yearly Exam	CHP: 2,3,4,5,6,7,8,10	SEPT	70
Benchmark Test III	CHP:11,12,13	NOV	40
Pre-Board I	FULL SYLLABUS	DEC	70
Pre-Board II	FULL SYLLABUS	JAN	70

SUBJECT: MATHEMATICS

Name of the Books:

1. NCERT Mathematics textbook, Part I & II
2. Senior Secondary School Mathematics for Class XII, by R.S. Aggarwal
3. Mathematics Lab Manual class XII, published by NCERT

SL NO.	Name of Chapter	Sub Topics	MONTH
1.	**Relations and Functions** **LEARNING OUTCOMES:** The students will be able • To identify one to one, onto and invertible functions. • To find the inverse of a function if it exists.	Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions, composite functions, inverse of a function.	**April**
2.	**Matrices** **LEARNING OUTCOMES:** The students will be able • To add 2 matrices, Expressing matrix as sum of symmetric and skew symmetric matrices. • To find inverse of a matrix by using elementary row transformations	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. On- commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2) Concept of elementary row and column operations. Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).	**April**

3.	**Determinants** **LEARNING OUTCOMES:** The students will be able ● To find an area of a triangle. ● To understand properties to simplify determinants. ● To solve a system of equations using matrices.	Determinant of a square matrix (up to 3 x 3 matrices), properties of determinants, 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 of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.	**May**
4.	**Inverse Trigonometric Functions** **LEARNING OUTCOMES:** The students will be able ● To find inverse values of trigonometric functions	Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions Elementary properties of inverse trigonometric functions.	**May**
5.	**Continuity and Differentiability** **LEARNING OUTCOMES:** The students will be able ● To identify points of discontinuity of functions. ● To identify points of non-differentiability of functions. ● To find derivatives of exponential and logarithmic functions. ● To find derivatives of functions in parametric form.	Concepts on Continuity and differentiability, derivative of composite functions, chain rule, derivative of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions.	**May**
6.	**Differentiations** **LEARNING OUTCOMES:** The students will be able ● To find the derivatives of different types of functions.	Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives. Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretation.	**June**

7.	**Application of Derivatives** **LEARNING OUTCOMES:** The students will be able • To find Rate of change of dependent variable due to change in independent variable. • To identify increasing and decreasing functions. • To find equations of tangent and normal at a point on the given curve. • To find error in a variable due to error in another variable. • To find approximate values of quantities using derivatives. • To find maxima and minima points of a function.	Applications of derivatives: rate of change of bodies, increasing/decreasing functions, tangents and normals, use of derivatives in approximation, 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.)	**July**
8.	**Integrals** **LEARNING OUTCOMES:** The students will be able • To solve both indefinite and definite integrals.	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. Definite integrals as a limit of a sum, Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals**.**	**August**
9.	**Application of Integrals** **LEARNING OUTCOMES:** The students will be able • To find Area using integration	Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only), Area between any of the two above said curves (the region should be clearly identifiable).	**Sept.**
10.	**Differential Equations** **LEARNING OUTCOMES:** The students will be able	Definition, order and degree, general and particular solutions of a differential equation. Formation of differential equation whose general solution real-life situations). ion is given. Solution of differential equations by method of	**Sept.**

	• To identify the degree and order of a differential equation. • To form a differential equation when a solution is given. • To solve differential equations using variable separable, homogeneous, Linear DE method	separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type: $dy/dx + py = q$, where p and q are functions of x or constants. $dy/dx + px = q$, where p and q are functions of y or constants.	
11.	**Vector Algebra** **LEARNING OUTCOMES:** The students will be able • To find dot product and cross • product of 2 vectors. • To find a Scalar triple product of 3 vectors. • To find the projection of one vector on another. • To analyze vectors if a dot product or cross product is zero.	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, scalar triple product of vectors.	**Oct.**
12.	**Three-Dimensional Geometry** **LEARNING OUTCOMES:** The students will be able • To find an equation of line in space in Cartesian and vector form. • To find equations of planes in Cartesian and vector form. • To find angle between 2 lines using DCS. • To find distance between 2 lines. • To find angle between 2 planes using normal lines. • To find the distance between a point from a plane.	Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane. Angle between (i) two lines, (ii) two planes, (iii) a line and a plane. Distance of a point from a plane.	**Oct. + Nov**

13.	**Linear Programming** **LEARNING OUTCOMES:** The students will be able • To find solutions to problems	Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, 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).	**November**
14.	**Probability** **LEARNING OUTCOMES:** The students will be able • To find probability using the conditional probability formula. • To identify and solve problems by Bayes' theorem. • To find the probability distribution of different random variables. • To identify and solve problem by using Bernoulli trials,	Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean and variance of random variable. Binomial probability distribution.	**December**

Details of Subject Enrichment Activities

Class XII SCIENCE: Mathematics (22-23)

SL NO.	TOPICS	MONTH
1.	**To demonstrate a function which is not one-one but is onto.**	**June**
2.	**To demonstrate a function which is one-one but not onto.**	**June**
3.	**To draw the graph of $Sin^{-1}x$,using the graph of Sin x and demonstrate the concept of mirror reflection (about the line y = x).**	**July**
4.	**To understand the concepts of absolute maximum and minimum values of a function in a given closed interval through its graph.**	**July**

5.	To verify that amongst all the rectangles of the same perimeter, the square has the maximum area.	August
6.	To evaluate the definite integral ab(1-x2) dx as the limit of a sum and verify it by actual integration.	August
7.	To demonstrate the equation of a plane in normal form.	Sept.
8.	To verify geometrically that c(a+b) =ca+cb	Sept.
9.	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.	Oct.
10.	To construct an open box of maximum volume from a given rectangular sheet by cutting equal squares from each corner.	Oct.

Details of Assessments

Class XII SCIENCE: Mathematics (22-23)

	Syllabus	Month	Marks
Benchmark Test I	1.Relations and Functions 2. Matrices 3. Determinants	MAY	40
Benchmark Test II	1. Inverse Trigonometric Functions 2. Continuity and Differentiability 3. Differentiations	JUL	40
Mid Term Exam	1. Relations and Functions 2. Matrices 3. Determinants 4. Inverse Trigonometric Functions 5. Continuity and Differentiability 6. Differentiations 7. Application of Derivatives	SEP	80

Benchmark Test III	1. Application of Derivatives 2. Integrals 3. Application of Integrals	NOV	40
1st Pre-Board Exam	Full Syllabus	DEC	80
2nd Pre-Board Exam	Full Syllabus	JAN	80

SUBJECT: WEB APPLICATION (803)

Name of the Books

1. Students Handbook CLASS XII

LINK TO DOWNLOAD THE BOOK:http://cbseacademic.nic.in/web_material/Curriculum21/publication/srsec/803-Web%20Application%20Class-%20XII.pdf

SL NO.	Name of Chapter(s) / Topic(S)	MONTH
1.	Ch-3 Web Scripting - Javascript : 3.1 Java Script Review 3.3 Object 3.6 Array object	April
2.	Ch-3 Web Scripting - Javascript : 3.3 Object 3.6 Array object	May

3.	**Ch-3 Web Scripting - JavaScript :** 3.2 Functions 3.4 String object 3.5 Math object 3.7 Events 3.8 Case Studies	June
4.	**Ch-1 Movie Editing Tools** 1.1 Movie Editing Tools 1.2 Familiarization of Interface Components 1.3 Importing Pictures, Audio and Video Clips Pictures into Windows Movie Maker	July
5.	**Ch-1 Movie Editing Tools** 1.4 Splitting, Joining and Trimming Movie Clips 1.5 Adding Titles in Windows Movie Maker 1.6 Publishing Movie in Windows Movie Maker	August

6.	**Ch-2 Customizing and Embedding Multimedia Components in Web Pages** 2.1 Customizing and Embedding Multimedia Components in Web Pages 2.2 Compatible Multimedia File Formats for Web Pages 2.3 Embedding Audio in Web Pages 2.4 Embedding Video in Web Pages 2.5 Embedding Flash Files in Web Pages Part A-Employability skills -Communication Skill -ICT Skill -Self management skill	September
7.	Part A-Employability skills -Green Skill -Entrepreneurial skills	October- November
8.	**Ch-4 Advanced Features of Web Design** 4.1 Code View , Add-ins, Snippets and Page Transitions 4.2 Dynamic Web Templates 4.3 SEO- Search Engine Optimization 4.4 Forms- Advanced 4.5 Publishing Web Pages or Websites - I 4.6 Publishing Web pages or Websites - II 4.7 Authoring Tools 4.8 CSS Templates	November- December

LIST OF ACTIVITIES & ASSESSMENTS

Class XII: WEB APPLICATION (22-23)

SL NO.	Details of Activity	Month	Marks
1.	Collecting Real life data to understand and solve the the following program of Array, String and Function i-Display Sum of n Natural Numbers ii-Write a program using a for loop to calculate the factorial of a number. iii-Write a program to classify a given number as prime or composite. iv-Write a Program to create an array. v-Write a Program using JavaScript to find length of Array. vi-Write a Program to join two arrays using concat() vii-Write a Program to remove the last element from the array by using pop() viii-Write a Program to reverse the order of the elements in the array.	APR- JUN	10
2.	Application of events and movie editing through the following activity i-Execution of JavaScript immediately after a page has been loaded ii-Execute a JavaScript when a button is clicked iii-Split Video Clip using Windows Movie Maker(WMM). iv-Joining Video clip using WMM. v-Perform Trimming Video Clip using WMM.	JUL- AUG	10
3.	Shoot a few videos and edit using the tools of WMP/Filmora.	SEPT NOV	10

4.	Create a Webpage and design it through html and css and published it using JavaScript	DEC- FEB	10
	Details of Assessment		
1.	**Benchmark Test 1-** **Ch-3 Web Scripting - Javascript :** **3.1 Java Script Review** **3.3 Object** **3.6 Array object**	MAY	40
2.	**Benchmark Test 2-** **Ch-3 Web Scripting - Javascript :** **3.2 Functions** **3.4 String object** **3.5 Math object** **3.7 Events** **3.8 Case Studies** **Ch-1 Movie Editing Tools** **1.1 Movie Editing Tools** **1.2 Familiarization of Interface Components** **1.3 Importing Pictures, Audio and Video Clips Pictures into Windows Movie Maker**	JULY	40

3.	**Mid Term-** **Ch-3 Web Scripting - Javascript :** **3.4 String object** **3.5 Math object** **3.7 Events** **Ch-1 Movie Editing Tools** **1.4 Splitting, Joining and Trimming Movie Clips** **1.5 Adding Titles in Windows Movie Maker** **1.6 Publishing Movie in Windows Movie Maker** **Part A-Employability skills** **-Communication Skill** **-ICT Skill** **-Self management skill**	**SEPT**	**60**
4	**Benchmark Test 3-** **Part A-Employability skills** **-Green Skill** **-Entrepreneurial skills** **Ch-4 Advanced Features of Web Design** **4.1 Code View , Add-ins, Snippets and Page Transitions** **4.2 Dynamic Web Templates** **4.3 SEO- Search Engine Optimization** **4.4 Forms- Advanced**	**NOV**	**40**

5.	1st Pre-Board Exam Full Syllabus	DEC	60
6.	2nd Pre-Board Exam Full Syllabus	JAN	60

SUBJECT: COMPUTER SCIENCE (083)

Class: XII

Name of the Books

1. NCERT TEXTBOOK FOR COMPUTER SCIENCE- CLASS XII LINK TO DOWNLOAD THE BOOK:https://ncert.nic.in/textbook.php?lecs1=0-13
2.Reference Book: Computer Science With Python Writer- Sumita Arora, Dhanpat Rai & Co. Publication

SL NO.	Name of Chapter(s) / Topic(S)	MONTH
1.	CH1-Revision of Python (LIST, TUPLES,DICTIONARIES,MODULES)	April-May

2.	CH2- Working with Functions	May-June
3.	CH3- File Handling	June-July
4.	CH4- Using Python libraries: Import Python libraries CH5- Data Structures(Stack, operations on stack (push & pop), implementation of stack using list.)	July- August
5.	CH6- Computer Networks	August- September
6.	CH7- Data Communications	September- October
7.	CH8-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)Data Definition Language and Data Manipulation Language, data type constraints (not null, unique, primary key), create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete	October- November
8.	CH9- Structured Query Language-1 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.	November- December

LIST OF ACTIVITIES & ASSESSMENTS

SL NO.	Details of Activity	Month	Marks
1.	Visit your computer lab and find out which topology of the network is used there and make brief notes of other topologies.	APR- JUN	10
2.	1.Write a Python program to implement a stack & queue using list 2.Write a code to find the factorial of a natural number using function 3. Write a code to find the sum of all elements of a list. 4. Write a code to compute the nth Fibonacci number using the function.	JUL- AUG	10
3.	Create a student table and insert data. Implement the following SQL commands on the student table: o ALTER table to add new attributes / modify data type / drop attribute o UPDATE table to modify data o ORDER By to display data in ascending / descending order o DELETE to remove tuple(s) o GROUP BY and find the min, max, sum, count and average o Joining of two tables.	SEPT NOV	10

4.	● Read a text file line by line and display each word separated by a #. ● Read a text file and display the number of vowels/consonants/uppercase/lowercase characters in the file. ● Remove all the lines that contain the character 'a' in a file and write it to another file. ● Create a binary file with name and roll number. Search for a given roll number and display the name, if not found display appropriate message. ● Write a random number generator that generates random numbers between 1 and 6 (simulates a dice). ● Create a CSV file by entering user-id and password, read and search the password for given user id.	DEC- FEB	10
	Details of Assessment		
1.	Benchmark Test 1- CH1-Revision of Python (LIST,TUPLES,DICTIONARIES,MODULES) CH2- Working with Functions	MAY	40
2.	Benchmark Test 2- CH2- Working with Functions CH3- File Handling	JULY	40
3.	Mid Term- CH4- Using Python libraries: Import Python libraries CH5- Data Structures(Stack, operations on stack (push & pop), implementation of stack using list.) CH6- Computer Networks CH7- Data Communications	SEPT	70

4.	**Benchmark Test 3-** **CH8-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)Data Definition Language and Data Manipulation Language, data type constraints (not null, unique, primary key), create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete** **CH9- Structured Query Language-1** **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.**	**NOV**	**40**
5.	**1st Pre-Board Exam** **Full Syllabus**	**DEC**	**70**
6.	**2nd Pre-Board Exam** **Full Syllabus**	**JAN**	**70**

SUBJECT: Mass Media Studies

Name of the Books

1. XII MASS MEDIA STUDIES by CBSE

SL NO.	Name of chapter(s)/ Topic (S)	MONTH
1.	**Part B–Skills** **Unit 1: Selling / Marketing/ Exhibiting A Product through Advertising** **Part A: Employability Skills** **Unit 1: Communication Skills – IV** **Learning Outcomes :** **i)Students would be able to understand the basics of Advertising a product.** **ii) Students would be able to acquaint them with important aspects of the**	**April**

	process of Marketing. iii) Students would be able to develop the knowledge of Selling skills and communication skills. iv) Students would be able to understand the purpose of Communication Skills and Marketing.	
2.	Part B–Skills Unit 2: Introduction to the Production Process Learning Outcomes : i) Students would be able to acquaint themselves with the process of Production. ii) They would be able to enhance the understanding of basics of the Production Process. iii) They would be able to understand the products and its importance.	May
3.	Part B–Skills Unit 3: New Media Part A: Employability Skills Unit 2: Self-management Skills – IV Learning Outcomes : i) Students would be able to understand the technology of New media. ii) They would understand the various types of new media and their techniques iii) They would learn the skills of self management. iv) They would understand the techniques of self management.	June
4.	Part B–Skills Unit 4: Creative Contributions of the Key People Part A: Employability Skills Unit 3: Information and Communication Technology Skills – IV Learning Outcomes : i) Students would be able to understand the creative techniques. ii) They would understand the communication skills and its various kinds. iii) They would understand Communication Technology and learn to develop the skills. iv) They would learn the creative ways of the key people.	July - Sept
5.	Part A: Employability Skills Unit 4: Entrepreneurial Skills – IV Unit 5: Green Skills – IV Learning Outcomes : i) Students would able to understand the business ideas and plans ii) They would understand the economical business activities and its effects iii) They would understand the benefits of Business plans and know how to use it as an Entrepreneur. iv) They would understand the process of protecting environment	Oct - Dec

LIST OF ACTIVITIES & ASSESSMENTS
Class 12: Mass Media Studies (22-23)

SL NO.	Details of Activity	Month	Marks
	As activities in the subject of Mass Media Studies are contemporary industry based activities, a detailed plan of activities will be announced with the progress of the syllabus and suitable time will be given for the completion of the same.		
	Details of Assessments		
Benchmark Test I	Part B–Skills Unit 1: Selling / Marketing/ Exhibiting A Product through Advertising Part A: Employability Skills Unit 1: Communication Skills – IV	May	40
Benchmark Test II	Part B–Skills Unit 2: Introduction to the Production Process Part A: Employability Skills Unit 1: Communication Skills – IV	July	40
Half Yearly Exam	Part B–Skills Unit 1: Selling / Marketing/ Exhibiting A Product through Advertising Unit 2: Introduction to the Production Process Part A: Employability Skills Unit 1: Communication Skills – IV Unit 2: Self-management Skills – IV	Sept.	70
Benchmark Test III	Part B–Skills Unit 3: New Media Part A: Employability Skills Unit 3: Information and Communication Technology Skills – IV	Nov	40
Pre-Board 1	Whole Syllabus	Dec	70
Pre-Board 2	Whole Syllabus	Jan	70

SUBJECT: PHYSICAL EDUCATION

Name of the Books

1. HEALTH & PHYSICAL EDUCATION, Dr V.K. Sharma

SL NO.	Name of chapter(s)/ Topic (S)	MONTH
1.	Unit III Yoga as preventive measures for lifestyle disease. **Learning Outcomes:** 1.Student have learned that yoga is one of the heritage of India. 2. Students have learned to perform various asana and pranayama. 3.student have learned to identify the asana and use of asana for correct or reducing the effect of diseases .	April
2.	Unit I Management in Sporting events. **Learning Outcomes:** 1.Students have learned how to make plan of any tournament or for any single activity in their life. 2.students have learned to make different committees and coordinate with these committees. 3.students have learned the importance of physical fitness in our life.	May/ June
3.	Unit II: Sports & Nutrition **Learning Outcomes:** 1.Children have learned the importance of diet in daily life 2. children have learned to identify the nutritive and non nutritive component of diet . 3. Children have learned the harmful effects of disorder in eating in our daily life. 4. children have learned about various diseases which occurs due to irregular eating in our daily life like obesity.	June
4.	Unit IV Physical Education & Sports for CWSN (Children With Special Needs - Divyang) **Learning Outcomes:** 1.Students have learned to identify the common disabilities and disorder found in human body . 2. students have learned how to make best physical activities for special type of children . 3. students have learned which all the thing to remember while dealing with the normal as well as special Kind of children or people.	July
5.	Unit V Children & Women in Sports **Learning Outcomes:** 1.Students have learned the basic and motor development of human body. 2. students have learned to identify the body posture and correctives measures . 3.student have learned the importance of physical activities and yoga in our daily life. 4.Students have learned about the present conditions of women participation in sports 5. students have learned about all the basic problem which the Indian women are facing during the participating in sports . 6. students have learned about the physiological , sociological factors that faced by the Indian women while there are participating in sports.	Aug
6.	Unit VI Test & Measurement in Sports **Learning Outcomes:** 1.Students have learned about the minimum fitness of the body. 2. student have learned how to measures the minimum fitness of the human body at different stages of life . 3. Student have learned to identify the test which is used to measure which kind of fitness of a person.	Sep

7.	**Unit VII Physiology & Injuries in Sports** **Learning Outcomes:** 1.Students have learned student have learn the basic physical and physiological differences between male and female.. 2. students have learned physiological factor determining components of physical fitness. 3. students have learned about different body system of human body which is going to help him to maintain proper physical fitness of the body. 4. student have learned the effects of exercises on various system of human body by which he or she can maintain the proper body shape and size by regular physical activities according to their body.	Oct/Nov
8.	Unit IX Psychology & Sports **Learning Outcomes:** 1.Students have learned how to groom themselves or present In front of other . 2. students have learned to manage the stress level of their own as well as other also .. 3. students have learned to utilize their aggression in a positive way which is going to enhance their performance any activities.	Dec
9.	Unit VIII Biomechanics & Sports **Learning Outcomes:** 1.Students have learned how to used different types of laws and principles of biomechanics and kinesiology in our sports field or in our daily life activities . 2. students have learned about the muscles of our body and which muscles are responsible for the movement of which part of the body . 3. students have learned to apply the laws of biomechanics correctly and in efficient way to perform better in sports or competition.	Jan
10.	Unit X Training in Sports **Learning Outcomes:** 1.students are able to understand about Speed, Strength, Endurance, Flexibility, Coordinative ability. 2.students are able to understand about various training methods (Circuit Training method, Continuous training, Interval training, Fartlek training).	Feb

LIST OF ACTIVITIES & ASSESSMENTS

SL NO.	Details of Activity	Month	Marks
1.	**Name of the activity**: Physical Fitness Test (50 m dash, 600 m run, Sit and Reach test, Standing Broad Jump, 4X10 m Shuttle Run, Harvard Step Test, Senior Citizen Test.) **Procedure** of the above mentioned activities **Materials** regarding those activities.	APR-JUN	10
2.	**Name of the activity:** Skills of Games (any one from the syllabus) **Rules** regulations of Games. **Equipment** regarding selected Games.	JUL-AUG	10
3.	**Name of the activity:** Practice of Yogasana.	SEPT	10

	(minimum 10) Procedure of Asanas. Equipments/ Materials regarding Asanas	/NOV.	
4.	**Name of the activity: BMI** Measurement **Procedure:** simple calculations using a person heights and weight **Equipment:** stadiometer, weighing machine.	DEC-FEB	10
	Details of Assessment		
BENCHMARK TEST I	UNIT- I&III	MAY	40
BENCHMARK TEST II	UNIT- II, IV & V	JULY	40
HALF YEARLY	UNIT- I,II,III, IV, V, VI & VII	SEPT	70
BENCHMARK TEST III	UNIT- VIII, IX & X	NOV	40
PRE BOARD I	FULL SYLLABUS	DEC	70
PRE BOARD II	FULL SYLLABUS	JAN	70

Details of Practicals: PHYSICAL EDUCATION (XII)

Sl. No.	TOPIC	Month
1	• Yoga practice • Physical fitness test practice	April
2	• Football • Yoga practice	May/ June
3	• Physical fitness test practice • Football	June/ July
4	• Yogic practice • Volleyball practice	Aug
5	• Kabaddi practice • Physical fitness test	Sep
6	• Volleyball practice • Yogic practice	Oct
7	• Volleyball practice • Kho-kho practice	Nov

8	● Physical fitness test practice ● Yogic practice	Dec
9	● Basketball practice ● Kabaddi practice	Jan