

DELHI PUBLIC SCHOOL

Bokaro Steel City

TERM AND MONTH-WISE SPLIT-UP SYLLABI OF CLASS – XII FOR THE SESSION 2010-2011

First - Term

Subject : Functional English

Text Book : 1. Language Skills book, Class-XI & XII, CBSE, New Delhi.
2. Literature Reader, Functional English, Class-XII, CBSE, New Delhi.

Month	W. D.	Book/Area	Unit/Chapter	Activities
April	21	<ul style="list-style-type: none">• <u>Lit. Reader</u> – Prose• Poetry• Language Skills book	<ul style="list-style-type: none">• What's Your dream?• A Room 10'x8'• Sympathy• 4.4 and 4.5	<ul style="list-style-type: none">• Classified Adv.• Notice• Report writing
June	13	<ul style="list-style-type: none">• <u>Lit Reader</u> – Prose• Poetry• Language Skills book	<ul style="list-style-type: none">• The Hum of Insects• Survivors• Ars Poetica• I to IV	<ul style="list-style-type: none">• Factual Description of Place, Person and Thing• Display Adv.
July	22	<ul style="list-style-type: none">• Prose• Poetry• Language Skills book	<ul style="list-style-type: none">• The Actress• The Judgement of Paris• Of Mothers, Among Other Things.• Ode to Autumn• 3.11 to 3.15 passages• 5.2 & 5.3• V and VI	<ul style="list-style-type: none">• Poster• Letter Placing Order• Job Application with Bio Data
August	19	<ul style="list-style-type: none">• <u>Lit Reader</u> – Prose• Drama• <u>Language Skills</u> book	<ul style="list-style-type: none">• On Education• Asoka• An Adventure Story• 5.5, 5.6, 5.7	<ul style="list-style-type: none">• Invitation• Letter Seeking Enquiry• Letter lodging complain
September	12+6+4	<ul style="list-style-type: none">• Language Skills book	<ul style="list-style-type: none">• 3.16, to 3.20 passages	

Revision
Summative Assessment-I

Subject : Mathematics

Text Books : Mathematics for Class–XII – Part-1 and Part-2 (NCERT)

Reference Books : 1. Saraswati Mathematics Class–XII Vol.1 & Vol.2, by O.P. Chug & N.P.Bali

Month	W.D.	Topics to be taught
April	21	<p><u>Relations and Functions</u> : Introduction, Types of relation, Types of function, Composition of functions and Invertible Functions, binary operation.</p> <p><u>Inverse Trigonometric Functions</u> : Introduction, Basic Concept, Properties.</p> <p><u>Matrices</u> : Introduction, Matrix, Types of matrices, Operation on Matrices, Transpose of a matrix, symmetric and skew symmetric matrices, Elementary operations / transformation on a matrix, Invertible matrices.</p>

June	13	<p><u>Determinants</u> : Introduction, Properties of Determinants, Area of a triangle, Minors and cofactors, Adjoint and Inverse of a matrix, application of Determinants and Matrices.</p> <p><u>Continuity and Differentiability</u> : Continuity and differentiability, Exponential and Logarithmic functions, Parametric forms, Inverse Trigonometric functions, Second order derivatives, Rolle's and Lagrange's Mean value theorem (without proof).</p>
July	22	<p><u>Application of Derivatives</u> : Rate of Change, Quantities, Increasing and Decreasing function, Tangents & Normals, Approximations, Maxima and Minima (First derivative test motivated geometrically and second derivative test given as a provable tool).</p> <p><u>Indefinite Integration</u> : Integration as a reverse process of Differentiation, Geometrical Interpretation of Indefinite Integration, Properties of Indefinite Integrals Methods of Integration; Substitution Method, using trigonometric identities, Integrals of some particular functions, partial fraction method, Integration by parts, Integrals of the type $\sqrt{a^2 - x^2}$, $\sqrt{x^2 - a^2}$, $\sqrt{a^2 + x^2}$.</p> <p><u>Definite Integral</u> : Definite Integral as a lt. of sum.</p>
August	19	<p><u>Definite Integral (Contd.)</u>: Fundamental Theorems of Integral Calculus (area function). Evaluation of Definite Integrals by substitution, some properties of Definite Integrals by. Application of Integrals, area under simple curves, area of the region bounded by a curve and a line, Area between two curves.</p> <p><u>Differential Equations</u> : Introduction, Basic Concepts, order and degree of a Differential Equation, General and Particular solutions of a Differential Equations, Formation of a Differential Equations whose general solutions if given. Method of solving first order, first degree differential equations. i) variable separable method ii) Homogeneous Differential Equations.</p>
September	12 + 06	<p><u>Differential Equations (contd.)</u> : iii) Linear differential equations of 1st order and 1st degree.</p> <p>Revision for Half-Yearly Exam.</p> <p>Summative Assessment-I</p>

Subject : Physics

Prescribed Textbooks : 1. Physics for Class XII NCERT
2. Practical Physics Laboratory Manual XII (Arya Publications)

Reference Books : 1. Concept of Physics (Vol.I & II) by H.C. Verma – Bharti Bhavan
2. Physics for Competition (Vol. II) by G.C. Agarwal (Bathala & Sons.)
3. Physics (Vol.II) – Resnick, Halliday & Krane – (John Willey & Sons.)
4. Fundamental Physics by Gomber & Gogia – Pradeep Publication
5. Interactive Physics by (all vol.) R.Ravi, MTG Learning Media P.Ltd.

Month	W. Days	Chapters / Topics Taught	Suggestive Projects/ Activity/ Excursion
April	21	<p>Unit – I : Electrostatics :</p> <p>a) Electric charges, conservation of charge, Coulomb's Law, Forces between two points charges, Forces between multiple charges. Superposition principle and continuous charge distribution.</p> <p>b) 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.</p> <p>c) Electric Flux - statement of Gauss's theorem and its</p>	To identify a diode an LED, a transistor an IC a resistor & a capacitor from mixed collection of such items.

application to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside)

- d) Electric Potential - potential difference, electric potential due to point charge, a dipole and system of charges, equipotential surfaces, electric potential energy of a system of two point charges and of electric dipole in an electrostatic field.
- e) Capacitors - Conductors and insulators, free charges and bound charges inside a conductor, Dielectrics and electric polarization, Capacitors and Capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor, Van de Graaff generator.

Unit – II : Current Electricity :

- a) 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 resistors, colour code for carbon resistors, series and parallel combination of resistances, temperature dependence of resistance,

To measure resistances voltage AC/DC current (AC) and check continuity of a given circuit using multimeter.

June

13

Current Electricity (Contd.):

- b) Internal resistance of a cell, potential difference and e.m.f. of a cell, combination of cells in series and parallel.
- c) Kirchoff's Laws and simple applications, Wheatstone bridge, Metre bridge,
- d) Potentiometer - principle and its application to measure potential difference and for comparing e.m.f. of two cells, measurement of internal resistance of a cell.

UNIT - III : Magnetic Effect of Current & Magnetism:

- a) Concept of Magnetic field, Oersted's experiment
- b) Biot-Savart law and its application to current carrying circular loop
- c) Ampere's circuital law and its application to infinite long straight wire, straight and toroidal solenoid.
- d) Force on a moving charge in a uniform magnetic and electric fields, Cyclotron,
- e) Force on a current carrying conductors in a uniform magnetic field. Force between two parallel current carrying conductors - – definition of ampere.
- f) Torque experienced by current loop in uniform magnetic field, moving coil galvanometer - its current sensitivity and conversion to ammeter and voltmeter.

To assemble a household circuit comprising three bulb, three switches, fuse wire, a power source.

July

22

- g) 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 the axis and perpendicular to its axis, Torque on a magnetic dipole (bar magnet) in a uniform magnetic field, Bar magnet as equivalent solenoid. Magnetic field lines, Earth's magnetic field and magnetic elements, Para, Dia and Ferro magnetic substance with examples, Electromagnet and factors affecting their strengths, permanent magnets.

Unit – IV : Electromagnetic Induction :

Faraday's laws Induced e.m.f. and current, Lenz's Law, Eddy currents, self and mutual inductance. Need for displacement current.

Alternating current : Alternating currents, Peak and RMS value of alternating voltage / current, reactance and impedance, LC oscillation (qualitative treatment), LCR series circuit, resonant circuit, power in AC circuit, wattless current. AC generator and transformers.

To draw the diagram of a given circuit comprising atleast a resistor/reheostat, key, ammeter and voltmeter.

Unit – V : Electromagnetic Waves :

Electromagnetic waves and their characteristics, (qualitative ideas only), Transverse nature of electromagnetic waves, Electromagnetic spectrum (radio waves, micro waves, infrared, visible, ultraviolet, x-rays, gamma rays) including elementary fact about their uses.

Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.

August 19

Unit – VI : Optics :

- a) Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal refraction and its applications, optical fibers, refraction at spherical surfaces, 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.
- b) Scattering of light - blue colour of the sky and reddish appearance of the sunrise and sunset
- c) Optical instruments : Human eye, image formation and accommodation, correction of eye defects (myopia, hypermetropia, presbyopia and astigmatism) using lenses, Microscope and astronomical telescopes (reflecting & refracting) and their magnifying powers.
- d) Wave Optics : Wave front and Huygens' principle, reflection and refraction of plane waves of a plane surface using wave fronts, proof of laws of reflection and refraction using Huygens' principle.

To study the nature and size of the image formed by a convex lens / concave m using a candle and a screen.

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

September 12

Interference : Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light

To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.

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Revision

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Summative Assessment-I

Subject : Chemistry

Text Book :

1. Text Book for Class XII (NCERT)

- Reference Books :**
1. New Era Chemistry – XII (by Prakash Publication)
 2. Comprehensive Chemistry – XII (by Laxmi Publication)

Month	W. Days	Chapter wise Contents	Sugg.Projects / Act./ Excur.
April	21	<p><u>Chapter - 1 : Haloalkanes and Haloarenes -</u></p> <ul style="list-style-type: none"> • 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 mono substituted compound only). • Uses and environmental effects of dichloromethane, trichloromethane, tetrachloromethane, Iodoform, Freons, DDT. <p><u>Chapter – 2 : Alcohols, Phenols, Ethers -</u></p> <ul style="list-style-type: none"> • Alcohol : Nomenclature, methods of preparation, physical and chemical properties (primary alcohols only), Identification of primary, secondary and tertiary alcohols; mechanism of dehydration, uses, some important compounds, methanol and ethanol. • Phenol : Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols. • Ether : Nomenclature, methods of preparation, physical and chemical properties, uses. <p><u>Chapter – 3 : Aldehydes, Ketones, Carboxylic Acids -</u></p> <ul style="list-style-type: none"> • 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. 	
June	13	<p><u>Chapter – 3 : Aldehydes, Ketones, Carboxylic Acids (Contd.) -</u></p> <ul style="list-style-type: none"> • Carboxylic Acids : Nomenclature, acidic nature, methods of preparation, physical and chemical properties and uses. <p><u>Chapter - 4 : Organic Compounds containing Nitrogen -</u></p> <ul style="list-style-type: none"> • Amines : Nomenclature, classification, structure, methods of preparation, physical and chemical properties and identification of primary secondary and tertiary amines. • Cyanides and isocyanides will be mentioned at relevant places in context. • Diazonium Salts : Preparation, chemical reactions, and their importance in Synthetic Organic Chemistry. <p><u>Chapter – 5 : Solid State -</u></p> <ul style="list-style-type: none"> • 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. 	Preparation of some useful organic compounds e.g. Aspirin, Iodoform etc.
July	22	<p><u>Chapter – 5 : Solid State (Contd.) -</u></p> <ul style="list-style-type: none"> • Calculation of density of unit-cell, packing in solids, voids, number of atoms per unit-cell in a cubic unit cell, point defects, electrical and magnetic properties. <p><u>Chapter – 6 : Solutions -</u></p> <ul style="list-style-type: none"> • Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, Henry's law, Raoult's law, Non-Ideal solution, colligative 	

properties – relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass.

Chapter – 7 : Electrochemistry -

- Redox reactions, conductance in electrolytic solutions, specific and molar conductivity variations of conductivity with concentration with concentration, Kohlrausch's Law, electrolysis and laws of electrolysis. (elementary idea), dry-cell, electrolytic cell and galvanic cells, lead accumulator, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells. Fuel cells and Corrosion.

Preparation of some coloured complexes of cobalt, copper etc. (transition element).

Chapter – 8 : 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.

August 19

Chapter – 8 : Chemical Kinetics (Contd.) -

- Integrated rate equations and half life (only for zero and first order reactions), concept of collision theory (elemental theory, no mathematical treatment).

Chapter – 9 : Surface Chemistry -

- Adsorption – physisorption and chemisorption, factors affecting adsorption of gases on solids.
- Catalysis – homogeneous and heterogeneous, activity and selectivity enzyme catalysis.
- Colloidal state, distinction between true solution, colloids and suspensions lyophilic, lyophobic, multi-molecular and macromolecular colloids, properties of colloids, tyndall effect, Brownian movement, electrophoresis, coagulation emulsions, types of emulsions.

Chapter – 10 : 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.

September 12 Revision for Half-Yearly Examination.
+6 **Summative Assessment-I**

Subject : Biology

Prescribed Text Book : Biology for Class XII by NCERT

Reference Book : 1. Elementary Biology for Class XII (Trueman's Pub.)
2. Text Book of Biology for Class XII (Pradeep's Publication)
3. Practical Note-Book (Saraswati Publication)

Month W.D. Topics Project/Activities

April 21 **UNIT - VI – Reproduction :**
Chapter – 1 : Reproduction in organisms : Mode of Asexual and Sexual reproduction.
Chapter – 2 : Sexual reproduction in flowering plants : Structure of flower, Pre-fertilization events, process of double fertilization, post Study of pollen germination in Portulaca / grass.

		fertilization changes, Apomixis and Polyembryony.	
		Chapter – 3 : Human Reproduction : Male reproductive system, menstrual cycle, fertilization and implantation, pregnancy, embryo development, parturition and lactation.	Study through permanent slides
		Chapter – 4 : Reproductive Health : Reproductive health problems and strategies, population explosion and birth control, medical termination of pregnancy, sexual transmitted diseases and infertility.	1) T.S. of testes 2) T.S. of ovary
June	13	UNIT VII – Genetics and Evolution : Chapter – 5 : Principles of Inheritance and Variation : Mendelian laws of inheritance, Inheritance of one gene, inheritance of two genes, sex determination, Mutation, Genetic disorders, Autosomal and sex linked. Chapter – 6 : Molecular Basis of Inheritance : The DNA, RNA world.	Project cum survey of few genetic traits through Pedigree analysis like – (a) attached ear lobe (b) Polydactyly (c) Rolling of tongue (d) Widow's peak
July	22	Chapter – 6 : Molecular Basis of Inheritance (Contd.) : Replication of DNA, Transcription, Genetic code, Translation, Regulation of gene expression, Human genome project, DNA fingerprinting. Chapter – 7 : Origin of Life : Evolution of life forms, Evidences for evolution, Adaptive radiation Mechanism of evolution, Origin and Evolution of Man.	Study of homologous and analogous organs in different groups of plants and animals.
August	17	UNIT – VIII : Biology in Human Welfare : Chapter – 8 : Human Health and Diseases : Common diseases in humans, Passive and Active immunity, AIDS, Cancer, Drug and Alcohol Abuse. Chapter – 9 : Strategies for enhancement in Food Production : Animal husbandry, Plant breeding single cell protein, tissue culture.	Project on detailed account of cancer and AIDS with respect to causes, symptoms mode of transmission preventive & cure.
September	12	Revision	
	+6	Summative Assessment-I	

Subject :- Biotechnology

Text Books – 1. A text book of Biotechnology for Class-XII – NCERT
2. Lab Manual of Biotechnology for Class-XII – NCERT

Reference Book – 1. A text book of Biotechnology with practicals by R.C. Dubey (S.Chand)

Month	W. D.	Topics	Project/Activity
April	21	Unit – V : Protein & Gene Manipulation Chapter – 2 : Recombinant DNA Technology – Introduction, Tools, Making recombinant DNA, DNA library, Introduction of rDNA into host cells, Identification of recombinants. PCR, DNA Probes,	Data retrieval using Internet site NCBI

		Hybridization techniques, DNA sequencing, Site-directed mutagenesis.	
June	13	<u>Chapter – 1</u> : Protein structure & engineering, introduction, 3-D structure of proteins, Structure – function relationship, Purification of proteins, proteins based products, Designing proteins, proteomics.	Determination of blood groups.
July	22	<u>Chapter – 3</u> : Genomics & Bioinformatics – Introduction, Genomic sequencing project, Gene-prediction & Counting, Genomic similarity, SNP & Comparative genomics, Functional genomics, History of bioinformatics, Sequences & nomenclature, Information sources, Analysis using bioinformatics tools.	Downloading DNA sequence & protein sequence using Internet site NCBI.
		Unit – VI <u>Chapter – 4</u> : Cell Culture technology, Microbial culture and Applications, Introduction, Microbial culture techniques, Measurement & Kinetics of microbial growth.	
August	19	<u>Chapter – 4 (Contd.)</u> : Scale up of Microbial process, Isolation of Microbial products, Strain Isolation & Improvement. Application of Microbial culture technology, Bio-ethics in microbial technology. <u>Chapter – 5</u> : Pant Cell Culture & Applications – Introduction, cell and tissue & culture techniques, application of tissue culture.	Bacterial Transformation using any plasmid.
September	22	Revision of Unit – V, Chapter – 1, 2 & 3. Summative Assessment-I	

Subject : Computer Science

Text Book : Computer Science C++ for Class XII by Sumita Arora, Dhanpat Rai Publication

Reference Books : C++ by Venu Gopal (Tata Mcgrawhill Publication)

Month	W.D	Topics to be covered
April	21	<p>Review : C++ covered in class XI</p> <p>Concept of OOPs – Class and objects, Data Encapsulation, Data hiding, Data Abstraction, Polymorphism, Inheritance, Implementation of Object Oriented Programming Concepts in C++.</p> <p>Networking: Concept of networking, server and node, Types of networking, Topology, Different network device, communicating medium, switching technique</p> <p>Internet : Communication protocol –HTTP, FTP, SLIP, PPP, TCP/IP</p> <p>Wireless and mobile computing technologies : GSM, TDMA,CDMA, WLL, EDGE</p> <p>Internet terminology and services : WWW, web browser, web site, web page, search engine, web address, web hosting, HTML, XML, DHTML, SMS,E-mail, voice mail, chat, video conferencing.</p> <p>Software related terminology: Free S/W OSS, Freeware, Gnu, FSF,OSI etc.</p> <p>Class & Objects: Definition of a class, Array of objects, objects as function argument, function returning the object, friend function, inline function, static data member and function</p> <p>Constructor: Special characteristics, Default constructor, parameterized and</p>

copy constructor, default argument constructor, Implicit and Explicit call to the constructor, constructor overloading, order of constructor execution in case of containership. **Destructor:** Special characteristics, Declaration and definitions of Destructor.

June	13	Inheritance: Definition and use, concept of inheritance- base class & derived classes, Accessibility mode, Accessibility of members from objects and within derived class(es), different types of inheritance, Defining parameterized constructor in base class and derive class and their order of invocations.
July	22	File Handling : Need for data file, text file and binary file, basic file operation (creating file, writing in a file, searching data from file, appending data in file, deleting data from file), file accessing mode and function used for file handling.
August	19	Data Structures: Arrays -Traversal, Searching (Linear, Binary Search), Insertion, deletion, sorting (insertion, selection, bubble sort), merging of two sorted arrays. Two Dimensional Arrays: Traversal, calculating address of an element (row major, column major), programming based on 2D array . Stacks : Definition, Operations on stack (Push and Pop) and its implementation in C++ using array, converting expressions from infix to postfix notation and evaluations of post fix expression, Queues : Definition, operation on queue(insertion, deletion) and its implementation in C++ using array, Circular Q.
September	12+ 6+4	Revision and Practical Exam. Summative Assessment-I

Subject : Web Technology & Multimedia

Text Book :- Web Tech. and Multimedia by Reeta Sahoo, Saraswati Publication.

Month	W.Days	Topics to be covered
April	21	UNIT-1: Computer System : <u>Database Terminology</u> : Data, record/tuple, table and database, Concept of keys, Primary key, Foreign Keys, Primary Key, Candidate Key, Alternate key. <u>Database Concepts using MS-Access</u> : Creating and Saving Table, Defining Primary key, Inserting and deleting column, Renaming, column, inserting records, deleting records and table relationships. UNIT-3: Web Development : Review of class XI Active Server Pages: Concepts of Asp features of Asp other equivalent tools, JSP, PHP. <u>Constants</u> : String and Numeric. <u>Data Types</u> : Integer, float, string, date, Boolean, currency, variant and object. <u>Variables</u> : explicit and implicit declaration, operators unary and binary comparison operators, logical operator and string operator.
Jun	13	Functions : <u>Conversion Fucntions</u> : Abs, CBool, CByte, Cint, CStr, CSng, CInG, CDate. <u>String Functions</u> : Ucase, lcase, left, len, right, mid, ltrim, rtrim, <u>Time and Time and Date Function</u> : date, day, month, now, hour, minute, monthname. <u>Arrays</u> : Declaration of 1 dimensional and 2 dimensional arrays, control statement, if, select case, for next, for each, do while, do loop while, do while. <u>Control Statement</u> : If-Then, Select-Case, For-Next, For-Each, do while, Do Until-loop.

July	22	<p><u>Procedures and Functions</u> : Passing parameters /arguments, concepts of object model structure, client to server and server to client)</p> <p><u>Objects</u> : Properties, methods, event, setting object properties, retrieving object properties, calling objects methods</p> <p><u>Type of objects</u>: Response, Request, Application and Session, Server and Error,</p> <p><u>Response object</u> : write method, adding header append to log, binary write, using short cuts, <u>Controlling information</u> : buffer, flush, char, end, <u>Request object</u> : collection, query string, form server variables, cookies, client certificate, <u>Application object</u> : contents, lock, unlock, remove and remove all.</p>
August	19	<p>ASP Components : AD Rotator content Rotator, counter, page counter, permission checker</p> <p><u>Text Files</u> : Open and read content from a text file.</p> <p><u>Connecting with Database</u> : Creating DSN using OLEDB</p> <p>Working with Database – Insert, Modify, Retrive, Record using Server Objects (ADODB connection & Recordset).</p> <p><u>Server Variables</u> : HTTP_User_Agent, Remote_Adder, Remote_Host and Server_Name.</p>
September	15	<p>Review of class XI about scripting language, working with VBScript Programs. Revision of ASP and a Project in ASP.</p> <p>UNIT-2 Web Technology : Communicational Network Concept.</p> <p><u>Evolution of Network</u> : ARPANET, Internet, Interspace. Different ways of sending data across the network with reference to switching techniques.</p> <p>Data Communication Terminology : Concept of channel, Band, Bandwidth (H₂, KH₂, MH₂) and Data transfer rate.</p> <p><u>Transaction Media</u> : Twisted Pair Cable, Co-axial Cable, Optical fiber, Infrared, radio link, microwave link and satellite link.</p> <p>Summative Assessment-I</p>

Subject :- Informatics Practices

Text Book : Informatics Practices for Class XII by Sumita Arora, Dhanpat Rai Publication

Reference Books : Informatics Practices for Class XII by Reeta Sahoo, Saraswati Publication

Month	W. D.	Topics to be covered
April	21	<p><u>NETWORKING AND OPEN STANDARDS</u></p> <p>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,</p> <p>Network Topologies, 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;</p> <p>Network security - denial of service, intrusion problems, snooping;</p> <p><u>Open Source Concepts:</u></p> <p>Open Source Software (OSI norms), common FOSS examples (Gnu/Linux, Firefox, OpenOffice), common open standards (open document format, Ogg Vorbis), 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.</p>
June	13	Review of Class XI
July	22	<p><u>Programming Fundamentals</u></p> <p>Access specifier for classes, Members and methods, Concept of package</p>

		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 Accessing MySQL database using ODBC to connect with database.
August	19	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
September	12+6+4	Revision Summative Assessment-I

Subject :- Economics

Text Book : Economics for Class – XII NCERT

Reference Book : Micro & Macro Economics – Sawaswati House Pvt.Ltd. & Tushar Pub. House

Month	W. D.	Topics	Project/Activity
April	21	<u>Introduction of Micro Economics</u> , distinction between Micro & Macro. Central problems of an economy – what, how and for whom, PPC and opportunity cost. <u>Consumers behaviour and demand</u> – Consumer's equilibrium – through utility and indifference curve. <u>Demand</u> – Determinants, market and individual demand, factors affecting & elasticity of demand – degree and factors.	Changes in demand and changes in quantity demanded to be shown on chart-paper.
June	13	<u>Production Function</u> : Meaning & relation between TP, AP, MP. Laws of returns to a factor. Supply – determinants, market and individual supply, factors affecting supply and elasticity of supply – degrees & factors.	Supply curves to be shown on a chart paper and also preparation of market and individual supply schedule.
July	22	<u>Forms of Market and Price determination</u> – Meaning, Features of perfect competition, imperfect competition, Monopoly and Oligopoly. Equilibrium Price – effects & shifts. <u>Introduction</u> – Macro Economics	
August	19	<u>National Income</u> – Circular flow of income, concepts, Aggregates, Measurement of National Income – Income method, expenditure method and product method. <u>Government Budget</u> – Meaning and Components of Government Budget, Objectives, Classification of receipts and expenditure – revenue and capital. Meaning & implications of different deficits – Primary, revenue & fiscal deficits.	
September	12+6	Revision. Summative Assessment-I	

Subject :- Accountancy

Text Books – Accounting III & IV – NCERT

Reference Book – Accounting – V. K. India

Month	W. D.	Topics	Project/Activity
April	21	<p><u>Part – A : Accounting for Not-For-Profit Organisation, Partnership Firms and Companies :</u></p> <p>Accounting for Not-For-Profit Organisation :</p> <ul style="list-style-type: none">• Meaning and examples.• Receipt and Payment – meaning, concept of fund.• Meaning and Features of Fund Based Accounting.• Preparation of Income & Expenditure Account• Preparation of Balance Sheet. <p>Accounting for Partnership Firm :</p> <ul style="list-style-type: none">• Nature of Partnership firm• Partnership Deed – meaning, importance among partners.• Partners' capital A/C, Fixed Cap., Fluctuating Cap.• Division of profit• Profit & Loss Appropriation A/C.• Past Adjustment. <p>Reconstitution of Partnership :</p> <ul style="list-style-type: none">• Change in profit sharing Ratio among the existing partners.• Sacrificing ration and Gaining ratio• Accounting for Revaluation of Assets & Liabilities, Distribution of Reserve & Accumulated profit. <p>Goodwill :</p> <ul style="list-style-type: none">• Nature, Factors affecting• Method of valuation of goodwill.• Average profit method, super profit method, capitalization method. <p>Admission of a Partner :</p> <ul style="list-style-type: none">• Effect of Admission of a Partner• Change in profit sharing ratio	
June	13	<p>Admission of a Partner (contd.) :</p> <ul style="list-style-type: none">• Accounting treatment of g/w.• Revaluation of Assets & Liabilities.• Preparation of Partner's Capital.• Preparation of New Balance Sheet. <p>Retirement of a partner :</p> <ul style="list-style-type: none">• Meaning, Cause, Change in ratio.• Treatment of goodwill,• Treatment of Revaluation of Assets & Liabilities.• Adjustment of Capital• Preparation of New Balance Sheet. <p>Dissolution of Partnership Firm :</p> <ul style="list-style-type: none">• Meaning & Reasons• Preparation of Realisation A/C. <p>Partner's Capital A/C, Bank A/C (Excluding Garner Vs. Murray rule and Peace Meal Distribution)</p>	
July	22	<p>Company Accounts – Issue of Share :</p> <ul style="list-style-type: none">• Share Capital - meaning and types.	

- Accounting of share capital.
- Issue and allotment of equity and pref. share.
- Over subscription, under subscription.
- Issue of share at par, premium and at discount.
- Calls in advance, calls in arrear.
- Forfeiture & reissue of share.
- Prorata allotment.
- Presentation of share capital in company's Balance sheet.

Accounting for Debenture :

- Debenture – meaning & types.
- Issue of Debenture at par, premium and discount.

August 17

Accounting for Debenture (Contd.):

- Issue of Debenture for consideration other than cash.
- Issue of debenture at collateral security & with term of redemption.

Redemption of Debenture :

- Source; Out of profits, debenture redemption reserve.
- Out of Capital Methods : Lump-sum payment, Draw by lots, purchases in the open market.
- Conversion Method.

September 12+
6

Revision

Summative Assessment-I

Subject :- Business Studies

Text Book : Business Studies – for Class XII - NCERT.

Ref. Book : Business Studies - XII by Poonam Gandhi.

Month	W. D.	Topics
April	21	<p>Part–A: Principles & Functions of Management.</p> <p><u>Chapter – 1 : Nature & Significance of Management</u></p> <ul style="list-style-type: none"> – Management - concepts, objectives & importance – Nature of Management – science, art & profession – Levels of Management – top, middle & lower. – Management functions – planning, organising, staffing, directing and controlling – Coordination – nature & importance. <p><u>Chapter – 2 : Principles of Management</u></p> <ul style="list-style-type: none"> - Meaning – nature & significance. – Fayol's Principles of Management – Taylor’s scientific management – principles & techniques <p><u>Chapter – 3 : Business Environment</u></p> <ul style="list-style-type: none"> – Meaning & Importance – Dimensions – economical, social, legal, political and technological. – Economic environment in India, Impact of Government policy changes on business & industry – policies of privatization, liberalization and globalization. <p><u>Chapter – 4 : Planning</u></p> <ul style="list-style-type: none"> – Meaning, features, importance, limitations, planning process – Types of plans – objectives, goals, strategy, policy, procedure, method, rule, budget & programme.

June	13	<u>Chapter – 5 : Organizing</u> – Meaning, importance, steps in organizing – Structure of Organisation – functional & divisional structures, formal & informal organization, delegation – meaning, elements & importance, decentralization – meaning & importance. – Difference between delegation and decentralization – Principles of organizing <u>Chapter – 6 : Staffing</u> – Meaning, need, importance, staffing as part of HRM – Steps in staffing process – Recruitment – meaning, sources – Selection – meaning, process, – Training & Development – meaning, need & methods.
July	22	<u>Chapter – 7 : Directing</u> – Meaning, importance & principles, Elements of direction – Supervision – meaning, importance – Motivation – meaning, importance, Maslow's theory of motivation, Financial & Non-financial incentives – Leadership – meaning, importance, qualities – Communication – meaning, importance, formal & informal communication, barriers to effective communication. <u>Chapter – 8 : Controlling</u> – Meaning & importance, relationship between planning & controlling – Steps in the process of control – Techniques of controlling – modern & traditional – Budgetary control Part B - Business Finance and Marketing <u>Chapter – 9 : Financial Management</u> – Meaning, role, objectives of financial management, – Financial planning – meaning & importance – Capital structure – meaning factors
August	17	<u>Chapter – 9 : Financial Management (Contd.)</u> – Fixed & working capital – meaning & factors affecting capital requirement. – Financial, Investment & Dividend decision – meaning & factors affecting these decisions. <u>Chapter – 10 : Financial Markets</u> – Concept of Financial Markets : money market – nature & instruments. – Capital markets – nature & types – Primary & secondary markets – Difference between capital & money market – Stock exchange – meaning, functions, NSEI, OTCEI, trading procedure, SEBI – objectives & functions.
September	12 + 6	Revision – Nature & Significance of Management, Principles of Management, Planning, Organising, Staffing, Directing, Controlling, Financial Management and Financial Market. Summative Assessment-I

Subject :- Entrepreneurship

Text Book : Entrepreneurship, NCERT.

Ref. Book : Entrepreneurship – Ankur Chhabra.

Month	W. D.	Topics
April	21	<p>Unit – I : Entrepreneurial Opportunities & Enterprise Creation</p> <p><u>Chapter – 1 : Sensing entrepreneurial opportunities –</u></p> <ul style="list-style-type: none"> - Introduction, functions, features - Opportunities and problem solving - Scope of business - Sensing opportunities – factors involved. <p><u>Chapter – 2 : Scanning of Environment –</u></p> <ul style="list-style-type: none"> - Importance of environment scanning, limitation of environmental analysis - Sources of environment scanning. <p><u>Chapter – 3 : Market Assessment –</u></p> <ul style="list-style-type: none"> - Meaning & definition of market assessment - Generation of ideas – idea fields - Transformation of ideas into opportunities, Product identification - Feasibility study
June	13	<p><u>Chapter – 4 : Setting-up an Enterprise –</u></p> <ul style="list-style-type: none"> - Preparing to launch a small enterprise - Enterprise process model - Preparatory steps - Measures to support E.Ps. - Practical steps in setting up an enterprise. - Launching the enterprise. <p>Unit – II : Enterprise Planning & Resourcing</p> <p><u>Chapter – 5 : Business Planning – Preparation of Project Report –</u></p> <ul style="list-style-type: none"> - Introduction & steps - business planning. - Project feasibility plan - guidelines. - Project appraisal tests. - Objectives and aspects.
July	22	<p><u>Chapter – 5 : Business Planning – Preparation of Project Report (Contd.) –</u></p> <ul style="list-style-type: none"> - Uses of a Project report. <p>Preparation of Project report and Market survey report.</p> <p><u>Chapter – 6 : Resource Allocation –</u></p> <ul style="list-style-type: none"> - Financial planning - Objectives, features, importance & limitations - Estimation of financial requirement – fixed and working capital requirement. - Fund flow statement, break even point, profit ratios. - Financial & non-financial. <p><u>Chapter – 7 : Mobilising Resources –</u></p> <ul style="list-style-type: none"> - Needs for resources – method & sources of resources - Establishing an enterprise - Preparation stage – facilities & technologies
August	19	<p>Unit – III : Enterprise Management –</p> <p><u>Chapter – 8 : General Management –</u></p> <ul style="list-style-type: none"> - Difference between Management & Entrepreneurship - Management responsibilities of an entrepreneur - Communication – features & types - Decision making <p><u>Chapter – 9 : Production of Goods & Services –</u></p> <ul style="list-style-type: none"> - Organising, production function - Scope of production management - Economic order quantity. - Selective approaches to inventory control

		- Functions and responsibilities of prod. management.
		<u>Chapter – 10 : Meaning, Function of Marketing, Marketing Mix. –</u>
		- Definition of marketing, characteristics, objectives & importance
		- Marketing orientation & function of marketing
		- Marketing management & its function
September	12	<u>Chapter – 10 : Meaning, Function of Marketing, Marketing Mix. –</u>
	+	- Marketing mix.
	6	Revision of all the chapter 1 to 10 for the Half-Yearly Examination

Summative Assessment-I

Subject : Physical Education

Month	W. Days	Topics to be covered
April to June	21 + 13	<p><u>Part – A : Theory</u></p> <p><u>Chapter – 1 : Physical Fitness and Wellness :</u></p> <p>1.1. Meaning, importance of Physical Fitness and Wellness.</p> <p>1.2. Components of Physical Fitness & Wellness</p> <p>1.3. Factors affecting Physical Fitness and Wellness</p> <p>1.4. Principles of Physical Fitness Development.</p> <p>1.5. Means of Fitness Development.</p> <p><u>Chapter – 2 : Planning in Sports :</u></p> <p>2.1. Tournaments – Knock-out and League</p> <p>2.2. Intramurals and Extramurals</p> <p>2.3. Formation of committees for organising sports events.</p> <p>2.4. Specific sports programmes.</p> <p><u>Part - B : Practical / Theory</u></p> <p><u>Chapter – 1 :</u></p> <p>1.1. Measurement of sports field and related sports equipments.</p> <p>1.2. Latest General Rules of the Game / Sport.</p> <p>1.3. Measurement of Sports Field and Equipments.</p> <p><u>Chapter – 2 :</u></p> <p>2.1. Fundamental skill of the Game / sports.</p> <p>2.2 Specific Exercises of warm-up and conditioning.</p>
July to September	22 +19+ 12	<p><u>Chapter – 3 : Sports Environment :</u></p> <p>3.1. Meaning and need of sports environment</p> <p>3.2. Essential element to positive sports environment.</p> <p>3.3. Role of individual in improvement of sports environment for prevention of sports related accidents.</p> <p>3.4. Role of spectators and media for creating positive sports environment</p> <p><u>Chapter – 4 : Postures :</u></p> <p>4.1. Meaning & Concept of correct postures.</p> <p>4.2. Advantages of correct posture</p> <p>4.3. Common Postural Deformities</p> <p>4.4. Physical activities as corrective measures.</p> <p><u>Chapter – 5 : Yoga :</u></p> <p>5.1. Meaning and Importance of Yoga</p> <p>5.2. Yoga as an Indian Heritage</p> <p>5.3. Elements of Yoga</p> <p>5.4. Role of Yoga in sports.</p>

Part – B : Practical / Theory

Chapter- 1 :

- 1.1. History of the Game/Sports
- 1.4. Important Tournaments and Venues.
- 1.5. Sports Personalities.

Part – B : Practical / Theory

Chapter- 2 :

- 2.3. Related sports terminologies
- 2.5. Common sports Injuries & its prevention

Revision

Summative Assessment-I

- Note :** (1) Part – B related to anyone Games/Sports of choice of student out of Basketball, Cricket, Football, Kabaddi, Kho-Kho and Volleyball.
- (2) Norms for Testing Physical Fitness for Boys :
- Test – A : 60 m or 100 m race
 - Test – B : Long Jump or Standing Board Jump
 - Test – C : Push-ups or Bent Knee Sit-up
 - Test – D : Shot-put (7.260 kg) Throw or Overhead Backward Basketball throw with both hands.
 - Test – E : Shuttle Run (4x10 m)
- (3) Norms for Testing Physical Fitness for Girls :
- Test – A, Test – B and Test – E is same as for Boys
 - Test – C : Modified Bent Knee push-ups or Bent Knee Sit-up
 - Test – D : Shot-put (4 kg) Throw or Overhead Backward Basketball throw with both hands.
- Each student will have to choose five items for the test of choice.*
- * One item for test must be chosen from A, one from B, one from C, one from D and test item number E is compulsory for all.

Subject : General Studies

Month	W. Days	Topics to be covered
April	22	<u>Unit – I : Science, Technology and Society</u> L-1 : Scientific Method L-2 : Scientific Spirit L-3 : Importance of Rationalism L-4 : Science and Economy
June	14	L-5 : Science and Religion <u>Unit – II : Contemporary Problems of Indian Society</u> L-1 : Removal of Poverty L-2 : Removal of Illiteracy
July	22	L-3 : Eradication of Superstition L-4 : Population 'Education' L-5 : Social inequalities in India L-6 : Planning Process of India
August	19	<u>Unit – III : Common Cultural Heritage</u> L-1 : Meaning of Culture

L-2 : The Evolution of Indian Culture

L-3 : Features of Indianness

September 12+7+3

Unit – IV : Constitutional Obligations

L-1 : Guiding Principles of Indian Constitution

L-2 : Democratic Living

L-3 : Secularism in a Religion Society

ART-EDUCATION :-

Subject : Vocal Music

Month	W.D.	Particulars
April	22	Revision, 5 Alankars in Bhairavi Thaata, Bhajan – Tahir Ahir Ki Project – Composing a new song
June	14	Shabad – Swas Swas Simro, Patriotic song – Bharat hamari maan hai, Bangla song – Manush Manusher Jonay
July	22	Song – Badari Babul Ke Angara, Hindi song – Jab jab neer bhara, Ghazal – Mana ke Mushte Khaak se
August	19	Gujarati song – Halo Manaviyun ne, Kajari – Are Rama Saawan Maan Assignment no. 1
September	22	Revision

Subject : Dance

Month	W.D.	Particulars
April	22	Theory – "Nayak – Nayaki Bhed" Pract. – A creative dance (Patriotic)
June	14	Theory – Taal parichay - Teen Taal, Jhap taal, Dhamar taal, Pancham Sawari Pract. – Continued
July	22	Theory – Definition – Taal, Matra, Bibhag, Avantam, Sam, Taali - khali Pract. – Continued
August	19	Theory – "Greeba Bhed" and "Shiroo Bhed" Pract. – A creative dance
September	22	Theory – Revision Pract. – Revision, 1 st Term Exam

Subject : Art & Craft

Month	W.D.	Particulars
April	22	Theory – Anatomy Pract. – Sketching
June	14	Theory – Contemporary art Pract. – Dry colour practice
July	22	Theory – Gothic period Pract. – Making Gothic structure
August	19	Theory – Cubasim (Contd.) Pract. – Cubasim painting (Contd.)
September	22	Theory – Cubasim Pract. – Cubasim painting

Subject : Photography

Month	W.D.	Particulars
April	22	Basic principles of photography, Different reaction with light and LSM
June	14	Image formation – How light comes through pin hole and inverted image form on opposite wall
July	22	Light – artificial – VDO, flash, halogen, Basic light – front, back spl.
August	19	Photographic chemical – develops stop bath, fixer and timing
September	22	Various variety of camera, film and positive, Cippa, silver tone, mixed tone

Subject : Instrumental Music

Month	W.D.	Particulars
April	22	Use of diagonal bar, Harmonise, Broken chords in E Major scale Songs – Jingle bells and Come september
June	14	4 – Koot Alankars in Layakari, Rag Ashawari, Razakhani Gat Song – Bhaiya batoria re
July	22	Western music – Limborock, Project work
August	19	Western music – S. N. Fantasy and Silvery Moon
September	22	Revision and Exam

Subject : Tabla

Month	W.D.	Particulars
April	22	शास्त्र :- तबले का चित्र, दस वर्ण, हस्त साधन, लेखन कार्य ! क्रियात्मक :- दस वर्ण, हस्त साधना, लय अभ्यास ।
June	14	शास्त्र :- परिचय त्रिताल, ठेका, कायदा पलटा निहाई लेखन कार्य क्रियात्मक :- त्रिताल, ठेका, हस्त साधन दस वर्ण, लयकारी ।
July	22	शास्त्र :- परिभाषाएँ एवं कांगो बोंगों परिचय क्रियात्मक :- दसवर्ण, हस्त साधन (Congobongo Beats Soul)
August	19	शास्त्र :- दस वाध्य कलाकरों का संक्षिप्त परिचय क्रियात्मक :- कहरवा दादरा परिचय ठेका कायदा पलटा अभ्यास
September	22	शास्त्र :- तिहाई के प्रकार लेखन कार्य क्रियात्मक :- वर्ण, हस्त साधन, ठेका, कायदा, पलटा अभ्यास । प्रोजेक्ट :- तबला अथवा पखावज का चित्र बनाकर अगों का विस्तृत वर्णन

Subject : Spanish Guitar

Month	W.D.	Particulars
April	22	Demonstration, scale – D major. Chords - D major, G major, A7th, B m, E m, F#7 th , Rythem – 2/4 or Hose Beat.
June	14	Revision of scale D. Notes of 1 st string on a staff notation, Melody on E, B, G, D & A string.
July	22	Rythem – ¾ waltz. Scale A minor chords, A major, F major. Notes of the 2 nd string on a staff. Project – Write D major scale on a staff.
August	19	Chords of A major, D minor, E7th, Notation, Assignment, some where my love, Notes of the 3 rd string on a staff.
September	12+7+3	Revision of scale, chords, notation, rythem. Summative assessment

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