

Short Answer Questions - Based on prose / drama / poetry from both the texts.

Long Answer Question - Based on texts to test global comprehension and extrapolation beyond the texts to bring out the key messages and values.

Long Answer Question - Based on texts to test global comprehension along with analysis and extrapolation.

Long Answer Question - Based on theme, plot and incidents from the prescribed novels.

Long Answer Question - Based on understanding appreciation, analysis and interpretation of the character sketch.

Prescribed Books

1. **Flamingo: English Reader** published by National Council of Education Research and Training, New Delhi

2. **Vistas: Supplementary Reader** published by National Council of Education Research and Training, New Delhi

Note: Long answer questions based on values can be given in the writing section or in the literature section.

Textbooks	Name of the lessons deleted	Author
Flamingo	1. Poets and Pancakes 2. The Interview 3. A Road Side Stand (Poetry)	
Vistas	4. The Third Level Journey to the End of the Earth 5. Earth	
3. Extended Reading Text:		
i) The Invisible Man (unabridged)		H.G. Wells

QUESTION PAPER DESIGN 2017-18

CLASS XII – ENGLISH CORE (Code No. 301)

Time-3 hours

Marks -100

Typology	Typology of questions/ learning outcomes	MCQ I mark	Very Short Answer Question 3 marks 1 mark	Short Answer Question 3 marks	Short Answer Question 4 marks	Long Answer- 1 80 - 100 words 5 marks	Long Answer- 2 120- 150 words 6 marks	Very Long Answer 150 - 200 words (HOTS)	Total marks	Over all %
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								10 marks		
Reading Skills	Conceptual, understanding, decoding, Analysing, inferring, interpreting, appreciating ,literary conventions and vocabulary, summarising and using appropriate format/s	6	16	1	—	1	—	—	30	30
Writing Skills	Reasoning, appropriacy of style and tone, using appropriate format and fluency, inference, analysis, evaluation and creativity.	—	—	—	1	—	1	2	30	30
Literary Text books and long reading text/novel	Recalling, reasoning, appreciating literary conventions, inference, analysis, evaluation, creativity with fluency	—	4	4	—	—	4	—	40	40
	TOTAL	6x1=6	20x1=20	5x3=15	1x4=4	1x5=5	5x6=30	2x10=20	100	100

General Objectives

- to listen and comprehend live as well as record in writing oral presentations on a variety of topics

- to develop greater confidence and proficiency in the use of language skills necessary for social and academic purpose
- to participate in group discussions, interviews by making short oral presentation on given topics
- to perceive the overall meaning and organization of the text (i.e., the relationships of the different "chunks" in the text to each other
- to identify the central/S point and supporting details, etc., to build communicative competence in various registers of English
- 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
- Students are expected to develop the following study skills:
- to develop the ability to be original and creative in interpreting opinion
- to develop the ability to be logically persuasive in defending one's opinion
- making notes based on a text

**TEXT BOOKS – 1. FLAMINGO
2. VISTAS
3. NOVEL – THE INVISIBLE MAN**

REFERENCE BOOKS – 1. BRIJENDRA BOOK COMPANY(BBC)

2.OXFORD STUDY MATERIAL

SYLLABUS BREAK-UP (MONTHLY)

MARCH

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

WRITING SKILLS- NOTICE, LETTER TO EDITOR, CIRCULARS

READING SKILLS- COMPREHENSION

APRIL

FLAMINGO-LOST SPRING, DEEP WATER, KEEPING QUIET

NOVEL- LESSONS 1-5

WRITING SKILLS- ADVERTISEMENTS (CLASSIFIED AND COMMERCIAL)

READING SKILLS- NOTE MAKING

MAY

FLAMINGO-THE RATRAP, INDIGO

VISTAS-THE TIGER KING

NOVEL- LESSONS 6-10

WRITING SKILL- INVITATIONS AND REPLIES, ARTICLE, SPEECH, POSTER, DEBATE

READING SKILLS- COMPREHENSION

JUNE/JULY

FLAMINGO- GOING PLACES,

VISTAS- THE ENEMY, ON THE FACE OF IT

NOVEL-LESSONS 11-15

WRITING SKILL-LETTERS PLACING AND CANCELLING ORDER, COMPLAINTS MAKING ENQUIRIES

READING SKILLS-COMPREHENSION

AUGUST

FLAMINGO- AN ELEMENTARY SCHOOL CLASSROOM IN A SLUM

VISTAS- SHOULD WIZARD HIT MOMMY

NOVEL-LESSONS 15-20

WRITING SKILL- JOB APPLICATION

READING SKILLS- NOTE MAKING

SEPTEMBER

FLAMINGO- REVISION

VISTAS- MEMORIES OF CHLIDHOOD

NOVEL-LESSON 21-25

WRITING SKILL -REPORT WRITING

READING SKILL- COMPREHENSION

OCTOBER

FLAMINGO-REVISION

VISTAS- EVANS TRIES AN O LEVEL

NOVEL- 26-29

WRITNG SKILL-REVISION

READING SKILL- COMPREHENSION

NOVEMBER

FLAMINGO- THING OF BEAUTY

VISTAS- REVISION

NOVEL – REVISION

WRITING SKILL –REVISION

READING SKILL-NOTEMAKING

DECEMBER- EPILOGUE (NOVEL)

SAMPLE PAPERS

SYLLABUS BREAKUP - EXAM WISE

MONDAY TEST– I (MAY 8,2017)

FLAMINGO- THE LAST LESSON, LOST SPRING, DEEP WATER, MY MOTHER AT SIXTY-SIX

NOVEL- LESSONS 1-5

WRITING SKILL- NOTICE, LETTERS TO EDITOR, CIRCULARS

READING SKILL COMPREHENSION

COMPRHENSIVE EXAMS-

FLAMINGO- THE LAST LESSON, LOST SPRING, DEEP WATER, MY MOTHER AT SIXTY-SIX, AUNT JENNIFER'S TIGER,THE RATRAP, INDIGO, KEEPING QUIET

VISTAS—THE TIGER KING

NOVEL LESSONS 1-10

WRITNG SKILL- NOTICE, LETTERS TO EDITOR, CIRCULARS, ADVERTISEMENTS (CLASSIFIED AND COMMERCIAL), INVITATIONS AND REPLIES, ARTICLE, SPEECH, POSTER AND DEBATE

READING SKILL- COMPREHENSION AND NOTE MAKING

MONDAY TEST 2 (AUGUST21,2017)

FLAMINGO- GOING PLACES

VISTAS-THE ENEMY, ON THE FACE OF IT

NOVEL-LESSONS11-15

WRITING SKILL- JOB APPLICATION , BUSINESS LETTERS, LETTER TO EDITOR, ADVERTISEMENTS, INVITATIONS AND REPLIES

READING SKILL-NOTE MAKING

MONDAY TEST 3 (NOVEMBER20,2017)

FLAMINGO- AN ELEMENTARY SCHOOL CLASSROOM IN A SLUM, THING OF BEAUTY, KEEPING QUIET

VISTAS- SHOULD WIZARD HIT MOMMY, MEMORIES OF CHILDHOOD, EVANS TRIES AN O LEVEL

NOVEL LESSONS 15-20

WRITNG SKILL- INVITATIONS AND REPLIES, ARTICLE, SPEECH, POSTER, JOB APPLICATIONS,NOTICE

READING-COMPREHENSION

MID TERM EXAMINATION (SEPTEMBER11-20,2017)

FLAMINGO- THE LAST LESSON, LOST SPRING, DEEP WATER, THE RATRAP, INDIGO, GOING PLACES, MY MOTHER AT SIXTY-SIX, AN ELEMENATRY SCHOOL CLASSROOM IN A SLUM, KEEPING QUIET, AUNT JENNIFER'S TIGERS

VISTAS- THE TIGER KING, ENEMY, ON THE FACE OF IT, SHOULD WIZARD HIT MOMMY

WRITING- NOTICE, POSTER, ADVERTISEMENTS,INVITATIONS AND REPLIES,LETTER WRITNG-EDITOR,BUSINESS,JOB APPLICATION,REPORT,ARTICLE,SPEECH DEBATE

PRE BOARD – (DECEMBER 18 ONWARDS) - COMPLETE SYLLABUS

Syllabus Break-Up Class XII (Session 2017 – 18)

MATHEMATICS (Code 041)

General Objectives:

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

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

Text Books:

- Mathematics Part I - Textbook for Class XII, NCERT Publication
- Mathematics Part II - Textbook for Class XII, NCERT Publication
- Mathematics Exemplar Problems for Class XII, NCERT Publication

Reference Book

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

MONTH – WISE SYLLABUS BREAK – UP

MARCH

MATRICES: Concept, notation, order, equality, types of matrices, zero matrix, transpose of a matrix, symmetric and skew symmetric matrices. Addition, multiplication and scalar multiplication of matrices, simple properties of addition, multiplication and scalar multiplication. Non-commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (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

DETERMINANTS: Determinant of a square matrix (up to 3×3 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.

RELATIONS AND FUNCTIONS: Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions, composite functions, inverse of a function. Binary operations.

MAY

INVERSE TRIGONOMETRIC FUNCTIONS: Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions

CONTINUITY AND DIFFERENTIABILITY: Continuity and differentiability, derivative of composite functions, chain rule, derivatives of Inverse trigonometric functions, derivative of implicit functions. Concept of exponential and Logarithmic functions.

Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives. Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretation.

JULY

APPLICATIONS OF DERIVATIVES: 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 real-life situations)

LINEAR PROGRAMMING: 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, feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).

AUGUST

INTEGRALS:

Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, special integrals Definite integrals as a limit of a sum, Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.

APPLICATIONS OF THE INTEGRALS:

Applications in finding the area under simple curves, especially lines, circles/parabolas/ellipses (in standard form only), Area between the two above said curves (the region should be clearly identifiable).

SEPTEMBER

DIFFERENTIAL EQUATIONS:

Definition, order and degree, general and particular solutions of a differential equation. Formation of differential equation whose general solution is given. Solution of differential equations by method of separation of variables, homogeneous differential equations of first order and first degree. Solutions of linear differential equations

OCTOBER

VECTORS: 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. Scalar (dot) product of vectors, projection of a vector on a line. Vector (cross) product of vectors. Scalar triple product of vectors.

THREE - DIMENSIONAL GEOMETRY: Direction cosines and direction ratios of a line joining two points. Cartesian 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.

NOVEMBER

PROBABILITY: Conditional probability, multiplication theorem on probability, independent events, total probability, Baye's theorem, Random variable and its probability distribution, mean and variance of random variable. Repeated independent (Bernoulli) trials and Binomial distribution.

DECEMBER, JANUARY, FEBRAURY

Revision of the whole syllabus and discussion of model test papers

TEST – WISE SYLLABUS BREAK–UP

MONDAY TEST – 1

- Matrices

- Determinants

COMPREHENSIVE EXAM

- Matrices
- Determinants
- Relations and Functions
- Inverse Trigonometry
- Continuity and Differentiability

MONDAY TEST – 2

- Applications of Derivatives

MID-TERM

- Chapters 1 – 8 and Chapter 12 from N.C.E.R.T textbook

MONDAY TEST – 3

- Chapters 10 – 11 from N.C.E.R.T textbook

PRE – BOARD - Whole syllabus

CHEMISTRY - CLASS - 12

OBJECTIVES

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

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

TEXT BOOKS

- Chemistry Part -I, Class-XII, Published by NCERT.
- Chemistry Part -II, Class-XII, Published by NCERT.

REFERENCE BOOKS

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

MONTH WISE SYLLABUS BREAK-UP

MARCH

Unit X: Haloalkanes and Haloarenes.

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

Haloarenes: Nature of C -X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only).

Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

APRIL

Unit XI: Alcohols, Phenols and Ethers

Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol.

Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols.

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

Unit XII: Aldehydes, Ketones and Carboxylic Acids

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

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

PRACTICALS:

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

i) Oxalic acid,

ii) Ferrous Ammonium Sulphate

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

MAY

Unit XIII: Organic compounds containing Nitrogen

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

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

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

Unit XIV: Biomolecules

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

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

Unit XV: Polymers

Classification - natural and synthetic, methods of polymerization (addition and condensation), copolymerization, some important polymers: natural and synthetic like polythene, nylon polyesters, bakelite, rubber. Biodegradable and non-biodegradable polymers.

Unit XVI: Chemistry in Everyday life

Chemicals in medicines - analgesics, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines.

Chemicals in food - preservatives, artificial sweetening agents, elementary idea of antioxidants.

Cleansing agents - soaps and detergents, cleansing action.

PRACTICAL:

EXP: Tests for the functional groups present in organic compounds:

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

ALLOTMENT OF PROJECT WORK

JULY

Unit I: Solid State

Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea). Unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, packing efficiency, voids, number of atoms per unit cell in a cubic unit cell, point defects, electrical and magnetic properties. Band theory of metals, conductors, semiconductors and insulators and n and p type semiconductors.

Unit II: Solutions

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

PRACTICALS:

EXP: Preparation of one lyophilic and one lyophobic sol

Lyophilic sol - starch

Lyophobic sol - ferric hydroxide

Qualitative analysis

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

PROJECT WORK

AUGUST

Unit II: Solutions (CONTD.)

Unit III: Electrochemistry

Redox reactions, 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, 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, fuel cells, corrosion.

Unit IV: Chemical Kinetics

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

PRACTICALS

Qualitative analysis

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

PROJECT WORK

SEPTEMBER:

Unit IX: Coordination Compounds

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

PRACTICAL:

EXP: Chromatography

i) Separation of colours from a mixture of red and blue ink by paper chromatography and determination of R_f values.

PROJECT WORK

OCTOBER:

Unit V: Surface Chemistry

Adsorption - physisorption and chemisorption, factors affecting adsorption of gases on solids, catalysis, homogenous and heterogenous activity and selectivity; enzyme catalysis colloidal state distinction between true solutions, colloids and suspension; lyophilic, lyophobic multimolecular and macromolecular colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation, emulsion - types of emulsions.

Unit VI: General Principles and Processes of Isolation of Elements

Principles and methods of extraction - concentration, oxidation, reduction - electrolytic method and refining; occurrence and principles of extraction of aluminium, copper, zinc and iron.

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

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

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

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

PRACTICAL:

EXP: Characteristic tests of carbohydrates, fats and proteins in pure samples and their detection in given food stuffs.

PROJECT WORK

NOVEMBER:

Unit VII: "p"-Block Elements

Group -15 Elements: General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; Nitrogen preparation properties and uses; compounds of Nitrogen, preparation and properties of Ammonia and Nitric Acid, Oxides of Nitrogen (Structure only); Phosphorus - allotropic forms, compounds of Phosphorus: Preparation and Properties of

Phosphine, Halides and Oxoacids (elementary idea only).

Group 16 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties, dioxygen: Preparation, Properties and uses, classification of Oxides, Ozone, Sulphur - allotropic forms; compounds of Sulphur: Preparation Properties and uses of Sulphur-dioxide, Sulphuric Acid: industrial process of manufacture, properties and uses; Oxoacids of Sulphur (Structures only).

Group 17 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens, Preparation, properties and uses of Chlorine and Hydrochloric acid, interhalogen compounds, Oxoacids of halogens (structures only).

Group 18 Elements: General introduction, electronic configuration, occurrence, trends in physical and chemical properties, uses.

DECEMBER:

Revision

JANUARY:

Revision

FEBRUARY:

Revision

TEST-WISE SYLLABUS BREAK-UP**MONDAY TEST 1**

- UNIT-10 :- Haloalkanes and Haloarenes
- UNIT-11 :- Alcohols, Phenols and Ethers

COMPREHENSIVE EXAMINATION

- UNIT-10 :- Haloalkanes and Haloarenes
- UNIT-11 :- Alcohols, Phenols and Ethers
- UNIT-12 :- Aldehydes, Ketones and Carboxylic Acids
- UNIT-13 :- Organic compounds containing Nitrogen
- UNIT-14 :- Biomolecules
- UNIT-15 :- Polymers
- UNIT-16 :- Chemistry in Everyday life

MONDAY TEST-2

- UNIT-1 :- Solid State
- UNIT-2 :- Solutions

MONDAY TEST-3

- UNIT-3 :- Electrochemistry
- UNIT-4 :- Chemical Kinetics

MID TERM EXAMINATION

- UNIT-1 :- Solid State
- UNIT-2 :- Solutions
- UNIT-3 :- Electrochemistry
- UNIT-4 :- Chemical Kinetics
- UNIT-10 :- Haloalkanes and Haloarenes
- UNIT-11 :- Alcohols, Phenols and Ethers
- UNIT-12 :- Aldehydes, Ketones and Carboxylic Acids
- UNIT-13 :- Organic compounds containing Nitrogen
- UNIT-14 :- Biomolecules
- UNIT-15 :- Polymers
- UNIT-16 :- Chemistry in Everyday life

PREBOARD EXAMINATION :- Complete Syllabus

Class XII Physics (042)

Session (2017-18)

General Objectives:

- Emphasis on basic conceptual understanding of the content.
- Emphasis on use of SI units, symbols, nomenclature of physical quantities and formulations as per international standards.
- Providing logical sequencing of units of the subject matter and proper placement of concepts with their linkage for better learning.
- Reducing the curriculum load by eliminating overlapping of concepts/ content within the discipline and other disciplines.
- Promotion of process-skills, problem-solving abilities and applications of Physics concepts.
- Besides, the syllabus also attempts to strengthen the concepts developed at the secondary stage to provide firm foundation for further learning in the subject. Expose the learners to different processes used in Physics-related industrial and technological applications.
- Develop process-skills and experimental, observational, manipulative, decision making and investigatory skills in the learners.
- Promote problem solving abilities and creative thinking in learners.
- Develop conceptual competence in the learners and make them realize and appreciate the interface of Physics with other disciplines.

Text Book for the Session: NCERT.

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

Month Wise Breakup

March:

Unit VI: Ray Optics

Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection and its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lens maker's formula. Magnification, power of a lens, combination of thin lenses in contact, combination of a lens and a mirror. Refraction and dispersion of light through a prism.

Scattering of light - blue colour of sky and reddish appearance of the sun at sunrise and sunset.

Optical instruments : Human eye, image formation and accommodation, correction of eye defects (myopia, hypermetropia) using lenses. Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.

Practicals(Experiment)

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

Activities:

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

Project: Individual Project based on choice of students.

April:

Unit VI:Wave Optics

Wave optics: Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen's principle. Interference, Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light. Diffraction due to a single slit, width of central maximum. Resolving

power of microscopes and astronomical telescope. Polarisation, plane polarised light, Brewster's law, uses of plane polarised light and Polaroids.

Unit VII: Dual Nature of Matter and Radiation

Dual nature of radiation. Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light.

Matter waves-wave nature of particles, de Broglie relation. Davisson-Germer experiment (experimental details should be omitted; only conclusion should be explained).

Unit I: Electrostatics

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).

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 polarisation, 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. Van de Graaff generator

Practicals(Experiment)

2. To determine resistance per cm of a given wire by plotting a graph of potential difference versus current.

3. To find resistance of a given wire using metre bridge and hence determine the resistivity.

Activities:

2. To observe polarization of light using two Polaroids

Project: Individual Project based on choice of students.

May:

Unit II: Current Electricity

Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, electrical resistance, V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity. Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance. Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel.

Kirchhoff's laws and simple applications. Wheatstone bridge, metre bridge.

Potentiometer - principle and its applications to measure potential difference and for comparing emf of two cells; measurement of internal resistance of a cell.

Unit III: Magnetic Effects of Current and Magnetism

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 and toroidal solenoids, Force on a moving charge in uniform magnetic and electric fields. Cyclotron.

Force on a current-carrying conductor in a uniform magnetic field. Force between two parallel current-carrying conductors-definition of ampere. Torque experienced by a current loop in uniform magnetic field; moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.

Practicals(Experiment)

4. To verify the laws of combination (series/parallel) of resistances using a metre bridge.

Activities:

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

July:**Unit III: Magnetic Effects of Current and Magnetism**

Current loop as a magnetic dipole and its magnetic dipole moment. Magnetic dipole moment of a revolving electron. Magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; Earth's magnetic field and magnetic elements. Para-, dia- and ferro - magnetic substances, with examples. Electromagnets and factors affecting their strengths. Permanent magnets.

Unit IV: Electromagnetic Induction and Alternating Currents

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

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

AC generator and transformer.

Practicals(Experiment)

5. To compare the emf of two given primary cells using potentiometer.

6. To determine the internal resistance of given primary cell using potentiometer.

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

Activities:

4. To assemble the components of a given electrical circuit.

Project: Individual Project based on choice of students.

August:**Unit IX: Electronic Devices**

Energy bands in solids (Qualitative ideas only) conductor, insulator and semiconductor; semiconductor diode – I-V characteristics in forward and reverse bias, diode as a rectifier; I-V Characteristics of LED, photodiode, solar cell, and Zener diode; Zener diode as a voltage regulator. Junction transistor, transistor action, characteristics of a transistor, transistor as an amplifier (common emitter configuration) and oscillator. Logic gates (OR, AND, NOT, NAND and NOR). Transistor as a switch.

Practicals(Experiment)

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

9. To study the characteristic of a common - emitter npn or pnp transistor and to find out the values of current and voltage gains.

10. To draw the characteristic curve of a zener diode and to determine its reverse break down voltage.

Activities:

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

Project: Individual Project based on choice of students.

September:**Unit V: Electromagnetic waves**

Need for displacement current, Electromagnetic waves and their characteristics (qualitative ideas only). Transverse nature of electromagnetic waves.

Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.

Unit X: Communication Systems

Elements of a communication system (block diagram only); bandwidth of signals (speech, TV and digital data); bandwidth of transmission medium. Propagation of electromagnetic waves in the atmosphere, sky and space wave propagation. Need for modulation. Production and detection Of an amplitude-modulated wave.

Practicals(Experiment)

11. To find the value of v for different values of u in case of a concave mirror and to find the focal length.

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

13. To find the frequency of the a.c. mains with a sonometer

Activities:

6. To study effect of intensity of light (by varying distance of the source) on an L.D.R.

October:

Unit VIII: Atoms & Nuclei

Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, Hydrogen spectrum. Composition and size of nucleus, atomic masses, isotopes, isobars; isotones. Radioactivity alpha, beta and gamma particles/rays and their properties; radioactive decay law. Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion.

Practicals(Experiment)

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

15. To find the focal length of a concave lens, using a convex lens

Test wise Breakup

Monday Test I

Unit VI Ray optics

Comprehensive Exam:

- 1. Unit I Electrostatics**
- 2. Unit II Current Electricity**
- 3. Unit III Magnetic effect of current**
- 4. Unit VI Optics**
- 5. Unit VII Dual Nature of Matter**

Monday Test II

Unit III Magnetic effect of current & Magnetism

Monday Test III

Unit IV Electromagnetic Induction and Alternating current

MID TERM

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

- 6. Unit VI Optics**
- 7. Unit VII Dual Nature of Matter.**
- 8. Unit IX Electronic Devices**

Pre-Board II

- 1. Unit I Electrostatics**
- 2. Unit II Current Electricity**
- 3. Unit III Magnetic effect of current & Magnetism**
- 4. Unit IV Electromagnetic Induction and Alternating current**
- 5. Unit V Electromagnetic Waves**
- 6. Unit VI Optics**
- 7. Unit VII Dual Nature of Matter**
- 8. Unit VIII Atoms and Nuclei**
- 9. Unit IX Electronic Devices**
- 10. Unit X Communication Systems**

CLASS XII (SESSION 2017-18)

COMPUTER SCIENCE (Code 083)

General Objectives:

- To understand basics of computers.
- To develop problem solving skills and their implementation through Python (version: 2.7) or to implement Object Oriented Programming using C++.
- To understand and implement the concept of Object Oriented Methodology.
- To understand the concept of working with Relational Database.
- To understand the basic concept of Computing Logic.
- To understand the basic concepts of Communication and Networking technologies.
- To understand Open Source Software.

Text books for the session (2016-2017)

1. Computer Science with C++ by Sumita Arora
2. Together with Computer Science (Rachna Sagar Publications)
3. Reference Books : Let Us C++ by Yashwant Kanetkar

MONTH-WISE SYLLABUS BREAK-UP

MARCH –

UNIT 1: OBJECT ORIENTED PROGRAMMING IN C++.

Chapter 1 : Revision Tour

UNIT 2: DATA STRUCTURES

Chapter – 9 : Arrays

Introduction to data structure, primitive and non-primitive data structure, linear and non-linear structure, static and dynamic data structure. Arrays: One and two Dimensional arrays: Sequential allocation and address calculation; One dimensional array: Traversal, Searching (Linear, Binary Search), Insertion of an element in an array, deletion of an element from an array, Sorting (Insertion, Selection)

Two-dimensional arrays: Traversal Finding sum/difference of two NxM arrays containing numeric values, Interchanging Row and Column elements in a two dimensional array;

APRIL -UNIT 1: OBJECT ORIENTED PROGRAMMING IN C++

Chapter -2 : Object Oriented Programming:

Concept of Object Oriented Programming - Data hiding, Data encapsulation, Class and Object, Abstract class and Concrete class, Polymorphism (Implementation of polymorphism using Function overloading as an example in C++); Inheritance, Advantages of Object Oriented Programming over earlier programming methodologies.

Chapter – 3 : Function Overloading Concept of overloading a function, examples of Function Overloading, Polymorphism.

Chapter -4: Classes & Objects

Definition of a class, Members of a class - Data Members and Member Functions (methods), Using Private and Public visibility modes, default visibility mode (private); Member function definition: inside class definition and outside class definition using scope resolution operator (::); Declaration of objects as instances of a class; accessing members from object(s), Objects as function arguments - pass by value and pass by reference;

Chapter – 5: Constructor and Destructor:

Constructor: Special Characteristics, Declaration and Definition of a constructor, Default Constructor, Overloaded Constructors, Copy Constructor, Constructor with default arguments; Destructor: Special Characteristics, Declaration and definition of destructor;

MAY - UNIT 1: OBJECT ORIENTED PROGRAMMING IN C++

Chapter – 6: Inheritance (Extending Classes):

Concept of Inheritance, Base Class, Derived Class, Defining derived classes, protected visibility mode;

Single level inheritance, Multilevel inheritance and Multiple inheritance, Privately derived, Publicly derived and Protected derived class, accessibility of members from objects and within derived class(es);

UNIT 5: COMMUNICATION TECHNOLOGIES

Chapter – 14: Computer Networks

Evolution of Networking: ARPANET, Internet, Interspace

Different ways of sending data across the network with reference to switching techniques (Circuit and Packet switching); Data Communication terminologies: Concept of Channel, Bandwidth (Hz, KHz, MHz) and Data transfer rate (bps, kbps, Mbps, Gbps, Tbps); Transmission media: Twisted pair cable, coaxial cable, optical fiber, infrared, radio link, microwave link and satellite link; Network devices: Modem, RJ45 connector, Ethernet Card, Router, Switch, Gateway, wifi card; Network Topologies and types: Bus, Star, Tree, LAN, WAN, MAN; Network Protocol: TCP/IP, File Transfer Protocol (FTP), PPP, Remote Login (Telnet), Internet Wireless/Mobile Communication protocol such as GSM, CDMA, GPRS, WLL,

Mobile Telecommunication Technologies: 1G, 2G, 3G and 4G Electronic mail protocols such as SMTP, POP3 Protocols for Chat and Video Conferencing VOIP Wireless protocols such as Wi-Fi and WiMax Network Security Concepts: Threats and prevention from Viruses, Worms, Trojan horse, Spams Use

of Cookies, Protection using Firewall; India IT Act, Cyber Law, Cyber Crimes, IPR issues, Hacking; Introduction To Web services: WWW, Hyper Text Markup Language (HTML), eXtensible Markup Language (XML); Hyper Text Transfer Protocol (HTTP); Domain Names; URL; Website, Web browser, Web Servers; Web Hosting, Web Scripting - Client side (VB Script, Java Script, PHP) and Server side (ASP,JSP, PHP), Web 2.0 (for social networking)

JULY -UNIT 1: OBJECT ORIENTED PROGRAMMING IN C++

Chapter – 7: Data File Handling: Need for a data file, Types of data files - Text file and Binary file;

Binary File: Creation of file, Writing data into file, Searching for required data from file, Appending data to a file, Insertion of data in sorted file, Deletion of data from file, Modification of data in a file; Implementation of above mentioned data file handling in C++;

Components of C++ to be used with file handling:

Header file: fstream.h; ifstream, ofstream, fstream classes; Opening a text file in in, out, and app modes; Using cascading operators (>><<) for writing text to the file and reading text from the file; open(), get(), put(), getline() and close() functions; Detecting end-of-file (with or without using eof() function); Opening a binary file using in, out, and app modes; Using cascading operators (>><<) for writing text to the file and reading text from the file; open(), get(), put(), getline() and close() functions; Detecting end-of-file (with or without using eof() function); Opening a binary file using in, out, and app modes;

Binary Files – Deletion and Modification , Text File: Basic file operations on text file:

Creating/Writing text into file, Reading and Manipulation of text from an already existing text file (accessing sequentially);

UNIT 4 : BOOLEAN ALGEBRA

Chapter – 13 : Boolean Algebra Role of Logical Operations in Computing.

Binary-valued Quantities, Boolean Variable, Boolean Constant and Boolean Operators: AND, OR, NOT; Truth Tables; Closure Property, Commutative Law, Associative Law, Identity law, Inverse Law, Principle of Duality, Idem potent Law, Distributive Law, Absorption Law, Involution Law, DeMorgan's Law and their applications; Obtaining Sum of Product (SOP) and Product of Sum (POS) form from the Truth Table, Reducing Boolean Expression (SOP and POS) to its minimal form, Use of Karnaugh Map for minimization of Boolean expressions (up to 4 variables); **Application of Boolean Logic:** Digital electronic circuit design using basic Logic Gates (NOT, AND, OR,NAND, NOR) Use of Boolean operators (NOT, AND, OR) in SQL SELECT statements, Use of Boolean operators (AND, OR) in search engine queries.

- **PROJECT WORK**

AUGUST -

UNIT 2: DATA STRUCTURES

Chapter – 8 : Pointers

Introduction to Pointer, Declaration and Initialization of Pointer; Dynamic memory allocation/deallocation operators: new, delete; Pointers and Arrays: Array of Pointers, Pointer to an array (1 dimensional array), Function returning a pointer, Reference variables and use of alias; Function call by reference. Pointer to structure: De-reference/Deference operator: *, ->; self referential structure;

SEPTEMBER Chapter – 10 : Stack & Queues

Stack and Queue , Circular Queue as Array Implementation

Stack (Array and Linked implementation of Stack): Introduction to stack (LIFO_Last in First Out Operations) Operations on Stack (PUSH and POP) and its Implementation in C++, Converting expressions from INFIX to POSTFIX notation and evaluation of Postfix expression;

OCTOBER - Chapter – 10 : Stack & Queues

Stack (Array and Linked implementation of Stack): Continued..

Queue: (Circular Array and Linked Implementation): Introduction to Queue (FIFO - First in First out operations) Operations on Queue (Insert and Delete and its Implementation in C++.

NOVEMBER-UNIT 3: DATABASES MANAGEMENT SYSTEM AND SQL

Chapter – 11 : Database Concepts , Chapter – 12 : SQL

Database Concepts: Introduction to data base concepts and its need.

Relational data model: Concept of domain, tuple, relation, key, primary key, alternate key, candidate key; Relational algebra: Selection, Projection, Union and Cartesian product;

Structured Query Language: General Concepts: Advantages of using SQL, Data Definition Language and Data Manipulation Language;

Data types: NUMBER/DECIMAL, CHARACTER/VARCHAR/VARCHAR2, DATE;

SQL commands: CREATE TABLE, DROP TABLE, ALTER TABLE, UPDATE...SET..., INSERT, DELETE; SELECT, DISTINCT, FROM, WHERE, IN, BETWEEN, GROUP BY, HAVING, ORDER BY; SQL functions: SUM, AVG, COUNT, MAX and MIN; Obtaining results (SELECT query) from 2 tables using equi-join, Cartesian Product and Union

DECEMBER - Revision

JANUARY - Revision

FEBRUARY - Revision

TEST-WISE SYLLABUS BREAK-UP - CLASS XII (Computer Science)

MONDAY TEST 1 - Chapter 9 - Arrays

COMPREHENSIVE EXAM

Chapter -1 : REVIEW: C++ covered In Class –XI

Chapter -2 : Object Oriented Programming

Chapter - 3 : Function Overloading

Chapter -4: Classes & Objects , Chapter – 5: Constructor and Destructor:

Chapter – 6: Inheritance (Extending Classes) ,Chapter – 9 : Arrays

Chapter 14 – Computer Networking and its Concepts

MONDAY TEST 2 - Chapter – 7: Data File Handling

MID TERM

Chapter 1 to 10 (Stack and Queue Array Implementation), 13,14

MONDAY TEST 3

Chapter 8: Pointers , Chapter 10: Stack and Queues

PRE-BOARD - Whole Syllabus

**CLASS XII (ECONOMICS)
SESSION (2017-18)**

General Objectives:

- (a) Understanding of some basic economic concepts and development of economic reasoning which the learners can apply in their day to day life as citizens, workers and consumers.**
- (b) Realisation of learner's role in nation building and sensitivity to the economic issues that the nation is facing today.**
- (c) Development of understanding that there can be more than one view on any economic issue and necessary skills to argue logically with reasoning.**
- (d) Equipment with basic tools of economic and statistics to analyse economic issues. This is pertinent even for those who may not pursue this course beyond senior secondary level.**

Text book for the session (2017-2018)

Microeconomics & Macroeconomics

Author: Sandeep Garg (Dhanpat Rai Publications)

References:

A-ONE

I.D.Mangla

Publisher: Gyan sagar publications

MONTH WISE SYLLABUS BREAKUP

MARCH

Unit-1 Introduction

Meaning of Microeconomics and Macroeconomics ; positive and normative economics.

What is an economy? Central problems of an economy: What, how and for whom to produce; concepts of production possibility frontier and opportunity cost.

Unit-2 Consumer equilibrium & Demand

Consumer's equilibrium –meaning of utility, marginal utility, law of diminishing marginal utility.

APRIL

Unit-2 Consumer equilibrium & Demand

Consumer's equilibrium - conditions of consumer's equilibrium using marginal utility analysis.

Indifference curve analysis of consumer's equilibrium-the consumer's budget (budget set and budget line), preferences of the consumer (indifference curve, indifference map) and conditions of consumer's equilibrium. Demand, market demand, determinants of demand Demand schedule, demand curve, movement along and shifts in the demand curve; price elasticity of demand-factors affecting price elasticity of demand; measurement of price elasticity of demand- percentage-change method

MAY

Unit-3 Producer Behaviour and supply

Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movements along and shifts in the supply curve; price elasticity of supply ;measurement of price elasticity of supply -percentage-change method

Unit-4 Determination of equilibrium price, shifts in demand & supply

Simple applications of tools of Demand and Supply: Price ceiling, price floor

JULY

Unit-3 Producer Behaviour and supply

Production function: short run and long run Total Product, Average Product and Marginal Product. Returns to a factor.

Cost and Revenue; Short run costs-total cost, total fixed cost, total variable cost; Average fixed cost, average variable cost and marginal cost-meaning and their relationship.

Revenue-total, average and marginal revenue-meaning and their relationships Producer's Equilibrium-meaning and its conditions in terms of marginal revenue-marginal cost.

AUGUST

Unit-4 Forms of market

Perfect Competition-Features; Determination of market equilibrium and effects of shifts in demand and supply.

Other market forms –monopoly, monopolistic competition, oligopoly-their meaning and features.

Unit-5 National Income and Related Aggregates

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

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

Aggregates related to National Income: Gross National Product(GNP), Net National Product(NNP),Gross and Net Domestic Product(GDP and NDP)- at market price and factor cost; Real and Nominal GDP,GDP and Welfare.

SEPTEMBER

Unit-6 Money & Banking

Money- Its meaning and Supply of money-Currency held by the public and net demand deposits held by the commercial banks.

Money creation by commercial banking system.

Central Bank and its functions (example of the Reserve Bank of India): Bank of Issue , Government Bank, Banker's Bank, Controller of Credit through Bank rate, CRR, SLR, Repo and Reverse Repo, Open Market Operations, Margin Requirement.

OCTOBER

Unit-7 Determination of Income & Employment

Aggregate Demand and its components

Propensity to consume and propensity to save (average and marginal)

Short run equilibrium output; Investment multiplier and its mechanism.

Meaning of full employment and involuntary unemployment

Problem of Excess Demand and Deficient Demand; measures to correct them- change in government spending, taxes and money supply.

Project work

NOVEMBER

Unit-8 Government Budget & the economy

Government budget-meaning, objectives and components

Classification of receipts-revenue receipts and capital receipts, classification of expenditure-revenue expenditure and capital expenditure.

Measures of government deficit-revenue deficit, fiscal deficit, primary deficit: their meaning

Unit-9 Balance of payment & foreign exchange

Balance of payment account-meaning and components, balance of payment deficit-meaning
Foreign exchange rate-meaning of fixed and flexible exchange rates and managed floating
Determination of exchange rate in a free market.

TEST-WISE SYLLABUS BREAK-UP

MONDAY TEST 1

Unit-1: Introduction

Unit-2: Consumer's behavior - Consumer's equilibrium –meaning of utility, marginal utility, law of diminishing marginal utility.

Consumer's equilibrium - conditions of consumer's equilibrium using marginal utility analysis.

COMPREHENSIVE EXAM

Unit-1: Introduction

Unit-2: Consumer equilibrium & Demand

Unit-3: Producer Behaviour and supply

Theory of supply and elasticity of supply

Unit-4: Determination of equilibrium price , shifts in demand & supply

MONDAY TEST 2

Unit-3 Producer behavior and supply

- ✓ **Production**
- ✓ **Cost**
- ✓ **Revenue**

MONDAY TEST 3

Unit-7: Determination of Income & Employment

MID TERM

Unit-1: Introduction

Unit-2: Consumer equilibrium & Demand

Unit-3: Producer Behaviour and supply

Theory of supply(Including elasticity of supply)

- ✓ **Production**
- ✓ **Cost**
- ✓ **Revenue**

Unit-4: Determination of equilibrium price , shifts in demand & supply

Macro economics:

Unit-5: National Income and Related Aggregates

PRE- BOARD 1

Whole syllabus

I. Project (Option One) : What's Going Around Us

The purpose of this project is to –Enable the student to understand the scope and repercussions of various Economic events and happenings taking place around the country and the world. (eg. The Dynamics of the Goods & Services Tax and likely impacts on the Indian Economy or the Economics behind the Demonetisation of 500 and 1000 Rupee Notes and the Short Run and Long Run impact on the Indian Economy or The impact of BREXIT from the European Union etc.)

- Provide an opportunity to the learner to develop economic reasoning and acquire analytical skills to observe and understand the economic events.

- Make students aware about the different economic developments taking place in the country and across the world.
- Develop the understanding that there can be more than one view on any economic issue and to develop the skill to argue logically with reasoning.
- Compare the efficacy of economic policies and their respective implementations in real world situations and analyse the impact of Economic Policies on the lives of common people.
- Provide an opportunity to the learner to explore various economic issues both from his/her day to day life and also issues which are of broader perspective.

Scope of the project: Student may work upon the following lines:

- Introduction
- Details of the topic
- Pros and Cons of the economic event/happening
- Major criticism related to the topic (if any)
- Students' own views/perception/ opinion and learning from the work
- Any other valid idea as per the perceived notion of the student who is actually working and presenting the Project-Work.

Mode of presentation and submission of the Project: At the end of the stipulated term, each student will present the work in the Project File (with viva voce) to the external examiner.

Marking Scheme: Marks are suggested to be given as –

S. No.	Heading	Marks Allotted
1.	Relevance of the topic	3
2.	Knowledge Content/Research Work	6
3.	Presentation Technique	3
4.	Viva	8
	Total	20 Marks

The external examiner should value the efforts of the students on the criteria suggested.

Suggestive List

1. Micro and small scale industries
2. Food supply channel in India
3. Contemporary employment situation in India
4. Disinvestment policy
5. Health expenditure (of any state)

6. Goods and Services Tax Act
7. Inclusive growth strategy
8. Human Development Index
9. Self help groups
10. Any other topic

II. Project (Option Two): Analyse any concept from the syllabus

The purpose of this project is to –

- Develop interest of the students in the concepts of Economic theory and application of the concept to the real life situations.
- Provide opportunity to the learners to develop economic reasoning *vis-a-vis* to the given concept from the syllabus.
- Enable the students to understand abstract ideas, exercise the power of thinking and to develop his/her own perception
- To develop the understanding that there can be more than one view on any economic issue and to develop the skill to argue logically with reasoning
- Compare the efficacy of economic policies in real world situations
- To expose the student to the rigour of the discipline of economics in a systematic way
- Impact of Economic Theory/ Principles and concepts on the lives of common people

Scope of the project:

Following essentials are required to be fulfilled in the project.

Explanation of the concept:

- Meaning and Definition
- Application of the concept
- Diagrammatic Explanation (if any)
- Numerical Explanation related to the concept etc. (if any)
- Students’ own views/perception/ opinion and learning from the topic..

Mode of presentation and submission of the Project:

At the end of the stipulated term, each student(s) will present their work in the Project File (with viva voce) to the external examiner.

Marking Scheme:

Marks are suggested to be given as –

S. No.	Heading	Marks Allotted
1.	Relevance of the topic	3
2.	Knowledge Content/Research Work	6

3.	Presentation Technique	3
4.	Viva	8
	Total	20 Marks

The external examiner should value the efforts of the students on the criteria suggested.

Suggested List

- Price Determination
- Opportunity Cost
- Demand and its determinants
- Production – Returns to a Factor
- Monopoly
- Monopolistic Competition
- Money Multiplier
- Government Budget & its Components
- Exchange Rate Systems
- Balance of payments
- Price Discrimination
- Production Possibility Curve
- Supply and its determinants
- Cost function and Cost Curves
- Oligopoly
- Credit Creation
- Central Bank and its functions
- Budget deficit
- Foreign Exchange Markets
- Any other topic

**BUSINESS STUDIES
CLASS –XII (2017 -2018)**

OBJECTIVES

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

TEXT BOOKS

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

REFERENCE BOOKS

- Business Studies - A textbook for Class XII
Author - SubhashDey (Geeta Publishing House)

MONTH-WISE SYLLABUS BREAK-UP

MARCH

Marketing Management

Marketing - Concept

Marketing management- Concept

Marketing management philosophies

Marketing Mix - Concept & elements.

Product-Concept, branding, labelling and packaging

Price- Factors determining price.

Physical Distribution- concept, channels of distribution: types, choice of channels

APRIL

MARKETING MANAGEMENT

Promotion- Concept and elements; advertising-concept, role, objections against advertising, personal selling-concept and qualities of a good salesman, sales promotion- concept and techniques, public relations- concept and role.

Marketing Functions

Consumer Protection

Concept and importance of consumer protection

Consumer Protection Act 1986 - Meaning of consumer and consumer protection, Rights and responsibilities of consumers . Who can file a complaint and against whom?

Redressal machinery

Remedies available

Consumer awareness-Role of consumer organisations and NGOs

Financial Management

Concept and objective of Financial Management

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

Financial Planning- concept and importance

Capital Structure – Concept and factors

Fixed and Working Capital - Concept and factors affecting their requirements

Project work.

MAY

PROJECT

Business Environment

Business Environment- concept and importance

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

Impact of Government policy changes on business with special reference to liberalization, privatization and globalization in India

Nature and Significance of Management

Management- concept, objectives and importance

Levels of Management

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

JULY

Nature and Significance of Management

Management as Science, Art and Profession

Coordination- concept and importance.

Principles of Management

Principles of Management- concept

Fayol's principles of management

Taylor's Scientific management- principles and techniques.

Project

Financial Markets

Financial Markets: Concept and types

Money market and its instruments

Capital market and its types (primary and secondary)

AUGUST

Financial Markets(cont.)

Stock Exchange- Functions and trading procedure,
Securities and Exchange Board of India (SEBI)- objectives and functions

- **Planning**

Concept, importance and limitations, planning process

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

Organising

Concept and importance

Organising Process

Structure of organization- functional and divisional, formal and informal organization.

SEPTEMBER

Organising(cont.)

Delegation: concept, elements and importance.

Decentralisation: concept and importance.

OCTOBER

Staffing

Concept and importance of staffing

Staffing as a part of Human Resource Management, concept of HRM

Staffing process

Recruitment- sources, Selection –process

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

- **Directing**

- Concept and elements of Directing

Supervision- concept, functions of a supervisor

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

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

NOVEMBER

Directing(cont.)

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

Importance of Directing

- **Controlling**

Concept and importance

Relationship between planning and controlling

Steps in the process of control

DECEMBER

Revision

JANUARY

Revision

FEBRUARY

Revision

TEST-WISE SYLLABUS BREAK-UP

MONDAY TEST 1

Marketing (except Promotion Mix)

COMPREHENSIVE TEST

Business Environment

Financial Management

Marketing

Consumer Protection Act

MID TERMS

Nature and Significance Of Management

Principles of Management

Business Environment Planning

Financial Management

Financial Markets

Marketing

MONDAY TEST 2

Principles Of Management

Financial Markets

MONDAY TEST 3

Organising

Staffing

PRE- BOARD

Full syllabus

CLASS XII SESSION 2017-18

SUBJECT CODE -- 055

ACCOUNTANCY

Objectives:

- To familiarize the students with accounting as an information system;
- To acquaint the students with basic concepts of accounting and accounting standards;
- To develop the skills of using accounting equation in processing business transactions;
- To develop an understanding about recording of business transactions and preparation of financial statements;
- To enable the students with accounting for reconstitution and dissolution of partnership firms;
- To enable the students to understand and analyse the financial statements; and
- To familiarize students with the fundamentals of computerized system of accounting.

TEXTBOOK

T S GREWAL'S

Part A: Accounting for Partnership Firms and Companies

Part B: Financial Statement Analysis

SULTAN CHAND EDUCATIONAL PUBLISHERS

MONTH-WISE SYLLABUS BREAK-UP

MARCH

Part A: Accounting for Partnership Firms and Companies

Unit 1: Accounting for Partnership Firms

Partnership: features, Partnership deed.

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

APRIL

Unit 1: Accounting for Partnership Firms

Past adjustments (relating to interest on capital, interest on drawing, salary and profit sharing ratio), guarantee of profits.

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

Change in the Profit Sharing Ratio among the existing partners - sacrificing ratio, gaining ratio.

Accounting for revaluation of assets and re-assessment of liabilities and distribution of reserves and accumulated profits.

Admission of a partner - effect of admission of a partner on change in the profit sharing ratio, treatment of goodwill (as per AS 26), treatment for revaluation of assets and re - assessment of liabilities.

MAY

Unit 1: Accounting for Partnership Firms

Admission of a partner

Treatment of reserves and accumulated profits, adjustment of capital accounts and preparation of balance sheet.

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

PROJECT WORK

JULY

Unit 1: Accounting for Partnership Firms

Dissolution of partnership firms: types of dissolution of firm. Settlement of accounts - preparation of realization account, and other related accounts (excluding piecemeal distribution, sale to a company and insolvency of partner(s)).

Note: (i) If value of asset is not given, its realised value should be taken as nil.

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

Unit -2 Accounting for Companies-Accounting for Share Capital

Share and share capital: nature and types.

Accounting for share capital: issue and allotment of equity shares, private placement of shares, Public subscription of shares - over subscription and under subscription of shares; Issue at par and at premium and at discount, calls in advance and arrears (excluding interest), issue of shares for consideration other than cash.

Accounting treatment of forfeiture and re-issue of shares.

Disclosure of share capital in company's Balance Sheet.

AUGUST

Unit -2 Accounting for Companies - Accounting for Share Capital & Debentures

Disclosure of share capital in company's Balance Sheet

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

Redemption of debentures: Lump sum, draw of lots and purchase in the open market (excluding ex-interest and cum-interest).

SEPTEMBER

Part B: Financial Statement Analysis

Cash Flow Statement - Meaning, objectives and preparation (as per AS 3 (Revised) (Indirect Method only)

Scope: Adjustments relating to depreciation and amortisation, profit or loss on sale of assets including investments, dividend (both final and interim) and tax.

Note: Bank overdraft and cash credit to be treated as a component of cash and cash equivalent.

OCTOBER

Part B: Financial Statement Analysis

Cash Flow Statement - Meaning, objectives and preparation (as per AS 3 (Revised) (Indirect Method only)

Scope: Adjustments relating to depreciation and amortisation, profit or loss on sale of assets including investments, dividend (both final and interim) and tax.

Note: Bank overdraft and cash credit to be treated as a component of cash and cash equivalent.

Accounting Ratios: Objectives, classification and computation.

Liquidity Ratios: Current ratio and Quick ratio.

Solvency Ratios: Debt to Equity Ratio, Total Asset to Debt Ratio, Proprietary Ratio and Interest Coverage Ratio.

Activity Ratios: Stock Turnover Ratio, Debtors Turnover Ratio, Creditors Turnover Ratio and Working Capital Turnover Ratio.

Profitability Ratios: Gross Profit Ratio, Operating Ratio, Operating Profit Ratio, Net Profit Ratio and Return on Investment.

NOVEMBER

Part B: Financial Statement Analysis

Financial statements of a company: Statement of Profit and Loss and Balance Sheet in the prescribed form with major headings and sub headings (as per Schedule VI to the Companies Act, 1956).

Scope: Exceptional Items, Extraordinary Items and Profit (loss) from Discontinued Operations are excluded.

Financial Statement Analysis: Objectives and limitations.

Tools for Financial Statement Analysis: Comparative statements, common size statements, cash flow analysis, ratio analysis.

PROJECT WORK

DECEMBER – REVISION

JANUARY – REVISION

FEBRUARY - REVISION

TEST-WISE SYLLABUS BREAK-UP

CLASS XII SESSION 2017-18

ACCOUNTANCY

MONDAY TEST 1

Part A: Accounting for Partnership Firms and Companies

Unit 1: Accounting for Partnership Firms (Fundamentals)

COMPREHENSIVE EXAM

Part A: Accounting for Partnership Firms and Companies

Unit 1: Accounting for Partnership Firms

- Fundamentals
- Goodwill

- Change in the Profit Sharing Ratio among the existing partners
- Admission of a partner
- Retirement and death of a partner

MONDAY TEST 2

Part A: Accounting for Partnership Firms and Companies

Unit 1: Accounting for Partnership Firms

- Dissolution of partnership firms

MID TERM

Part A: Accounting for Partnership Firms and Companies (Issue of Shares)

MONDAY TEST 3

Part B: Financial Statement Analysis

- Accounting Ratios
- Cash Flow Statement

PRE-BOARDS II (DECEMBER)

FULL SYLLABUS

**MONTH-WISE SYLLABUS BREAK-UP
CLASS XII (Informatics Practices)
CODE (065)
SESSION (2017-18)**

Learning Objectives:

- To gain working knowledge of a computer system including peripherals
- To understand the application development process.
- To gain programming skills in front-end development
- To gain skills in back-end development: Relational Database Creation and Management.

Competencies Developed:

- Sound knowledge of computer system
- Familiarity with application development process using simple IDEs
- Ability to use, develop and debug programs independently.
- Ability to store and retrieve data using an RDBMS.

Text book for the session (2017-2018)

Informatics Practices

Publisher: CBSE

Reference Book:

Together with Informatics Practices

Publisher : Rachna Sagar

CLASS XII (Informatics Practices) - SESSION (2017-18)

MARCH

Unit-1: Computer Networking

- Networking – a brief overview
- Advantages of Networking
- Transmission Media and its types
- Network Devices
- Network Topologies and Protocols
- Types of Networks
- IP, MAC, DNS
- Network Security

APRIL**Unit-2: Open Source Concepts**

- NRCFOSS
- Examples of FLOSS/FOSS
- OSS Security
- Common open standards
- Indian Language Computing
- Types of Fonts
- Entering Indian language text

Unit-3: GUI – Programming Review

- Swing controls and its properties
- Variables, Data Types and Operators
- Selection Constructs
- Looping control
- Menu swing control

MAY**Unit-4: Basics of Object Oriented Programming**

- Introduction
- Classes and objects
- Inheritance, Polymorphism, Abstraction, Encapsulation
- Applications

Unit-5 Advanced Programming Concepts

- Math Class and methods
- String Methods

JULY**Unit-6: Database Connectivity**

- Introduction to GUI Application
- Database Connectivity
- Insertion, deletion, updation, searching

AUGUST**Unit-6: Database Connectivity**

- JDBC
- Project work implementing JDBC

Unit-7: Web Applications

- History of WWW and URL
- HTML Elements tags and attributes
- XML vs HTML

SEPTEMBER

Unit-8: MySQL – Revision Tour

- Database Concepts
- Working with MySQL
- Functions in MySQL

Unit-9: More on Databases and SQL

- Aggregate Functions
- Group BY
- Joins

OCTOBER

Unit-10 : Advanced RDBMS concepts

- Define a Transaction
- Perform basic transactions
- Commit, Rollback and Savepoint

NOVEMBER

Unit 11 : IT Applications

- **Front – End Interface**
- **How to make Front-End user friendly**
- **Back-End Database**
- **Examples of IT Applications**

DECEMBER - Revision

JANUARY- Revision

FEBRUARY- Revision

TEST-WISE SYLLABUS BREAK-UP CLASS XII (Informatics Practices) SUBJECT CODE-065 - (2017-2018)

MONDAY TEST 1

Unit-1: Computer Networking

Unit-2: Open Source Concepts

COMPREHENSIVE EXAM

Unit-1: Computer Networking

Unit-2: Open Source Concepts

Unit-3: GUI – Programming Review

Unit-4: Basics of Object Oriented Programming

Unit-5 Advanced Programming Concepts

MONDAY TEST 2

Unit-5 Advanced Programming Concepts , Java - Control Structures

MID TERM EXAMINATION

Unit-1: Computer Networking

Unit-2: Open Source Concepts

Unit-3: GUI – Programming Review

Unit-4: Basics of Object Oriented Programming

Unit-5 Advanced Programming Concepts
Unit-8: MySQL – Revision Tour
Unit-9: More on Databases and SQL

MONDAY TEST 3

Unit-8: MySQL – Revision Tour
Unit-9: More on Databases and SQL
Unit-10 : Advanced RDBMS concepts

PRE- BOARD - Full syllabus