

Chemistry I

July -2015

Some basic concept of chemistry

- Introduction
- Importance and scope of chemistry
- Historical approach of particulate nature of matter
- Law of chemical combination
- Dalton's atomic theory
- Concept of elements, atoms and molecules
- Atomic and molecular masses
- Avogadro's law, Avogadro's number and mole concept
- Percentage composition and empirical and molecular formula
- Chemical reaction, stoichiometry and calculation based on stoichiometry
- Limiting and excess reactants

August- 2015

State of matter

- Introduction
- The three states of matter
- Intermolecular interactions
- Hydrogen bonding
- The gaseous state
- Boyle's law
- Charles law
- Gay lussac's law
- Avogadro's law
- Ideal behaviour, ideal gas equation
- Deviations from ideal behaviour
- Liquefaction of gases and critical temperature, pressure and volume
- Kinetic theory-molecular speeds
- Liquid state
- Vapour pressure
- Surface tension
- Viscosity

September -2015

Structure of atom

- Introduction
- Discovery of electron
- Discovery of proton
- Discovery of neutron
- Concept of atomic number
- Isotopes and isobars
- Atomic models (Thomson model)
- Rutherford's atomic model and its limitation
- Bohr's model for H and H like atom
- Concept of shells and subshells
- Dual nature of matter and light
- de- Broglie equation
- Heisenberg's uncertainty principle
- Concept of atomic orbitals
- Quantum numbers
- Shapes of orbitals
- Rules for filling electron in orbitals
 - 1)Aufbau principle
 - 2)Pauli's exclusion principle
 - 3)Hund's rule of maximum multiplicity
- Electronic configuration of the elements (atomic no.1 to 30)
- Stability of half filled and completely filled orbitals

October-2015

Periodic table

- Introduction , significance of classification
- Brief history of the development of periodic table
- Modern periodic law and present form of periodic table
- Periodic trends in properties of elements
 - a. Atomic radii
 - b. Ionic radii
 - c. Ionization enthalpy

- d. Electron gain enthalpy
- e. Electronegativity
- f. Valency or oxidation state

Redox reaction

- Introduction
- Concept of oxidation and reduction
- Redox reactions
- Oxidation number
- Balancing of equations of redox reactions
- Applications of redox reactions

December-2015

Chemical equilibrium

- Introduction
- Equilibrium in physical and chemical processes
- Dynamic nature of equilibrium
- Law of mass action
- Equilibrium constant
- Factor affecting equilibrium Le chatelier's principle
- Ionic Equilibria

Introduction

Strong and weak electrolytes

Acids and bases

Concept of pH

Hydrolysis of salts

Buffer solutions (Henderson equation)

Solubility product

Common ion effect

January -2016

Surface chemistry

- Introduction

- Adsorption
 - a. Type of adsorption (physical and chemical)
 - b. Factors affecting adsorption of gases on solid
- Catalysis

Introduction

Classification of catalysts

Catalytic activity

Catalytic selectivity

Enzyme catalysis

- Colloids
 - Introduction
 - Colloidal state
 - Distinction between true solutions, colloids and suspensions
 - Classification of colloids
(Lyophobic, lyophilic, multimolecular, macromolecular)
 - Properties of colloids
 - Emulsions
- Nanomaterials

February-2016

Nature of chemical bond

- Introduction
 - Kossel approach and Lewis approach
 - Valence electrons and Lewis structure
- Ionic bond
 - Born Haber cycle
- Covalent bond
- Lewis structure
 - Formal charge
 - Limitations of octet rule
 - Bond parameters

Resonance
Polar character of covalent bond
Covalent character of ionic bond
Valence Bond Theory
Hybridisation
Geometry of molecules
Valence shell electron pair repulsion theory
Importance of valence bond theory and limitations of valence bond theory
Molecular orbital theory
Hydrogen bonding

EXAM WISE YEAR PLAN 2015-16

I unit test

1. Some basic concepts of chemistry
2. State of matter

I semester

1. Some basic concepts of chemistry
2. State of matter
3. Structure of atom
4. Periodic table
5. Redox reaction

II unit test

1. Chemical equilibrium

II semester

1. Chemical equilibrium
2. Surface chemistry
3. Nature of chemical bond

Note:- 20% syllabus from Ist semester

Year Plan 2015-16

Chemistry-II

July

Basic Principles and technique in organic chemistry

- General introduction, Importance of organic chemistry
- Characteristics of organic chemistry
- Methods of purification of organic compounds
- Qualitative analysis of organic compounds
- Tetravalency of carbon, structural presentation

August

- Classification and IUPAC nomenclature
- Fundamental concept in organic reaction mechanism
- Electron movement in organic reactions
- Electrons displacement in a covalent bond
- Homolytic and heterolytic in a covalent bond
- Homolytic and heterolytic fission of a covalent bond
- Types of reagents
- Types of organic reactions

August: Alkanes

Introduction

Structural formula, Isomerism, Conformation of ethane, Nomenclature of alkanes, Methods of preparation of alkanes, Physical properties of alkanes, Chemical properties of alkanes, Uses of alkanes

September: Alkenes

Introduction

Electronic structure of ethane

Isomerism in alkenes

Nomenclature of alkenes

Methods of preparation of alkenes

Physical and chemical properties of alkenes

Uses of alkenes

Oct: Alkynes

Introduction

Electronic structure of ethyne

Nomenclature of alkynes

Methods of preparation alkynes

Physical and chemical properties of alkynes

Uses of alkynes

Dec: Aromatic compounds

Important formula and reaction

Introduction

Characteristics of aromatic compounds

Nomenclature of benzene derivatives

Methods of preparation of benzene

Chemical properties

Carcinogenicity and toxicity

Jan : Hydrogen

Introduction,

Position of Hydrogen in periodic table

Occurrence of Hydrogen

Isotopes of hydrogen

Preparation of dihydrogen

Preparation of dihydrogen

Uses of dihydrogen

Hydrides ,water ,heavy water

Hydrogen peroxide

Dihydrogen as fuel

Jan 15: S –block element

General introduction ;electronic configuration

occurrence of S-block elements

Anomalous properties of lithium

Diagonal relationship between lithium and Mg

Periodic trends of alkali elements

chemical reactivity of alkali metals

Importance compounds of sodium

Uses of alkali metals

Biological importance of sodium and potassium

Group-2 elements

Alkaline earth elements

Chemical reactivity of alkaline earth metal

Anomalous properties of beryllium

Uses of alkaline earth metals

Important compound of calcium metal

Biological importance of magnesium and calcium.

Feb 15: P block elements

General group introduction

Introduction of Boron family

Occurrence of group -13 elements

Variation in properties of group -13 elements

Chemical properties of group -13 elements

Anomalous property of boron

Physical and chemical properties of boron

Important compound of boron

Uses of aluminium

Reaction of acids and alkalies with aluminum

Group 14 elements

Introduction

Trends in chemical properties of group 14

Anomalous behaviour of carbon

Catenation

Allotropes of carbon

Physical and chemical properties of carbon

Important compound of carbon

Compounds of silicon

1st unit test

Basic principles and techniques in organic chemistry

1st semester exam

Basic principles and technique in organic chemistry

Alkanes

Alkenes

Alkynes

2nd Unit Test

Aromatic Compound

2nd semester exam

Aromatic compound

S-block elements

P-block elements

Hydrogen

INFORMATION TECHNOLOGY

July & august:

Chap.7 Hyper text markup language

- Uses features, properties and limitations and heading tags, comments. Ordered and unordered lists and related tags nested list. Anchor tag and hyperlink in html division and physical style tags. Working with fonts font type sizes and columns body background color text color and hyperlink colours preformatting, line break and horizontal rules, displaying special characters in html, images in html, related tags and attributes features of BMP, JGP & GIP Rasher image formats tables in html and related tags, marquee, java applets

August:

Chap 1: Introduction to Information Technology

- Information Tech: Definition, Introduction, Information system, Software, Data .IT in business, Industry, Home, Play education, training, science and engineering computers in hiding.

September:

Chap 2:Office suit

- Word processor-MS word and its main features, spreadsheets-MS excel and its main features, presentations-MS power point

September:

Chap 3:Multimedia

- Multimedia definition communication component building blocks, scope uses, application purposes, overview of computer images, digital audio, overview of video, flash overview and introduction multimedia design and future directions.

September:

Chap 4: Web browsers, email clients and messenger utilities:-

- Overview, working of internet and WWW role of web servers, clients, web browsers and their use popular web browsers, e-mails servers and protocols e-mails clients and web based mail access using browser , messenger service and clients FTP.

October:

Chap 5: Introduction to Networking:-

- Communication and Networking Technologies, Internet, Network Communication and process, Transmission media, communication over wires and cables wireless communication and standards. Network architecture, relationship and features, cable topologies, Network

December:

Chap 6: Visual Basic NET:-

- Introduction to NET framework, Introduction to the visual studio/Visual basic IDE, console and window applications Introduction to Visual Basic.Net Syntaxes selection and Iteration statements Array and enumerations, introduction to window forms, messenger box and input box , handling keyboard and mouse events, the control class controls library function.

January:

Chap 8:Introduction to Java Script:-

- Limitation of plain html, difference between Java and Java script is a scripting language, Java script basic syntax. Insertion of Java script in html Java script built in function, selection and Interaction in Java script. Built in object properties and methods related to array.Strings, math and date function, simple html programmes using Java script.

❖ First unit test syllabus:-

Chap-7 Html

Chap-1 Introduction to information technology

❖ First semester:-

Chap -7 Html

Chap-1 Introduction to IT

Chap-2 Office suit multimedia

Chap-4 Web browser- Email clients and messenger utilities.

ENGLISH

	PROSE AND POEMS	RAPID READING	GRAMMAR	WRITING SKILLS
I UNIT	UNIT I 1.1 Start where you Stand 1.2 Climb Every Mountain 1.3 A Time To Buy Horses 1.4 Me, Myself and I UNIT II 1.1 Work 1.2 Bike Ride	1. The Joy of Learning	1. Articles 2. Prepositions 3. Voice 4. Use of too and enough 5. Tenses 6. Transformation of Sentences	Letter Writing (Application for job) Interview questions Tree diagram
II UNIT	UNIT II 1.3 The Best Advice I Ever Had 1.4 Mommy Knows Best UNIT III 3.1 City 3.2 Schooling On The Streets 3.3 The Jamun Tree 3.4 Mumbai Dabbawala UNIT IV 4.1 On Journeys Through The States 4.2 Shock And Calm 4.3 The Puppy 4.4 A letter From Father To His Little Son	2. Gateman's Gift 3. The Happy Prince	1. Direct and Indirect Speech 2. use of too and enough 3. Infinitives and Gerund 4. If-Unless 5. Simple, Compound 6. complex sentence	Note making, Speech Writing Tourist leaflet Summary writing
III UNIT	5.1 My Mother 5.2 Traffic Problems 5.3 Indian Women's income Doubles 5.4 A working Class Hero	2. The Gift Of The Magi	If-unless Degree	Letter to the editor Dialogue Writing

	6.1 Marching Song 6.2 Empower The Farmer 6.3 The Imagined And The Real 6.4 Gandhiji : A 21 st Century Leader			
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IV UNIT	7.1 O Gentleman 7.2 The Real Rain Man 7.3 For Heaven's Sake 7.4 Martin Luther King Jr. A Tribute 8.1 The Flower School 8.2 Harry Potter Novels Go Digital 8.3 Where Peacocks Enjoy Pride of Perch 8.4 Kick The Habit Go Carbon Low	The Wise Judge	Modal Auxiliaries	News Report View Counter-View Appeal
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Physics XI-std

Year Plan (Month wise)

Section I

July

- Measurements-Introduction, Units for measurements, system of units SI System, Supplementary quantities. Devices quantities derived units method of measurement of mass, length, time.

August

- Measurements:-Dimensions, User of dimension order of magnitude, significant figures errors, its types and formulas on errors
Scalarst vectors- definition, eq's, representation of vectors

September

- Scalars vectors- addition or subtraction of vectors, triangle law, law of parallelogram of vectors, resolution of vectors scalar product of vector
- Projectile motion- definitions, position time graphs, velocity time graphs, projectile equation of a projectile time of light, horizontal range, maximum height

October

- Force- introduction, implies, types of force, law of conservation of momentum, examples, work energy theorem, elastic – inelastic collisions, coefficient of restitution

November

- Force-
Inertial – non inertial frame of reference torque, couple characteristics of couple center of mass, center of gravity condition of equilibrium.
- Function in solids and liquids- introduction types of friction, origin of friction, laws of static, kinetic friction

December

- Frictions of solids and liquids-
Pressure, hydrostatic paradox, Pascal law its applications, streamlines flow, turbulent flow, newtons formula statics law, Reynolds number, Bernoulli's principles

January-

- Sonic waves
Introduction, waves and oscillation progressive waves, transverse
Longitudinal waves, its characteristics, sounds as longitudinal waves, Newton's formula, Laplace correction, effect of temperature, pressure humidity on velocity of sound, characteristics of musical sound.

February-

- Thermal Expansion
Temperature and heat, Expansion of solids, specific heat capacity, Latency heat, Heat transfer, conduction, coefficient of thermal conductivity, convection, radiation.

PHYSICS(PAPER II)

JULY

REFRACTION OF LIGHT

Introduction, Refraction of monochromatic light, Snell's Law, Total internal Reflection, Applications of total internal reflection, Critical Angle

JULY

Optical fiber, Dispersion of light, Prism formula, Thin Prism, Angular Dispersion and Dispersive power, Deviation without dispersion, Rainbow, Scattering of Light, Blue Color of sky, Colour of sun at Sunrise and Sunset, Raman Effect

CHAPTER 11: CURRENT ELECTRICITY

Introduction, Ohm's Law, Resistance, Resistivity, Conductivity, Temperature dependence of resistance, thermistor, Super conductivity.

SEPTEMBER

Colour code for resistors, Resistance connections, EMF, Internal resistance, combination of cell, work done by electric current, power in electric circuits.

CHAPTER 13: MAGNETISM

Introduction, Origin of magnetism due to moving charges, magnetic dipole moment, current carrying coil-solenoid, Torque acting on a magnet in uniform magnetic induction, Earth's magnetic field, Electromagnet and factors affecting their strength, magnetic induction

October

CHAPTER:9

RAY OPTICS

Introduction, Reflection of light by spherical mirror, Reflection at single curved surface, Lens maker equation, Combination of thin lenses, magnifying power of simple microscope and compound microscope , Eye defects, Magnifying power of telescope, Reflecting telescope

DECEMBER

CHAPTER 10: ELECTROSTATICS

Introduction, frictional electricity, charge conservations, coulomb's law, Dielectric constants, superposition principle of forces, distribution of charges, charge density, field intensity due to point charge

JANUARY

electric Field, line of force, dipole and dipole moment, electric potential energy, potential due To point charge, relation between electric field intensity and potential energy in an external field, volt, electron-volt and flux density.

CHAPTER 12:

Magnetic effect of electric current

Introduction, bio-savart's law, Right hand thumb rule, magnetic induction Fleming's left hand rule, forces between two long current carrying parallel conductors, Ampere, Torque on Current carrying loop in magnetic field

CHAPTER 14

ELECTROMAGNETIC WAVES

Introduction, Electromagnetic Waves and their Characteristics, Electromagnetic Spectrum, Gamma Ray, X-ray, Ultraviolet ray, visible light, micro wave, Radio waves, Propagation of Electromagnetic wave in the Atmosphere, mode of Propagation

MATHS I & MATHS II

MONTH	M-I	M-II
JULY	1. Angle and its measurement i) Relation between degree measure and radian measure ii) Length of an arc and area of sector	1. Logarithm i) Laws of logarithm ii) Change of base iii) Common logarithm Characteristics, Mantissa, Antilogarithm
AUGUST	2. Trigonometry function	2. Complex no

	<ul style="list-style-type: none"> i) Trigonometric function with the help of standard unit circle ii) Interrelation between trigonometric function iii) Signs of trigonometric functions in quadrants iv) Trigonometric functions and particular angles 	<ul style="list-style-type: none"> i) Definition of complex no. ii) Algebra of C.N iii) Powers and square root iv) properties of c.n v) Argand's Diagram, Polar form vi) Solution of quadratic equation vii) cube roots and unity
AUGUST	<p>3. Trigonometric function of compound angles</p> <ul style="list-style-type: none"> i) Trigonometric functions of sum and difference of two angles, compound angles ii) Formulae and Compound Angles 	<p>3. Sets, relation and functions</p> <ul style="list-style-type: none"> i) Types of set, operation, Cartesian product, relation, types of relations, function, types of function, operation and Binary op
SEPTEMBER	<p>4. Factorization formula and formula for factorization and defactorisation</p>	<p>4. Sequence and series</p> <p>A.P, G.P, H.P, Means, A-G Progression, Special Series, Exponential</p>
SEPTEMBER	<p>5. Locus</p> <ul style="list-style-type: none"> i) Equation of Locus ii) Shift of origin 	<p>5. Permutation and combination</p> <ul style="list-style-type: none"> i) Factorial Notation ii) Fundamental Principles iii) Permutation, Permutation with repetition, Circular Permutation iv) Combination
OCTOBER	<p>6. Straight Line</p> <ul style="list-style-type: none"> i) Inclination of line, slope of a line ii) Different forms of equation of a line iii) Angle between two lines iv) Distance of a point from a line v) Family of lines 	<p>6. Method of induction and binomial Theorem</p> <ul style="list-style-type: none"> i) Principle of M.I ii) Binomial Th, Binomial Th for any index iii) Binomial Coefficient
NOVEMBER-DECEMBER	<p>7. Circles & Conics</p> <p>Definition of a circle as a locus standard equation, centre- radius form, Diameter form, parametric form</p> <p>PARABOLA</p> <ul style="list-style-type: none"> i) Focus- directrix property ii) Standard equation, pr of parabola, other forms of parabola, parametric equation of parabola 	<p>7. Limits</p> <ul style="list-style-type: none"> i) Meaning of $\lim_{x \rightarrow a}$ ii) Limits of Function iii) Algebra of Limits iv) Limits of Algebraic functions, Trigonometric Function, logarithmic Functions v) Limits of Infinity

	<p>ELLIPSE Definition, standard equation of ellipse</p> <p>HYPERBOLA Definition, standard equation of hyperbola, rectangular hyperbola, conjugate hyperbola, parametric equation of hyperbola</p>	
JANUARY	<p>8. Vectors</p> <p>i) Definition of vector, types of vector</p> <p>ii) Cross product, properties of cross product</p> <p>iii) Definition and Properties of dot Product</p> <p>iv) Application of vectors to mechanics</p>	<p>8.Differentiation</p> <p>i) Definition of Derivatives</p> <p>ii) Derivatives of standard function</p> <p>iii) Derivates of products</p> <p>iv) Derivatives of quotient</p>
JANUARY	<p>9. Linear Inequation</p> <p>i) Linear inequation in one variable</p> <p>ii) Set or domain of the variable, solution set</p> <p>iii) Solution of linear inequalities in two variables</p> <p>iv) Feasible solution of inequation</p>	<p>9.Integratrion</p> <p>i) Definition of Integral of Function</p> <p>ii) Integral of Standard function</p> <p>iii) Rules of integration</p>
JANUARY	<p>10. Determinants</p> <p>i) Definition, properties of determinant</p> <p>ii) Solution of 3 simultaneous equations by Cramer's rule</p> <p>iii) Consistency of equations</p> <p>iv) Area of triangle using determinants</p>	<p>10.Statistics</p> <p>i) Range of its coefficient</p> <p>ii) Quartile Deviation, Mean deviation</p> <p>iii) Variance, Standard Deviation, Effect of Change of Origin and Scale, Combined Variance, Coefficient of variation</p>
FEBRUARY	<p>11. Matrices</p> <p>i) Definition, types of matrices, determinants of a matrix, transpose of matrix</p> <p>ii) Operation on matrices</p> <p>iii) Multiplication is not equal to two matrices</p>	<p>11.Probabilty</p> <p>i) Types of events, Algebra of events, Probability of Events</p> <p>ii) Addition Theorem, Conditional Probability</p> <p>iii) Multiplication Theorem</p> <p>iv) Bayer's Law, odds</p>

1st UNIT TEST

I) ANGLE AND ITS MEASUREMENT

- II) TRIGONOMETRIC FUNCTIONS
- III) LOGARITHM
- IV) COMPLEX NUMBERS

1ST SEMESTER

- I) ANGLE AND ITS MEASUREMENT
- II) TRIGONOMETRIC FUNCTIONS
- III) TRIGONOMETRIC FUNCTIONS OF COMPOUND ANGLES
- IV) FACTORISATION FORMULAE
- V) LOCUS
- VI) LOGARITHM
- VII) COMPLEX NUMBERS
- VIII) SETS, RELATION AND FUNCTIONS
- IX) SEQUENCE AND SERIES
- X) PERMUTATION AND COMBINATION

2ND UNIT

- I) STRAIGHT LINE
- II) LIMITS
- III) DERIVATIVES

2ND SEMESTER

M-I

- I) TRIGONOMETRIC FUNCTIONS OF COMPOUND ANGLES
- II) FACTORISATION FORMULAE
- III) STRAIGHT LINE
- IV) CIRCLE AND CONICS
- V) VECTORS
- VI) LINEAR EQUATIONS
- VII) DETERMINANTS
- VIII) MATRICES

M-2

- I) LOGARITHM
- II) COMPLEX NUMBERS
- III) METHOD OF INDUSTION AND BINOMIAL THEOREM
- IV) LIMITS
- V) DERIVATIVES
- VI) INTEGRATION
- VII) STATISTICS
- VIII) PROBABILITY

COMPUTER SCIENCE- I

Month	topic name & content
July	number system & binary arithmetic- Content: - binary numbers, decimal, octal, hex decimal numbers, BCD, conversion From one number system to another, ASCII code, binary addition, subtraction by One's complement & two's complement binary multiplication & division
Aug	Program analysis Content: - analysis of problem, pseudo code, design steps, flow charts, structural Programming & modular programming concept, algorithms searching & sorting
Sep &	Introduction to C++
Oct	content:-C++, keyboard, identifiers, data types, user defined data types, derived Data types, constants, variable, declaration of variable
Nov&	c++
Dec	content:-operates, memory management operates manipulates, control structure, IF, switch, do-while for, function in C++, reference, I/O operations
Jan	Introduction to networking & Internet Content:- networking terms, concept, centralization, distributed, collaboration Network configuration, client/server architecture, peer to peer networking, LAN,

WAN, email, voice mail, FTP, WWW, e-commerce, BBS

Feb visual basic

March& content:- Introduction to VB, menu bar, tool bar, toolbox, properties setting, form

Layout, variable, constants, arrays, relational operators, control flow statements,

Nesting of loops, build in function, Event driven programming

First Unit Test: - 1) number system & binary arithmetic

First semester -1) program analysis

2) Introduction to networking & Internet

Second semester-1) C++

2) Visual basic

3) Introduction to networking & internet

COMPUTER SCIENCE-II

Month	topic name & name
July	study of components & circuit Content:-Registers, capacitors, Inductors, transfers, diodes, transactions Zener diodes, LED, transistor as a switch, single, stage amplifier regulate Power supply, SMPS, TTL &CMOS
Aug &	logic gates & sequential circuits
Sept	logic gates, AND, OR, NOT, NAND, NOR, XOR, basic building blocks, half Adder, full adder, flips flop –RS, D, Toggle, JK, sequential circuits, shift Registers, counters, multiplexers, demultiplexers.
Nov, dec	function hardware parts of PC system board, mother board, CPU
&Jan	Properties, types of PC memory, conventional, extended & expand, Semiconductor memory, BNS, DMA channels, EISA, PCI & USB, Controller, adapter, floppy disk &hard disk controller
Feb &	peripheral devices
March	video, video board characteristics, keyboard, mouse, scanner, printer, Drives, CD rom, sound board, modem-plug&play First unit test – study of components &circuit First semester- logic gates & sequential circuit Second unit test- function hardware parts of PC Second semester- peripheral devices.

Biology

Section –I

<p>July & August</p>	<p><u>Chap -1-Diversity in Organism</u> Introduction, taxonomic Hierarchy Binomial Nomenclature- Significance & Rules 5 Kingdom classification Lichens types, Economic Imp Viruses types, Economic Imp. Viroids</p>
<p>Sep & Oct</p>	<p><u>Chap 2-Kingdom Plantae</u> Subkingdom cryptogams and Phanerogams Salient features of major groups- a) Algae b) bryophyte c) Pteridophyta d) gymnosperms e) Angiosperms</p> <p><u>Chap -4- Cell division</u></p> <p>Cell cycle and its phases Mitosis and its stages Meiosis, difference between Mitosis and Meiosis Chap-5- Morphology of flowering Plants Flower- Inflorescence, floral whorls, functions, placentation, Symmetry , Aestivation, Floral Formula, Root, Stem and leaf and its modifications</p>
<p>Nov.</p>	<p>Fruit- Parts and its types Seed- Parts and its types</p>
<p>Dec.</p>	<p>Tissues- Meristematic and its classifications Permant tissues and its types Complex permant tissue and its types Analomy of stem</p>
<p>Jan</p>	<p>Chap-3- Biochemistry of Cell Basic chemical constituents of cell Carbohydrates, Proteins, Lipids and nucleic acids its properties, structure and classification Enzymes: Definition and General Properties</p>
<p>Feb</p>	<p>Chap-6 – Plant water relations and Mineral Nutrition Physical Processes –Imbibition, diffusion, Osmosis Root-Regions of root, structure of root hair, path of water in root tissue during absorption Transpiration and its types Structure of stomata and Mechanism of opening and closing of</p>

	stomata Classification of essential elements
Mar	<u>Chap-7 –Plant Growth and development</u> Seed dormancy Seed germination Characterstics of growth Phases of growth Growth regulators Photoperiodism Vernalisation

Section-II

July & August	Chap-10 Study of Animal Tissue 1. Epithelial tissue: simple epithelium squamous, cuboidal,ciliated columnar,Non-ciliated columnar 2. Connective tissue:Areolar connective tissue,Adipose connective tissue,Tendons ,ligaments Skeletal tissue – Cartilage , Bone . Muscular Tissu-Straited muscles,Non-straited muscles, cardiac muscles. 5.Nervous Tissue- Neuroglial Cells, structure and types of neuron. <u>Chap-8 Kingdom Animalia</u> Criteria for Animal classification Sailent features of non-Chordates upto phylum level
Sep/oct	Sailent feature of Chordates upto class level <u>Chap-14 Human Skeleton And Locomotion</u> Human Skeleton :axial skeleton and appendicular skeleton. Locomotion:Types Of Joints Synarthroses: Sutures of skull , Gomphosis Amphiarthroses: Symphysis and Intervertebral joints Diarthroses: Synovial joint-Ball and socket,hinge joint,pivot joint Skeletal Disorders
Nov	<u>Chap-11 Study of Animal Type</u> External features of cockroach ,Its digestive System, Circulatory System,Respiratory System,Reproductive system
Dec	Chap-12 Human Nutrition Food Constituents Stages of Digestion Human Digestive System Histology of Intestine Nutritionals disorders

Jan	Chap-13 Human Respiration Respiratory System of Man Breathing- Inspiration and expiration Exchange of gases ,transport of O ₂ and CO ₂ and tissue respiration Respiratory Disorder
Feb/March	Chap-9 Organization of Cell Cell Theory Prokaryotic cell and its Ultra structure Eukaryotic cell and its Ultra structure A) Cell wall and cell membrane B) Cell Organelles- plastids,mitochondria,Endoplasmic,recticulum.
March	Nuclear Organisation-nucleus,nucleoplasm and nucleolus