

Subject : Biology

CLASS : XII

Text Book : Biology Class - XII (N.C.E.R.T)

Unit I March 14 to April 19

14 + 11 = 25 working days

CHAP 1 : Reproduction in organisms.

CHAP 2 : Sexual reproduction in flowering plants.
Pollination and fertilization in flowering plants.
Development of seeds and fruits.

CHAP 3 : Human reproduction : Reproductive system in male and female, menstrual cycle. Production of gametes, fertilization. Implantation, embryo development, pregnancy and parturition.

CHAP 4 : Reproductive health : Birth control, contraception and sexually transmitted diseases.

Practicals :

1. Study of gamete development – T.S. of testis and T.S. of ovaries.
2. Study of Blastula
3. Study of mitosis in onion root tip and meiosis in grasshopper testis
4. Exercise on controlled Pollination
5. To study growth of pollen tube.
7. To examine the presence of particulate matter in air.

Weekly Test I : 18.04.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

CHAP 7 : Principles of inheritance and variations :
Mendelian inheritance
Chromosome theory of inheritance, deviations from Mendelian ratio (gene interaction - incomplete dominance, co-dominance, complementary genes, multiple alleles, Sex determination in human beings : XX, XY.
Linkage and crossing over
Inheritance pattern of haemophilia and blood groups in human beings.

CHAP 8 : Molecular basis of inheritance :
DNA : replication, transcription, translation, Gene expression and regulation.
Lacoperon, Genome and Human and rice Genome Project. DNA Fingerprinting

CHAP 6 : Environmental issues.

CHAP 5 : Bio-diversity and conservation : Centres of diversity and conservation of biodiversity. National parks and sanctuaries, Biosphere reserve, Ramsar sites.

Practicals :

1. Study of Prepared Pedigree charts of Genetic trait
2. Study of Adaptations of plants and animals in Xerophytic conditions and Aquatic conditions
3. Effect of salivary amylase on starch. (temperature and pH)

Weekly Test II : 23.05.2016

Unit III July 13 to August 17

13 + 12 = 25 working days

CHAP 9 : Evolution : Theories and evidences.

CHAP 11 : Human Health and Diseases : Basic concepts of immunology, vaccines, Pathogens, Parasites.

CHAP 13 : Biotechnology : Principles and Processes.

Recombinant DNA technology.

CHAP 14 : Biotechnology and its applications :

Applications in Health, Agriculture and Industry.

GM organisms; biosafety issues.

Insulin and Bt Cotton, Stem cell technology, Gene therapy.

Practicals :

1. Study of common disease causing organisms.

2. Analysis of seed sample to study Mendelian Ratio.

3. Study of physical properties, chemical properties and pH of soils.

4. Study of water holding capacity of soils.

5. Extraction of DNA from the given sample.

6. Study of Quadrat method.

Weekly Test III : 22.08.2016

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

CHAP 10 : Strategies and Enhancement in Food production : Plant breeding, tissue culture, food production. Animal husbandary.

CHAP 12 : Microbes in human welfare :

Microbes in household food processing. Industrial production, sewage treatment and energy generation.

CHAP 15 : Ecosystem : Components, types and energy flow. Ecological services Carbon fixation, pollination, seed dispersal, oxygen release.

CHAP 16 : Organisms and populations : Species, population and Community.

CLASS XII - THEORY

One Paper (Theory)

70 Marks

Unitwise Weightage

Unit	Marks
1. Sexual Reproduction	14
2. Genetics and evolution	18
3. Biology and human welfare	14
4. Biotechnology and its applications	10
5. Ecology and environment.	14

PRACTICAL

Time Allowed : 3 hours

30 Marks

Evaluation Scheme for Examination	Distribution Marks
1. One major experiment	5
2. One minor experiment	4
3. Slide Preparation	5
4. Spotting	7
5. Practical Record - Viva voce	4
6. Project Record - Viva Voce	5
Total	30

Subject : Physics

Text Book : Physics Class - XII (N.C.E.R.T)

Unit I March 14 to April 19

14 + 11 = 25 working days

ELECTROSTATICS

Electric Charges; conservation of charge, coulomb's law-force between two point charges, forces between multiple electric charges; superposition principle and continuous charges 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 a uniform electric field.

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

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.

CURRENT ELECTRICITY

Electric current, flow of electric charges in a metallic conductor, drift velocity and 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 resistor, 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.

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

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

Weekly Test :11.04.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

MAGNETIC FIELD

Concept of magnetic field, Oersted's experiment.

Force on a moving charge in uniform magnetic and electric field, Cyclotron. Force on current - carrying conductor in a uniform magnetic field. Torque experienced by a current loop in uniform magnetic field.

MAGNETIC EFFECT OF CURRENT AND MAGNETISM

Biot-Savart's law and its application to current carrying circular loop.

Ampere's law and its applications to infinitely long straight wire, straight and toroidal solenoids.

Forces between two parallel current - carrying conductors - definition of ampere; moving coil galvanometer - its current sensitivity and conversion to ammeter and voltmeter.

Current loop as a magnetic dipole and its magnetic dipole moment; Magnetic dipole moment of a revolving electron; Magnetic field intensity due to magnetic dipole (bar magnet) along its axis and perpendicular to the 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 the factors affecting their strength, Permanent magnets.

ELECTROMAGNETIC INDUCTION

Electromagnetic induction, Faraday's laws, Induced emf and current, Lenz's law, Eddy currents, self and mutual inductance.

ALTERNATING CURRENTS

Alternating current, 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.

Weekly Test 16.05.2016

Mid Semester Examination July 01, 2015 to July 11, 2015

Unit III July 13 to August 17

13 + 12 = 25 working days

ELECTROMAGNETIC WAVES

Need for displacement current.

Electromagnetic waves and their characteristics (qualitative ideas only); Transverse nature of electromagnetic waves.

Electromagnetic spectrum (Radio waves-microwaves, infra-red, optical, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.

OPTICS

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. Refraction and dispersion of light through a prism.

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

Optical instruments : Microscopes and astronomical telescope (reflecting and refracting) and their magnifying powers.

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 Huygens' principle. Interference, Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light; Diffraction - diffraction due to single slit, width of central maximum. Resolving power of microscope and astronomical telescope. Polarisation, Plane polarised light, Brewster's law; use of plane polarised light and polaroids.

Weekly Test : 16.08.2016

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

DUAL NATURE OF MATTER AND RADIATIONS

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, Davison and Germer experiment.

ATOMS

Alpha -particle scattering experiment, Rutherford's model of atom; Bohr model; energy levels, hydrogen spectrum.

ATOMIC NUCLEUS

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 and fusion.

ELECTRONIC DEVICES

Energy bands in solids, conductor, insulators and semiconductors; 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), logic gates (OR, AND, NOT, NAND and NOR).

COMMUNICATION SYSTEM

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 Basic ideas about Internet, mobile telephony and global positioning system (GPS)

Weekly Test : 19.10.2015

THEORY

Time Allowed : 3 hours

70 Marks

Unitwise Weightage

Unit	Marks
1. Electrostatics]	15
2. Current Electricity]	
3. Magnetic Effect of Current and Magnetism]	16
4. Electromagnetic Induction and Alternating Currents]	
5. Electromagnetic Waves]	17
6. Optics]	
7. Dual Nature of Matter]	10
8. Atoms and Nuclei]	
9. Electronic Devices]	12
10. Communication Systems]	

PRACTICAL

Time Allowed : 3 hours

30 Marks

Evaluation Scheme for Examination	Distribution Marks
1. Two experiments (one from each section)	8+8=16
2. Practical record (experiments and activities)	6
3. Demonstration / Project	3
4. Viva	5
Total	30

Subject : Chemistry

Text Book : Chemistry Class XII (NCERT)

Unit I March 14 to April 19

14 + 11 = 25 working days

1. 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, semiconductor, insulation, n & p type semiconductor.

2. Solutions

Types of solutions, expressions of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties - relative lowering of vapour pressure, elevation of B.P., depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Vant Hoff factor.

3. Electrochemistry

Redox reactions, conductance in electrolytic solutions, specific and molar conductivity variations of conductivity with concentration, Kohlrausch's Law, electrolysis and laws 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, fuel cells; corrosion. Relation between Gibbs free energy & EMF.

4. Chemical Kinetics

Rate of a reaction (average and instantaneous), factors affecting rates 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.

Practical

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).

Weekly Test I : 25.04.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

5. Haloalkanes and Haloarenes

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

Haloarenes : Nature of C-X bond, substitution reactions (directive influence of halogen for monosubstituted compounds only)

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

6. 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, some important compounds - 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.

7. Aldehydes, Ketones and Carboxylic Acids

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

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

8. 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 context.

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

Qualitative analysis - Practical

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

Cations - Pb^{2+} , Cu^{2+} , As^{3+} , Al^{3+} , Fe^{3+} , Mn^{2+} , Zn^{2+} , Co^{2+} , Ni^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+} , Mg^{2+} , NH_4^+

Anions - CO_3^{2-} , S^{2-} , SO_3^{2-} , SO_4^{2-} , NO_2^- , NO_3^- , Cl^- , Br^- , I^- , PO_4^{3-} , $\text{C}_2\text{O}_4^{2-}$, CH_3COO^-

(Note : Insoluble salts excluded)

Weekly Test II : 30.05.2016

Unit III July 13 to August 17

13 + 12 = 25 working days

9. 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); Phosphorous-allotropic forms; compounds of phosphorous; preparation and properties of phosphine, halides (PCl_3 , PCl_5) and oxoacids (elementary idea only)

Group 16 elements : General introduction, electronic configuration, occurrence, oxidation states, occurrence, trends in physical and chemical properties; dioxygen - preparation, properties and uses; simple 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.

10. 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 $\text{K}_2\text{Cr}_2\text{O}_7$ and KMnO_4 .

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

Actinoids - Electronic configuration, oxidation states comparison with lanthanoids.

11. Coordination Compounds

Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds, bonding werner. VBT. CFT structure & stereo-isomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological systems).

12. 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.

13. Surface Chemistry

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

PRACTICAL

Test for the functional groups present in organic compounds :

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

Study of carbohydrates, fats and proteins in pure form and detection of their presence in given food stuffs.

Surface Chemistry :

- Preparation of one lyophilic and one lyophobic sol.
Lyophilic sol - starch, egg albumin and gum
Lyophobic sol - aluminium hydroxide, ferric hydroxide, arsenious sulphide.
- Study of the role of emulsifying agent in stabilizing the emulsions of different oils.

Weekly Test III : 29.08.2016

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

14. Biomolecules

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

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

Vitamins - Classification and functions.

Nucleic Acids : DNA & RNA

15. 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 & non biodegradable.

16. 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

Chromatography

- Separation of pigments from extracts of leaves and flowers by paper chromatography and determination of R_f values.

- b. Separation of constituents present in an inorganic mixture containing two cations only (constituents having wide difference in R_f values to be provided).

Preparation of Inorganic Compounds

- a. Preparation of double salt of ferrous ammonium sulphate or potash alum.
b. Preparation of potassium ferric oxalate.

CLASS XII - THEORY

One Paper (Theory)

Time : 3 Hours

70 Marks

No.	Title	
1.	Solid State	} 23
2.	Solutions	
3.	Electrochemistry	
4.	Chemical Kinetics	
5.	Surface Chemistry	
6.	General principles and processes of Isolation of Elements.	} 19
7.	P-Block Elements	
8.	d- and f-Block elements	
9.	Coordination Compounds	
10.	Haloalkanes and Haloarenes	} 28
11.	Alcohols, Phenols and Ethers	
12.	Aldehydes, Ketones and Carboxylic acids	
13.	Organic Compounds containing Nitrogen	
14.	Biomolecules	
15.	Polymers ³	
16.	Chemistry In Everyday Life.	
Total		70

PRACTICAL

Time Allowed : 3 hours

30 Marks

Evaluation Scheme for Examination	Distribution Marks
1. Volumetric Analysis	10
2. Salt Analysis	8
3. Content Based Experiments	6
4. Class Record, Investigating Project, Viva	6
Total	30

Subject : Mathematics

Text Book : Mathematics for Class XII (NCERT)

Unit I March 14 to April 19

14 + 11 = 25 working days

1. 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 the uniqueness of inverse, if it exists. (Here all matrices will have real entries)

2. Determinants

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

3. Relations and Functions

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

4. Inverse Trigonometric Functions

Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions.

Weekly Test I : 04.04.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

1. Continuity and Differentiability

Continuity and differentiability, derivative of composite functions, chain rule, derivatives of inverse trigonometric functions, derivative of implicit function. Concept of exponential and logarithmic functions and their derivative. 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 interpretations.

2. Applications of Derivatives

Applications of derivatives : rate of change, increasing / decreasing functions, tangents and normal, 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).

Weekly Test II : 09.05.2016

Unit III July 13 to August 17

13 + 12 = 25 working days

1. Integrals

Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, only simple integrals of type

$$\int \frac{dx}{x^2 \pm a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{\sqrt{a^2 - x^2}}, \int \frac{dx}{\sqrt{ax^2 + bx^2 + c}}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}$$

$$\int \frac{(px + q)}{ax^2 + bx + c} dx, \int \frac{(px + q)}{\sqrt{ax^2 + bx + c}} dx, \int \sqrt{a^2 \pm x^2} \text{ and } \int \sqrt{x^2 - a^2} dx$$

to be evaluated.

Definite integrals as a limit of a sum, Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.

2. Applications of the Integrals

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

3. 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 zero degree. Solutions of linear differential equation of the type :

$$\frac{dy}{dx} = p(x) y = q(x), \text{ where } p(x) \text{ and } q(x) \text{ are functions of } x.$$

Weekly Test III : 08.08.2016

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

1. Probability

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

2. Vectors

Vectors and scalars, magnitude and direction of a vector. Direction cosines / ratios of vectors. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of 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 segment in a given ratio. Scalar (dot) product of vectors, projection of a vector on a line. Vector (cross) product of vectors.

3. Three-dimensional Geometry

Direction cosines / 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.

4. Linear Programming

Introduction, definition of 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).

Weekly Test IV : 12.10.2015

One Paper

100 Marks

Unitwise Weightage

Unit	Marks
1. Relations and Functions	10
2. Algebra (Matrices and Determinants)	13
3. Calculus	44
4. Vectors and Three-Dimensional Geometry	17
5. Linear Programming	06
6. Probability	10

Subject : Accountancy

Text Book : Accounting Book - By N.C.E.R.T.
Accounting By T.S. Grewal

Unit I March 14 to April 19

14 + 11 = 25 working days

Accounting for Partnership Firms - Fundamentals

- a. Partnership Features Partnership Deed, Provisions of Indian Partnership Act 1932 in the absence of partnership deed. Fixed vs Fluctuating Capital accounts, Preparation of profit and loss appropriation account-division of Profit among partners, Guarantee of Profits, past adjustments (relating to interest on capital, interest on drawing, salary and profit sharing ratio. Interest on partners loan to be treated as charge against profits.
- b. Goodwill : Nature, Factors affecting and methods of valuation : Average profit, Super profit and Capitalisation methods.

Accounting for partnership firms – Reconstitution and Dissolution.

Changes in Profit Sharing Ratio among the existing partners

- a. Sacrificing Ratio and Gaining Ratio.
- b. Accounting for Revaluation of Assets and reassessment of Liabilities and treatment of Reserves and Accumulated Profits. Preparation of revaluation account and balance sheet.

Admission of a Partner :

- a. Effect of Admission of Partner on Change in Profit Sharing Ratio, Treatment of Goodwill (as per AS26), Treatment for Revaluation of Assets and reassessment of Liabilities. Treatment of reserves and Accumulated profits, Adjustment of Capital accounts and preparation of balance sheet.

Weekly Test : 25.04.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

Continuation of Admission of a partner.

- a. **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 reassessment of Liabilities. Adjustment of accumulated profits and reserves. Adjustment of capital accounts and preparation of balance sheet. Preparation of loan account of retiring partner. Calculation of deceased partner share of profit till the date of death, preparation of deceased partner's capital account, executor's account and preparation of balance sheet.
- b. **Dissolution of Partnership :** Types of dissolution of firm settlement of Accounts - Preparation of realisation account, and other related accounts capital accounts of partners and cash / bank account (excluding pre-meal distribution, sale to a company and insolvency of partner's).

- Note:** (i) The realised value of each asset must be given at the time of dissolution.
(ii) In case, the realisation expenses are borne by a partner, clear indication should be given regarding the payment thereof.

Accounting for Company Accounts

- a. Share and Share Capital : Nature and Types.
- b. Accounting for Share Capital : Issue and Allotment of Equity Shares. Private Placement of shares, Employee stock option Plan (ESOP) Public Subscription of shares-over subscription and under subscription, issue at par, premium and, Calls in advance, Calls in arrears, excluding interest Issue of Shares for consideration other than cash.

- c. Accounting treatment of forfeiture and re-issue of Shares.
- d. Disclosure of Share Capital in company's Balance Sheet.

Weekly Test : 30.05.2016

Unit III July 13 to August 17

13 + 12 = 25 working days

Continuation of Shares

Debentures : Issue of debentures at par, at premium and at discount, Issue of Debentures for consideration other than cash, Issue of debentures as collateral security, Interest on debentures. Issue of debentures with firms of redemption.

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

Note : Related sections of the Indian Companies Act, 2013 will apply.

Analysis of Financial Statement

- a. Financial Statements of a Company : preparation of simple balance sheet of a company in the prescribed form with major headings and subheadings (as per schedule VI to the companies Act 1956)
- b. Financial Statement Analysis : Objectives and limitations.
- c. Tools for Financial Statement Analysis : Comparative Statements, Common Size Statements. Cash Flow analysis, ratio analysis.
- d. Accounting Ratios : Objectives and classification.
Liquidity Ratios : Current Ratio, Liquid Ratio.
Solvency Ratio : Debt equity ratio, Proprietary Ratio. Total Asset to Debt Ratio, Interest coverage Ratio.

Weekly Test- III : 29.08.2016

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Activity Ratios : Inventory Turnover Ratio, Debtors Turnover Ratio, Working Capital Turnover Ratio, Creditors Turnover Ratio.

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

Cash Flow Statement

- a. Cash Flow Statement : Meaning, Objectives and Preparation as per AS-3 revised.(Indirect Method)

Project Work in Accountancy

One Paper

80 Marks

Unitwise Weightage

Unit	Marks
Part A - Accounting for Partnership Firms and Companies	
1. Accounting for Partnership Firms	35
2. Accounting for Companies	25
Part B - Financial Statement Analysis	
3. Analysis of Financial Statements	12
4. Cash Flow Statement	8
5. Project Work (Project file 4 marks + written test (one hour) 12 marks + viva voce 4 marks)	20

Subject : Business Studies

Text Book : Business Studies by N.C.E.R.T.

Unit I March 14 to April 19

14 + 11 = 25 working days

PRINCIPLES AND FUNCTIONS OF MANAGEMENT

Chapter 1 : Nature and Significance of Management

Management - concept, objectives, importance.

Nature of management - management as Science, Art and Profession.

Levels of management - top, middle and supervisory (First level).

Management functions - Planning , organising, staffing, directing and controlling.

Coordination - nature and importance.

Chapter 2 : Principles of Management

Principles of Management - meaning, nature and significance

Fayol's principles of management

Taylor's Scientific management : Principles and Techniques.

Chapter 3 : Management and Business Environment

Business Environment - meaning and importance.

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

Economic environment in India, Impact of government policy changes on business and industry with special reference to adoption of the policies of liberalisation, privatization and globalisation.

Chapter 4 : Planning

Meaning, importance, limitations.

Planning process.

Types of Plans - Single use and standing plans, Objectives, Strategy, Policy, Procedure, Methods, Rules, Budget and Programme.

Chapter 5 : Organising

Meaning and importance

Steps in the process of organising.

Weekly Test : 11.04.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

Chapter 5 : Organising (cont...)

Structure of organisation - functional and divisional.

Formal and informal organization.

Delegation : Meaning, Elements and importance.

Decentralization : meaning and importance.

Difference between delegation and decentralisation.

Chapter 6 : Staffing

Meaning, need and importance of staffing.

Staffing as a part of Human Resource Management.

Steps in Staffing Process

Recruitment - meaning and sources.

Selection - Meaning, process.

Training and Development - meaning and need. Methods of training : apprenticeship, vestibule, internship, Induction training.

Chapter 8 : Directing

Meaning, importance and principles

Elements of directing :

- Supervision - meaning and importance
- Motivation - meaning and importance, Maslow's hierarchy of needs; Financial and non-financial incentives.
- Leadership - meaning, importance, qualities of good leader, leadership style.
- Communication - meaning and importance - formal and informal, communication; barriers to effective communication.

Weekly Test : 16.05.2016

Unit III July 13 to August 17

13 + 12 = 25 working days

Chapter 7 : Controlling

Meaning and importance

Relationship between planning and controlling.

Steps in the process of control.

BUSINESS FINANCE AND MARKETING

Chapter 9 : Financial Management

Meaning, role, objectives of financial management.

Financial decisions

Financial Planning - meaning and importance.

Capital structure - meaning and factors.

Fixed and working capital - meaning and factors affecting its requirements.

Chapter 10 : Financial Markets

Concept of Financial Market : Money Market - nature, instruments.

Capital market : nature and types - primary and secondary market.

Distinction between Capital Market and money market.

Stock Exchange - meaning, functions - Trading Procedure, Depository services and D'MAT Account.

Securities and Exchange Board of India (SEBI) - Objectives and Functions.

Chapter 11 : Marketing

Marketing - meaning, functions and role

Marketing management philosophies.

Weekly Test : 16.08.2016

Unit IV August 19 to September 16, October 3 to October 21
8 + 11 + 14 = 33 working days

Chapter 11 : Marketing (cont..)

Distinction between marketing and selling.

Marketing mix - concept and elements

Product - nature, classification, branding, labeling and packaging.

Physical distribution : meaning, role; channels of distribution - meaning, types, factors determining choice of channels.

Promotion - meaning and role, promotion mix, Role of Advertising and personal selling; objections to Advertising, public relations.

Price : factors influencing pricing

Chapter 12 : Consumer Protection

Importance of consumer protection, consumer protection Act 1986.

Consumer rights

Consumer responsibilities

Ways and means of consumer protection - Consumer awareness and legal redressal with special reference to consumer protection Act.

Who can file a complaint and against whom.

Role of consumer organisation and NGOs.

Project work

One Paper

100 Marks

Unitwise Weightage

Unit	Marks
Part A - Principles and Functions of Management	
1. Nature and Significance of Management	16
2. Principles of Management	
3. Business Environment	
4. Planning	14
5. Organising	
6. Staffing	20
7. Directing	
8. Controlling	
	50
Part B - Business Finance and Marketing	
9. Financial Management	15
10. Financial Markets	
11. Marketing	15
12. Consumer Protection	
	30
Part C - Project	20

Subject : Economics

Text Book : 1. Introductory Micro Economics - T.R. Jain
2. Introductory Macro Economics - Sandeep Garg

Unit I March 14 to April 19

14 + 11 = 25 working days

Introduction

Meaning of micro economics and macroeconomics.

What is an economy? Central problems of an economy, concept of production possibility frontier and opportunity cost.

Consumer Equilibrium and Demand

Consumer's Equilibrium - meaning of utility, marginal utility, law of diminishing marginal utility, conditions of consumer equilibrium using marginal utility analysis.

Indifference curve analysis of consumer's equilibrium- the consumer's budget (budget set and budget line), indifference curve, indifference map, conditions of consumer's equilibrium

Demand, market demand, determinants of demand, demand schedule, demand curve, movement along and shifts in demand curve, price elasticity of demand, factors affecting price elasticity of demand, measurement of price elasticity of demand - percentage, total expenditure and geometric method.

Producer Behaviour and Supply

Production function : Short run and Long run, Total Product, Average Product and Marginal Product,

Returns of a factor.

Cost : Short run costs - Total cost, Total variable cost, Total Fixed cost; Average Fixed cost, Average Variable Variable cost and Marginal cost-meaning and their relationship.

Weekly Test I : 18.04.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

Producer Behaviour and Supply (Cont...)

Revenue-total, average and marginal revenue meaning and their relationships.

Producer's equilibrium - Meaning and its conditions in terms of MR-MC approach.

Marginal cost-marginal revenue approach

Supply, market supply, determinants of supply, supply schedule, supply curve and its movement along and shifts in supply curve, price elasticity of supply, measurement of price elasticity of supply - (a) percentage (b) geometric method.

Market Equilibrium and Price Determination

Simple applications of Tools and demand and supply

Forms of Market - Perfect competition - meaning and features, Market equilibrium under perfect competition-determination of equilibrium price, effects of shifts in demand and supply,

Other Market Forms – monopoly, monopolistic competition, oligopoly – their meaning and features. Simple applications of tools of Demand and Supply : Price ceiling, Price floor.

Weekly Test II : 16.05.2016

Unit III July 13 to August 17

13 + 12 = 25 working days

Introductory Macroeconomics

National Income and related aggregates

Some basic concepts of macroeconomics: consumption goods, capital goods, final goods, intermediate goods, stocks and flows, gross investment and depreciation

Circular flow of income, methods of calculating national income-Value Added, Income and Expenditure method, concepts and aggregates related to national income.

GDP, GNP, NDP, NNP (at market price and factor cost), National disposable Income (gross and net); Private Income, Personal Income and Personal Disposable Income, Real and Nominal GDP, GDP and welfare.

Determination of Income and Employment

Aggregate demand and its components., Propensity to consume and propensity to save (average and marginal), Short run equilibrium output, investment multiplier, multiplier mechanism, Meaning of involuntary unemployment and full employment, Problems of excess and deficient demand, Measures to correct them - availability of credit, change in Government spending, taxes and money supply.

Weekly Test III : 16.08.2016

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Money and Banking

Money - its meaning and functions.

Supply of money-currency held by the public and net demand deposits held by commercial banks

Money creation by the commercial banking system.

Central banking and its functions (example of RBI) Bank of issue, Govt. Bank, Banker's bank, Controller of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.

Government Budget and the Economy

Government budget - meaning, objectives and components

Classification of receipts - revenue and capital ; classification of expenditure - revenue and capital, Various measures of government deficit-revenue deficit, fiscal deficit and primary deficit: their meaning and implications.

Balance of Payments

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

One Paper

100 Marks

Unitwise Weightage

Unit	Marks
1. Introduction	6
2. Consumer's Equilibrium and Demand	16
3. Producer Behaviour and Supply	16
4. Forms of market and Price Determination under Perfect Competition with Simple Applications	12
5. National Income and Related Aggregates	15
6. Money and Banking	8
7. Determination of Income and Employment	12
8. Government Budget and the Economy	8
9. Balance of Payments	7

Subject : Informatics Practices

CLASS : XII

Text Book : Informatics Practices - Class XII (NCERT)

Unit I March 14 to April 19

14 + 11 = 25 working days

Computer Networking: Networking - a brief overview, Identifying computers and users over a network (Domain Name, MAC 'Media Access Control' and IP address), domain name resolution, Network Topologies, Network Protocols : HTTP, TCP /IP/, PPR, Remote access software such as Team Viewer
Types of network - LAN, MAN, WAN, PAN; Wired Technologies - Co- Axial, Ethernet Cable, Optical Fiber; Wireless Technologies - Blue Tooth, Infrared, Microwave, Radio Link, Satellite Link; Network Devices - Hub, Switch, Repeater, Gateway - and their functions;

Network security - denial of service, intrusion problems, snooping;

Open Source Concepts:

Open Source Software (OSS norms), common FOSS examples (Gnu/Linux, Firefox, OpenOffice), Java, Netbeans, MySQL, common open standards (open document format, Ogg Vorbis, WWW, HTML, XML, ODF, TCP, IP)

Indian Language Computing: character encoding, UNICODE and Indian Language, different types of fonts (open type vs true type, static vs dynamic), Entering Indian Language Text - phonetic and keymap based.

Programming Fundamentals (Review of Class XI)

Weekly Test I : 04.04.16 & 18.04.16

Unit II April 21 to May 31

7 + 22 = 29 working days

Access specifier for classes, Members and methods, Concept of inheritance.

Inheritance: need and implementation, Method Overloading and Overriding, Abstract Class and Interfaces, use of interfaces

Commonly used libraries: String class and methods: toString(), concat(), length(), toLowerCase(), toUpperCase(), trim(), substring()

Math object: pow(), round()

Simple GUI Objects: Dialog

Weekly Test II : 09.05.16 & 23.05.16

Unit III July 13 to August 17

13 + 12 = 25 working days

Web application development: URL, Web Server, Communicating with the web server, concept of Client and Server Side.

HTML based web pages covering basic tags - HTML, TITLE, BODY, H1..H6, Paragraph (P), Line Break (BR), Section Separator (HR), FONT, TABLE, LIST (UL, OL), FORM;

Creating and accessing static pages using HTML and introduction to XML

Review of RDBMS from Class XI

Database Fundamentals

Concept of Database Transaction, Committing and revoking a Transaction using COMMIT and REVOKE,

Grouping Records: GROUP BY, Group functions - MAX(), MIN(), AVG(), SUM(), COUNT(); using COUNT(*), DISTINCT clause with COUNT, Group Functions and Null Values,

Displaying Data From Multiple Tables: Equi-Join and Cartesian Products; concept of Foreign Key; Union, Intersection.

Weekly Test III : 08.07.16 & 22.08.16

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Creating a Table with PRIMARY KEY and NOT NULL constraints, adding a Constraint, enabling Constraints, Viewing Constraints, Viewing the Columns Associated with Constraints;

ALTER TABLE for deleting a column, ALTER TABLE for modifying data types of a column

DROP Table for deleting a table; Adding a constant, enabling constraints, dropping constraints.

Revisiting the features of e-Governance, e-Business and e-Learning

Front-end Interface - Introduction; content and features; identifying and using appropriate component (Text Box, Radio Button, CheckBox, List) for data entry, validation and display;

Back-end Database - Introduction and its purpose; exploring the requirement of tables and its essential attributes;

Front-End and Database Connectivity - Introduction, requirement and benefits

Demonstration and development of appropriate Front-end interface and Back-end Database for e-Governance, e-Business and e-Learning applications.

Impact of ICT on society : Social, environmental and Economic benefits.

Accessing MySQL database using ODBC to connect with database.

Subject : Multimedia and Web Technology

Text Book : Multimedia and Web Technology – *Publisher : B.R. International*

Unit I March 14 to April 19

14 + 11 = 25 working days

Chapter 1 : Revision of Class XI

HTML, Markup Tags, Heading, Linking, Creating Frame, Different INPUT types and their attributes, Web Scripting, VB Script, VB Script Variable, Select Case statement, Loops, Procedure, Calling a subroutine, Functions, Events.

Chapter 3 : Communication and Network Concepts

Introduction, Network, Web Technologies, Advantages of Networking, Types of Networks, Network Topologies, Transmission Media, Communication Protocols, FTP, PPP, level-Remote login, Network Devices, NIC, Hub, Switch, RJ45 connector, Switching Techniques, wireless / mobile communication, 3G, Network Application, cookies.

Chapter 4 : Introduction to open source software OSS, FLOSS, GNU, FSF, OSI, W3C, Freeware, Shareware, Proprietary software, Localisation, Unicode, Linux, Mozilla Web Browser, Apache HTTP Server, MySQL, Postgres, Pango, Open office, Tomcat, PHP, Python, Websites.

Weekly Test I : 04.04.16 & 18.04.16

Unit II April 21 to May 31

7 + 22 = 29 working days

Chapter 2 : Computer System : Databases

Introduction, Advantages of DBMS, keys, Database Tool, Microsoft Access, Create a database using the Database wizard, creating a new database without using Database Wizard, Manipulating Data Table Relationship.

Chapter 5 : Multimedia Applications

Multimedia in Education, Multimedia in Entertainment, Multimedia in Business, Video on Demand, Video phone, Video conferencing, VR, Digital Libraries, Multimedia in Health Care.

Chapter 6 : Getting started with Active server Pages

Introduction, Equivalent tools of ASP, Using ASP on a computer.

Chapter 7 : ASP : Variable and Operators

Introduction, Variable, Data Types, Operators, Comparison or Relational operator, Logical operators, Operator Precedence, Constants.

Chapter 8 : ASP : Flow of Control

Introduction, Conditional Statements, Select Case Statement, interactive or Looping statements, Arrays.

Weekly Test II : 09.05.16 & 23.05.16

Unit III July 13 to August 17

13 + 12 = 25 working days

Chapter 9 : ASP : Procedures

Introduction, Procedures, Subroutine, Variable Scope, Built in functions.

Chapter 10 : ASP : Objects

ASP Objects, ASP object Model, Request Object, The Query string collection, The client Certificate Collection, The application object, The session Object, The server object, The ASP Error object.

Chapter 11 : ASP : Components

Introduction, ASP Components, Ad Rotator Component, Content Rotator Component, Counters Component, Page Counter Component.

Chapter 12 : Working with Text Files

File System Object and Text Stream Objects, Opening and Reading from a Text File.

Weekly Test III : 08.07.16 & 22.08.16

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Chapter 13 : Connecting with Databases

Connecting to a Database using OLE-DB, working on the Database, Record sets, Inserting Records.

Chapter 14 : Flash – An Introduction

The Power of Motion - Animation and Movies, Morphing, Movie / Video, Movie file Formats, Authoring Tools, Embedding Audio / Video on the Webpage, Flash Advantages of Flash, Opening Flash, Creating the first flash movie, State objects and overlay objects, Grouping Objects, Symbols and Instance.

Chapter 15 : Creating Animation

Elements of Animation, Scenes, Types of layers, setting layer properties, Timeline, Tweening Animation, Onion Skinning, Creating Text Effects, Adding Sounds.

Chapter 16 : Publishing Flash Movies

Exporting movie, Publishing a Flash Movie, Publishing the Movie in HTML Format.

Subject : English

CLASS : XII

Text Books : 1. Flamingo, 2. Vistas, 3. The Invisible Man

Unit I March 14 to April 19

14 + 11 = 25 working days

Flamingo

1. The Last Lesson
2. Lost Spring
3. My Mother at Sixty-Six
4. An Elementary School Classroom in a Slum

Vistas : The Tiger King

Novel : The Invisible Man-Chapters 1 to 10.

Writing Skills

1. Classified Advertisements
2. Article
3. Note Making
4. Letter to the Editor

Weekly Test I : 28.03.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

Flamingo

1. Deep Water
2. Keeping Quiet
3. The Rattrap
4. A Thing of Beauty

Vistas

1. Enemy
2. Memories of Childhood

Novel : The invisible Man-Chapters 11 to 15.

Writing Skills

1. Invitations
2. Poster
3. Notice
4. Speech / Debate
5. Letter (Complaint, Placing Order, to School Authority)

Weekly Test II : 02.05.2016

Unit III July 13 to August 17

13 + 12 = 25 working days

Flamingo

1. Going Places
2. Indigo
3. Aunt Jennifer's Tigers

Vistas

1. Should Wizard Hit Mommy
2. On The Face Of It

Novel : The Invisible Man-Chapters 16 to 20.

Writing Skills

1. Job Application
2. Application to the Head of Institutions.

Weekly Test II : 01.08.2016

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Vistas

1. Evans Tries An O Level
2. Revision of all writing skills

Novel : The Invisible Man. Chapter 21-28

Note : Comprehension, Note - Making and Writing Skills once introduced may be tested in any / all tests.

Subject : Computer Science

Text Book : Computer Science with C++ by Sumita Arora of Dhanpat Rai & Co. - Class XII

Unit I March 14 to April 19

14 + 11 = 25 working days

CHAPTER 1 : C++ Revision Tour

Introduction, C++ Basics, Data Handling, Operators and Expressions, Flow of Control, Console I/O, Operations, Arrays, Functions, Standard Library and Header Files, Structures.

CHAPTER 2 : Object Oriented Programming

Introduction, Various Programming Paradigms, Oop concepts, Basic Concepts of Oop, Implementing Oop Concept in C++, Advantage and Disadvantage of Oop.

CHAPTER 3 : Function Overloading

Introduction, Function Overloading, Calling Overloaded Functions.

CHAPTER 4 : Classes and Objects

Introduction, Classes, Data Hiding and Encapsulation, Functions in a class, Using Objects, Static class Members.

CHAPTER 5 : Constructors and Destructors

Introduction, Constructors, Destructors.

CHAPTER 6 : Inheritance : Extending classes

Introduction, Need for Inheritance, Different Forms of Inheritance, Derived and Base Classes, Inheritance and Access Control, Multiple Inheritance Revisited, Multilevel Inheritance, Nesting of Classes.

Weekly Test I : 18.04.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

CHAPTER 8 : Pointers

Introduction, C++ Memory Map, Free store, Declaration and Initialization of Pointers, Dynamic Allocation Operators, Pointers and Arrays, Pointers and Const, Pointers and Functions, Pointers and Structures, Objects as Function Arguments, Pointers and Objects.

CHAPTER 10: Linked Lists, Stacks and queues

Introduction, Need for Linked Lists, Singly Linked Lists, Stack, Queue.

Weekly Test II : 23.05.2016

Unit III July 13 to August 17

13 + 12 = 25 working days

CHAPTER 9 : Arrays

Introduction, Elementary Data Representation, Different Data structures, Operations on Data structures, Arrays.

CHAPTER 11: Database concepts

Introduction, Purpose of Databases, Database abstraction, Different Data Models, The Relational Model, Comparison of Data Models

CHAPTER 12: Structured Query Language

Introduction, Processing Capabilities of SQL, Data Manipulation language, SQL Processing.

CHAPTER 13: Boolean Algebra

Development of Boolean Algebra, Binary Valued Quantities, Logical Operations, Basic Logic Gates, Basic Postulates of Boolean Algebra, Principle of Duality, Basic Theorems of Boolean Algebra, Demorgan's Theorems, Derivation of Boolean Expression, Minimization of Boolean Expression, More about Logic Gates.

Weekly Test III : 22.08.2016

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

CHAPTER 7 : Data File Handling

Introduction, The fstream.h Header file, Data Files, Opening and Closing Files, Steps to Process a File in your Program, Changing the Behaviour of streams, Sequential I/O with Files, Detecting EOF, File Pointers and Random Access, Basic Operations on Binary Files, Error Handling During File I/O.

CHAPTER 14: Communication and Network Concepts

Introduction, What is a Network, Need for Networking, Evolution of Networking, Switching Techniques, Transmission Media, Data Communication Technologies, Types of Networks, Network Topologies, Network Devices, Communication Protocols, Wireless / Mobile Computing, Internet working Terms and Concepts, Network Security, Introduction to Open Source Based Software, Viruses.

Subject : Political Science Syllabus

- Books :**
- i. Politics in India since Independence – NCERT
 - ii. Contemporary World Politics – NCERT

Unit I March 14 to April 19

14 + 11 = 25 working days

Books : Contemporary World Politics – NCERT

Chap. 1 The Cold War Era

Emergence of two power blocs after the second world war. Arenas of the cold war. Challenges to Bipolarity : Non Aligned Movement, quest for new international economic order. India and the cold war.

Chap.2 End of Bipolarity

New entities in world politics : Russia, Balkan states and Central Asian states, Introduction of democratic politics and capitalism in post-communist regimes. India's relations with Russia and other post- communist countries.

Chap. 3 US Hegemony in World Politics :

Growth of unilateralism : Afghanistan, first Gulf War, response to 9/11 and attack on Iraq. Dominance and challenge to the US in economy and ideology. India's renegotiation of its relationship with the USA.

Chap. 4 Alternative Centres of Power :

Rise of China as an economic power in post-Maoera, creation and expansion of European Union, ASEAN. India's changing relations with China.

Weekly Test I : 25.04.16

Unit II April 21 to May 31

7 + 22 = 29 working days

Chap. 5 Contemporary South Asia

Democratisation and its reversals in Pakistan and Nepal. Ethnic conflict in Sri Lanka, Impact of economic globalization on the region. Conflicts and efforts for peace in South Asia. India's relations with its neighbours.

Chap. 6 International Organizations

Restructuring and the future of the UN. India's position in the restructured UN. Rise of new international actors : new international economic organisations, NGOs. How democratic and accountable are the new institutions of global governance?

Chap. 7 Security in the Contemporary World

Traditional concerns of security and politics of disarmament. Non-traditional or human security: global poverty, health and education. Issues of human rights and migration.

Chap. 8 Environment and Natural Resources

Environmental Concerns. Protection of global commons, common but differentiated Responsibilities, Common property resources, India's stand on environmental issues, Environmental movements, Resource Geographics, The indigenous peoples and their rights.

Chap. 9 Globalisation

Economic, cultural and political manifestations. Debates on the nature of consequences of globalisation. Anti-globalisation movements. India as an arena of globalization and struggle against it.

Weekly Test : 30.05.16

Unit III July 13 to August 17

13 + 12 = 25 working days

Books : Politics in India Since Independence – NCERT

Chap. 1 Challenges of Nation Building

Challenges for the new nation, partition, Integration of Princely States, Reorganisation of states.

Chap.2 Era of One-Party Dominance

First three general elections, nature of Congress dominance at the national level, uneven dominance at the state level, coalitional nature of Congress. Major opposition parties.

Chap.3 Politics of Planned Development

Five year plans, expansion of state sector and the rise of new economic interests. Famine and suspension of five year plans. Green revolution and its political fallouts.

Chap.4 India's External Relations

Nehru's foreign policy. Sino-Indian war of 1962, Indo-Pak war of 1965 and 1971. India's nuclear programme and shifting alliances in world politics.

Chap. 5 Challenge to and Restoration of Congress System :

Political succession after Nehru. Non-Congressism and electoral upset of 1967, Congress split and reconstitution, Congress' victory in 1971 elections, politics of 'garibi hatao'.

Weekly Test I : 29.08.16

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Book : Politics in India Since Independence – NCERT

Chap. 6 The crisis of the Democratic Order

Search for 'committed' bureaucracy and judiciary. Navnirman movement in Gujarat and the Bihar movement. Emergency : context, constitutional and extra-constitutional dimensions, resistance to emergency. 1977 elections and the formation of Janta Party. Rise of civil liberties organisations.

Chap. 8 Regional Aspirations and Conflicts

Rise of regional parties. Punjab crisis and the anti-Sikh riots of 1984. The Kashmir situation. Challenges and responses in the North East.

Chap. 7 Rise of Popular Movements

Farmers' movements, Women's movement, Environment and Development-affected people's movements. Implementation of Mandal Commission report and its aftermath.

Chap. 9 Recent Developments in Indian Politics

Challenge of and responses to globalization : new economic policy and its opposition. Rise of OBCs in North Indian politics. Dalit politics in electoral and non-electoral arena. Challenge of communalism : Ayodhya dispute, Gujarat riots.

Subject : Physical Education

Text Book : Health and Physical Education

Unit I March 14 to April 19

14 + 11 = 25 working days

Chapter-1 : Psychology and Sports

- Understanding stress, anxiety and its management
- Coping Strategies - Problem Focused and Emotional focused
- Personality, its dimensions and types; Role of sports in personality development
- Motivation, its type and technique
- Self-esteem and Body image
- Psychological benefits of exercise.

Chapter-2: Adventure Sports and Leadership Training

- Meaning and objectives of Adventure Sports
- Types of activities - Camping, Rock Climbing, Tracking, River Rafting and Mountaineering
- Material requirement and safety measures
- Identification and use of Natural Resources
- Conservation of surroundings
- Creating leaders through Physical Education

Chapter-3: Planning in Sports

- Meaning and Objectives of Planning
- Various Committees and its responsibilities
- Tournament - Knock-Out, League or Round Robin and Combination
- Procedure to draw Fixtures - Knock-Out (Bye and Seeding) and League (Staircase and Cyclic)
- Intramural and Extramural - Meaning, Objectives and its Significance
- Specific Sports Programme (Sports Day, Health Run, Run for Fun, Run for Specific Cause and Run for Unity)

Weekly Test I : 04.04.16 & 18.04.16

Unit II April 21 to May 31

7 + 22 = 29 working days

Chapter-4 : Training in Sports

- Strength - Definition, types and methods of improving strength - Isometric, Isotonic and Isokinetic
- Endurance - Definition, types and methods to develop Endurance - Continuous Training, Interval Training and Fartlek Training
- Speed - Definition, types and methods to develop speed - Acceleration Run and Pace run
- Flexibility - Definition, types and methods to improve flexibility
- Coordinative abilities - Definition and types

Chapter-5 : Postures

- Meaning and concept of correct postures - standing and sitting
- Advantages of correct posture

- Causes of bad posture
- Common Postural Deformities - Knock Knee; Flat Foot; Round Shoulders; Lordosis, Kyphosis, Bow Legs and Scolioses
- Physical activities as corrective measures

Chapter-6: Children and Sports

- Motor development in children
- Factors affecting motor development
- Physical and Physiological benefits of exercise on children
- Advantages and disadvantages of weight training and food supplement for children
- Activities and quality of life

Weekly Test II : 09.05.16 & 23.05.16

Unit III July 13 to August 17

13 + 12 = 25 working days

Chapter-7: Test and Measurement in Sports

- Measurement of Muscular Strength - Kraus Weber Test
- Motor Fitness Test - AAPHER
- Measurement of Cardio Vascular Fitness - Harward Step Test/Rockfort Test
- Measurement of Flexibility - Sit and Reach Test
- Rikli and Jones - Senior Citizen Fitness Test
 1. Chair Stand test for lower body strength
 2. Arm Curl test for upper body strength
 3. Chair Sit and Reach test for lower body flexibility
 4. Back Scratch test for upper body flexibility
 5. Eight Foot Up and Go test for agility
 6. Six minute walk test for Aerobic Endurance

Chapter-8: Sports Medicine

- Concept and definition
- Aims and scope of sports Medicine
- Impact of surface and Environment on athletes
- Sports injuries : Classification, causes and prevention
- Mangement of Injuries:
- Soft Tissue Injuries :
(Abrasion, Contusion, Laceraction, Incision, Sprain and strain)
- Bone and Joint Injuries :
(Dislocation, Fractures : Stress Fracture, Green Stick, Communicated, Transverse oblique and Impacted)

Chapter-9: Sports and Nutrition

- Balanced Diet and Nutrition: Macro and Micro Nutrients
- Nutritive and Non-Nutritive Components of Diet
- Eating Disorders - Anorexia Nervosa and Bulemia
- Effects of Diet on Performance

- Eating for Weight Control - A Healthy weight, The pitfalls of Dieting, food intolerance and food myths

Weekly Test III : 08.07.16 & 22.08.16

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Chapter–10: Biomechanics and Sports

- Projectile and factors affecting Projectile Trajectory
- Angular and Linear Movements
- Introduction to Work, Power and Energy
- Friction
- Mechanical Analysis of Walking and Running

Chapter–11 : Women and Sports

- Sports participation of women in India
- Special consideration (Menarche, Menstrual dysfunction, Pregnancy, Menopause)
- Female Athletes Triad (Anemia, Osteoporosis and Amenorrhea)
- Psychological aspect of women athlete
- Sociological aspects of sports participation
- Ideology

Chapter–12: Physiology and Sports

- Gender difference in Physical & Physiological parameters
- Physiological factor determining component of Physical Fitness
- Effect of exercise on Cardio Vascular System
- Effect of exercise on Muscular System
- Effect of exercise on Circulatory System
- Physiological changes due to ageing role of regular exercise on ageing process
- Role of physical activity maintaining functional fitness in aged population.

Subject : Psychology

CLASS : XII

Text Book : NCERT

UNIT - 1

Unit I March 14 to April 19

14 + 11 = 25 working days

Chapter -1. Variations in Psychological Attributes

- Individual differences.
- Assessment of Psychological Attributes
- Intelligence.
- Theories of Intelligence.
- Culture and Intelligence
- Special Abilities.
- Creativity.

Chapter - 2. Self and Personality.

- Concept of self.
- Cognitive and Behavioural aspects of self.
- Culture and self.
- Concept of personality.
- Major approaches to personality.
- Assessment of Personality.

Practical :

- Intelligence. Test
- Personality. Test.

Weekly Test I : 04.04.16 & 18.04.16

Unit II April 21 to May 31

7 + 22 = 29 working days

Chapter 3 : Meeting life Challenges

- Nature types and sources of stress.
- Effects of stress
- Stress and Health.
- Stress and Immune system
- Life style.
- Coping with stress.
- Promoting positive Health and well - being.

Chapter 4 : Psychological disorders

- Concepts of Abnormality and Psychological disorders
- Classification of psychological disorders.
- Factors underlying Abnormal Behaviour
- Major Psychological disorders

Practical Adjustment Inventory.

Weekly Test II : 09.05.16 & 23.05.16

Unit III July 13 to August 17

13 + 12 = 25 working days

Chapter - 5 : Therapeutic Approaches

- Nature and Process of Psychotherapy.
- Therapeutic relationship
- Types of therapies

- Steps in the Formulation of a client problem
- Rehabilitation of the mutually ill.

Chapter - 6 : Attitude and social cognition.

- Explaining social behaviour.
- Nature and Components of attitudes.
- Attitude Formation and Change.
- Prejudice and Discrimination.
- Strategies for handling prejudice.
- Social Cognition.
- Impression Formation
- Behaviour in the presence of others.
- Pro-social behaviour.

Practical- : Attitude Test.

Weekly Test III : 08.07.16 & 22.08.16

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Chapter - 7 Social Influences and group processes.

- Nature and formation of groups.
- Types of groups
- Influence of group.
- Conformity, Compliance, Obedience.
- Social Identity.
- Intergroup conflict.
- Conflict Resolution Strategies.

Chapter - 8 Psychology and Life.

- Human, Environment Relationship.
- Environmental Effects on Human behaviour.
- Promoting Pro-environmental Behaviour.
- Psychology and social concerns.

Chapter - 9 Developing psychological skills.

- Developing as an Effective psychologist.
- General skills.
- Observational skills.
- Specific skills.
- Interviewing skills.
- Counselling skills.

Practical : Aptitude Test.

Subject : Entrepreneurship

Text Book : Entrepreneurship by CBSE

UNIT - 1

Unit I March 14 to April 19

14 + 11 = 25 working days

Chapter 1. Entrepreneurial opportunities

- Factors involved in sensing opportunities
- Environmental scanning
- Creativity & Innovation
- Problem identification
- Spotting Trends
- Selecting the right opportunity

Chapter 2 : Enterprise Planning

- Forms of Business entities
- Business plan
- Types of Business Plan – Organisational, Operational,

Weekly Test I : 04.04.16 & 18.04.16

Unit II April 21 to May 31

7 + 22 = 29 working days

Chapter 2 : Enterprise Planning (contd.)

- Types of Business Plan – Financial, Marketing, Human Resource,
- Creating a plan
- Formalities for starting a business

Chapter -4 : Enterprise Growth strategies

- Franchising and types of franchising
- Mergers and Acquisition
- Concept of value addition and value chain
- Requirement of value chain management

Chapter 3 : Enterprise Marketing

- Goals of business, goal setting SMART goals

Weekly Test II : 09.05.16 & 23.05.16

Unit III July 13 to August 17

13 + 12 = 25 working days

Chapter 3 : Enterprise Marketing (contd.)

- Marketing and sales strategy
- Branding – Business name, logo, tag line
- Promotion strategy
- Negotiations - importance and methods
- Customer relation
- Employee and vendor management
- Quality, timeliness and customer satisfaction
- Business failure and its reasons.

Chapter - 5 : Business Arithmetic

- Unit price, Unit of sale, Unit cost, break even point
- Inventory control and EOQ
- Concept working capital,
- Financial management and budgets
- ROI, ROE

Weekly Test III : 08.07.16 & 22.08.16**Unit IV August 19 to September 16, October 3 to October 21****8 + 11 + 14 = 33 working days****Chapter - 6 Resource Mobilization**

- Angel Investor
- Venture capital funds
- Stock market - raising funds
- Specialized financial institutions.

THEORY

One paper

100 Marks

Unitwise Weightage

Chapters	Marks
1. Entrepreneurial opportunities, Enterprise Planning	30
2. Enterprise Growth strategies, Enterprise Marketing	20
3. Business Arithmetic, Resource Mobilization	20

PRACTICAL

One paper

1. Project (Market survey, Business plan)	30
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Subject : Typography & Computer Applications (English)

CLASS : XII

Text Book : Teacher's Manual – By SCERT

Unit I March 14 to April 19

14 + 11 = 25 working days

EXCEL – Overview: Starting with Excel, understanding worksheets/spreadsheet and workbooks, entering worksheet data – entering text, entering numbers and formulas, entering dates and times. Navigating between spreadsheets. Opening a Workbook, Saving a workbook and printing a Worksheet/Workbook. Editing Excel Worksheets/Spreadsheets – selecting cells, Editing cell contents. Inserting and deleting cells, Inserting and deleting rows and columns, working with worksheet ranges. Using Cut, copy and paste options, clearing data.

Using formulas and functions: Using arithmetic operators, using range names in formulas, using relative and absolute cell referencing, copying formulas. Using auto sum for efficiency, common functions – sum (), average (), max(), min(), count(), countif(), counta(). Using paste function.

Using Special Tools: Spell checking, auto correct worksheets, finding and replacing data, using autofill, adding comments. (*Contd.....*)

Weekly Test I : 04.04.16 & 18.04.16

Unit II April 21 to May 31

7 + 22 = 29 working days

Contd. from unit I

Formatting worksheets: Center aligning, left aligning, right aligning and justifying cell content, row and column height, changing width and font. Making format changes. Auto formatting worksheets, modifying styles, additional formatting options – special alignment, special cell borders, special cell shades, protecting cells. Conditional formatting, tab colors help separate worksheets.

Using Charts: Creating custom charts (graphs) – choosing the chart type, selecting data for chart, modifying the chart. Making a quick, presentable and easily interpretable chart.

INTERNET AND SECURITY

Finding information from the web using popular Internet search engines like Google, Yahoo, Rediff, Lycos, Indiatimes, e-Commerce and e-Business

EMAIL – E-mails management: Opening e-mail accounts using popular sites offering free email services like Yahoo, Google, Rediffmail, Indiatimes, Hotmail etc., composing a message, formatting text, selecting the e-mail message format, add a signature, sending and receiving emails with/without attachment, reading email, replying to email, printing an email, deleting email, forwarding an email, creating folders/labels for archiving emails.

COMPUTER VIRUS – Computer Virus: Computer virus, computer virus versus biological virus. Virus classification – boot sector virus, companion virus, e-mail virus, logic bomb, macro virus, cross-site scripting virus, Worm and Trojan. Effects of computer virus, the vulnerability of operating systems to virus, protection from virus and use of popular anti virus software.

Weekly Test II : 09.05.16 & 23.05.16

Unit III July 13 to August 17

13 + 12 = 25 working days

POWERPOINT

PowerPoint Presentations: Understanding presentations and slides, creating a new presentation – the auto content wizard and presentation design, creating presentations using design templates.

Editing and arranging presentations: Using the outline – adding and importing new items, promoting and demoting elements. Using the slide sorter view, using the notes page view. Saving and printing.

PowerPoint advanced features: Modifying presentations, editing individual slides – putting comments in your presentations, adding text and text boxes, moving and rotating text. Adding pictures. Animating your presentations: Using Power Point's slide show – timed transitions, transition effects, setting up shows, rehearsing slide show. Voice narration, using action buttons, introducing animation schemes, customizing animation

Weekly Test III : 08.07.16 & 22.08.16

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

PART I: TYPOGRAPHY

CORRESPONDENCE - Business: Different styles of letters – indented, semi indented and blocked; official: Office Memorandum, office order, DO letter and Office Note

MANUSCRIPT - Proof correction signs List of standard abbreviations

Weekly Test – IV: 2nd November, 2015

Subject : History

CLASS : XII

Text Book : Themes in Indian History (Volume I, II, III)- NCERT

Unit I March 14 to April 19

14 + 11 = 25 working days

1. The Story of the First Cities: Harappan Archaeology
2. Political and Economic History: How Inscriptions tell a story
3. Social Histories: Using the Mahabharata
4. A History of Buddhism: Sanchi Stupa

Map Work

Weekly Test - I : 11.04.2016

Unit II April 21 to May 31

7 + 22 = 29 working days

5. Agrarian Relations: The Ain-i- Akbari
6. The Mughal Court: Reconstructing Histories through Chronicles
7. New Architecture: Hampi
8. Religious Histories: The Bhakti-Sufi tradition

Map Work

Weekly Test - II : 16.05.2016

Unit III July 13 to August 17

13 + 12 = 25 working days

9. Medieval Society Through Travellers' Accounts
10. Colonialism and-Rural Society: Evidence from Official Reports
11. Representations of 1857
12. Colonialism and Indian Towns: Town Plans and Municipal Reports

Map Work

Weekly Test - III : 18.08.2016

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

13. Mahatma Gandhi through Contemporary Eyes
14. Partition through Oral Sources
15. The Making of the Constitution

Map Work

Unitwise Weightage

Chapters	Marks
1 - 4 Themes in Indian History Part - I	25
5 - 9 Themes in Indian History Part - II	25
10 - 15 Themes in Indian History Part - III	25
16 Map Work	5
Project work	20
Total	100

Subject : Painting (049)

Text Book :

Unit I March 14 to April 19

14 + 11 = 25 working days

Unit 1: The Rajasthani and Pahari Schools of Miniature Painting (16th Century A.D. to 19th Century A.D.) 24 Pds.

A brief introduction to Indian Miniature Schools: Western-Indian, Pala, Rajasthani, Mughal, Central India, Deccan and Pahari.

(A) The Rajasthani School :

- (1) Origin and Development
- (2) Sub-Schools-Mewar, Bundi, Jodhpur, Bikaner, Kishangarh and Jaipur
- (3) Main features of the Rajasthani School
- (4) Study of the following Rajasthani Paintings:
 - i. Maru-Ragini
 - ii. Raja Aniruddha Singh Heera
 - iii. Chaugan Players
 - iv. Krishna on swing
 - v. Radha Bani- Thani
 - vi. Bharat meets Rama at Chitrakut

(B) The Pahari School:

- (1) Origin and development
- (2) Sub-Schools-Basohli and Kangra
- (3) Main features of the Pahari School
- (4) Study of the following Pahari Paintings :
 - i. Krishna with Gopis,
 - ii. Raga Megha,
 - iii. Nand, Yashoda and Krishna with Kinsmen going to Vrindavana.

Weekly Test I : 04.04.16 & 18.04.16

Unit II April 21 to May 31

7 + 22 = 29 working days

The Mughal and Deccan Schools of Miniature Painting (16th Century A.D. to 19th Century A.D.) 24 Pds.

(A) The Mughal School

- (1) Origin and development
- (2) Main features of the Mughal School
- (3) Study of the following Mughal Paintings:
 - i. Krishna Lifting Mount Goverdhan
 - ii. Babur Crossing the River Sone

- iii. Jahangir Holding the Picture of Madona
- iv. Falcon on a Bird Rest
- v. Kabir and Raidas
- vi. Marriage Procession of Dara Shikoh

(B) The Deccan School

- (1) Origin and development
- (2) Main features of the Deccan School
- (3) Study of the following Deccan Paintings:
 - i. Dancers
 - ii. Chand Bibi Playing Polo
 - iii. Raga Hindole
 - iv. Lady with the Myna bird

Weekly Test II : 09.05.16 & 23.05.16

Unit III July 13 to August 17

13 + 12 = 25 working days

The Bengal School Painting 24 Pds. (Above mid of the 19th Century)

- (A)**(I) A. New Era in Indian Art-an introduction
- B. Study of the following paintings
 - (i) Rama Vanquishing the pride of the ocean-Raja Ravi Varma
 - (ii) Evolution of the Indian National Flag
- (B)** (1) Introduction to the Bengal School of Painting
 - (i) Origin and development of the Bengal School of painting
 - (ii) Main features of the Bengal School of painting
- (2) Contribution of Indian artists in the struggle for National Freedom Movement
- (3) Study of the following paintings of the Bengal school:
 - (i) Journey's End
 - (ii) Tiller of the soil
 - (iii) Rasa - Lila
 - (iv) Radhika
 - (v) Meghdoot

Weekly Test III : 08.07.16 & 22.08.16

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Introduction

- (1) Study of the following Paintings:
 - (i) Magician
 - (ii) Mother and child

- (iii) Woman Face
- (iv) Three Girls
- (2) Study of the following pieces of Sculpture:
 - (i) Triumph of Labour
 - (ii) Santhal Family
- (3) Study of the following work of contemporary (modern) Indian Art'
 - (a) Paintings
 - (i) Mother Teresa
 - (ii) Birth of Poetry
 - (iii) Gossip
 - (iv) Untitled
 - (v) Diagonal
 - (b) Graphic-prints:
 - (i) Whirl pool
 - (ii) Children
 - (iii) Devi
 - (iv) Of Walls
 - (v) Man, Woman and Tree
 - (c) Sculptures
 - (i) Standing Woman
 - (ii) Cries Un-heard
 - (iii) Ganesha
 - (iv) Figure
 - (v) Chaturmukhi

Note : The names of artists and titles of their art work as listed above are only suggestive and in no way exhaustive. Teachers and students should expand this according to their own resources. However, the questions will be set from the above mentioned art works only.

Subject : French

Text Book : Course de langue et de civilisation
Françaises - II-G.mauger

Unit I March 14 to April 19

14 + 11 = 25 working days

Ch. 18, 19, 20, 21 et le poème.

Grammaire – (i) le pronom relatif simple

(ii) le pronom relatif composé

(iii) le participe, présent, passé

Weekly Test I : 04.04.16 & 18.04.16

Unit II April 21 to May 31

7 + 22 = 29 working days

Ch. 22, 23, 24, 25 et le poème.

Grammaire – (i) le pronom interrogatif

(ii) l'adjectif interrogatif

(iii) pronom personnel

Weekly Test II : 09.05.16 & 23.05.16

Unit III July 13 to August 17

13 + 12 = 25 working days

Ch. 26, 27, 28, 29, 30 et le poème.

Grammaire – (i) pronom personne

(ii) l'histoire

(iii) les poèmes, le passé simple le passé antérieure.

Weekly Test III : 08.07.16 & 22.08.16

Unit IV August 19 to September 16, October 3 to October 21

8 + 11 + 14 = 33 working days

Toutes les leçons