ANNUAL PROGRESSION 2021-22

CLASS - 11

SUBJECT - PHYSICS

Month	chapter	Topic	Experiment	Art integration
July	1	Mathematical tools and techniques		
		unit and measurements		
		dimensions		
		errors, different types of error		
		different types of special function		prepare a chart of work
				of all scientist and
				make a list of it.
August	2	Motion in straight line		
		distance displacement, speed, velocity		
		motion under gravity	1. ohms law	
		uniform circular motion		
		Motion in plane, vectors		prepare an resistor copper
		rectangular components,	2. meter bridge	wire of given ohm
		Time period, Range, maximum height		
September	4	Newton's Law of motion		
		free body diagram, different forces,		
		friction, kinetic and statics friction.		
	5	Work done by frictional force,		
		work energy theorem, notion of potential energy,		show magnetic effect
		collision, elastic and inelastic collision		of self made solenoid
	6	System of particls,centre of mass		
		Moment of force and torque	3. Potentiometer	
		Conservative of momentum and its	4. Internal resistance	
		application, equilibrium, rigid body rotation,	5. Comaparing elf	
		moment of inertia		
October	7	Gravitation, acceleration due to gravity,		
		gravitational potential energy,		
		escape velocity,orbital velocity		
	8	Mechanical properties of solids,		
		stress and strain, Young's modulus		make capacitor of 2 farad
				using silver foil.
	9	Mechanics of fluid,		
		pascal law and its application	6.Covex lens focal length	
		viscosity, stokes law, Bernaullis theorem.		
		surface energy,surface tension,	7. focal length using mirror	
	10	Heat and temperature, thermal expansion		
		anamalous expansion of water.		
		specific heat capacity,		

	10	heat transfer, convection and radiation,		
			8.PN juction	
			9.Zenor diode	
November	11	Thermodynamics	10. conversion of galvanometer	
		Thermal equilibrium, Heat work and internal	into ammeter , voltmeter	
		energy, first law of motion,		
		second law of motion, Carnot engine,		
	12	Kinetic theory,		
		equation of state of ideal gas,		
		Degree of freedom, law of equipartition		
		specific heat capacity of gases,		
		Avogadro's lawl		
December	13	Periodic motion, displacement of function		
		of time, Simple harmonic motion,		
		free and forced oscillation		
	14	wave		
		transverse and logitudinal wave		
		principal of superposition of wave		
		reflection of wave.		
November	revision	1,2,3,4		
December	revision	5,6,7,8		
January	revision	14-Sep		

ANNUAL PROGRESSION 2021-22
CLASS - 11
SUBJECT - BIOLOGY

MONTH	CHAPTER/TOPIC
JULY	CHAPTER-1 The living world CHAPTER-2 Biological classification CHAPTER- 4 Animal Kingdom
AUG	CHAPTER-4 Animal Kingdom CHAPTER-5 MORPHOLOGY OF FLOWERING PLANTS
JUNE	**SUMMER BREAK**
SEPTEMBER	CHAPTER-7 Structural organization in animals CHAPTER 8 Cell; the unit life
OCTOBER	CHAPTER-10 Cell cycle and cell division CHAPTER-15 Plant-Growth and development CHAPTER 17 Breathing and exchange of gases
NOVEMBER	CHAPTER -18 Body fluids and circulation CHAPTER-3 Plant kingdom Revision
DECEMBER	CHAPTER-19 Excretory products and their elimination CHAPTER -20 Locomotion and movement
DECEMBER	CHAPTER 13 Photosynthesis in higher plants CHAPTER-14 Respiration in plants
JANUARY	CHAPTER-21 Neural control and coordination CHAPTER -22 Chemical coordination and integration

ANNUAL PROGRESSION 2021-22
SUBJECT - POLITICAL SCIENCE
CLASS – XI

MONTH	CHAPTER / TOPIC	ACTIVITIES
APRIL	1. Constitution : Why And How , Philosophy Of The Constitution, Constitution As A Living Document 2. Rights And Duties In The Indian Constitution 3. Election And Representation	Project on Fundamental rights,
MAY/JUNE	4. The Executive 5. The Legislature 6. The Judiciary	Role play on different organs of the government
JULY	7. Federalism 8. Local Governments 9. Political Theory : An Introduction	Speech on Local government set up in India
AUGUST	10. Freedom 11. Equality 12. Justice With Special Reference To Social Justice	Debate on freedom and equality of men and women
SEPTEMBER	Revision for half yearly exam	
OCTOBER	13. Rights 14. Citizenship	
NOVEMBER	15. Nationalism 16. Secularism	One act play/ppt
DECEMBER	17. Peace 18. Development	

ANNUAL PROGRESSION 2021-22
SUBJECT: PHYSICAL EDUCATION
CLASS : XI

Month	Topic/Chapter	Activity
May	**Ch. 1-changing trends and career in Physical education** Sub topics: 1.Meaning and definition of physical education 2.Aims and objectives 3.Career options in physical education 4.National and international competitions 5. Khelo- India Programme	Students will enlist and analyze physical activities changed from last 30 year's.
July	**Ch.2 – OLYMPIC VALUE EDUCATION** Sub topics: 1.Olympic, Paralympic and Special Olympic 1.Olympic Symbols, Ideals, Objectives and Values of Olympic 3.International Olympic Committee (IOC) 4.Indian Olympic Association (IOA) **Ch.3 – PHYSICAL FITNESS ,WELLNESS AND LIFESTYLE** Sub topics: 1.meaning and importance of physical fitness, Wellness and lifestyle 2.Components of physical fitness and Wellness 2.Component of Health Related Fitness	Students will learn change of technology in sports in last 120 year's
August	Ch**.4- Physical Education and sports for CWSN (Children with special needs-Divyang)** Sub topics: 1.Aims and objectives of adaptive physical education 2.Organizations Promoting Adaptive Sports (Special Olympic Bharat Paralympic Deaflympics) 3.Concept of inclusion, its Needs and Implementation 4.Role of various Professionals for Children with Special Needs(Counsellor, Occupational therapists, Physiotherapist, Physical education teacher, Speech therapists & Special Educator **Ch.5- Yoga** Sub topics: 1.meaning & importance 2. Elements of Yoga 3. Asanas,Pranayam, Meditation & Yogic Kriyas 4.Yoga for concentration & related Asanas 5.Relaxation Techniques for improving Concentration- Yog -nidra	Students will analyse how to differentiate and identify people with disabilities and disorders
September	**Ch.6 PHYSICAL ACTIVITY AND LEADERSHIP TRAINING** Sub topics: 1.Leadership Qualities and Role of a Leader 2.Creating Leaders through Physical Education 3.Meaning, objectives and Types of Adventure Sports 4.Safety Measures to prevent Sports Injuries **Ch.7- TEST,MEASUREMENT AND EVALUATION** Sub topics: 1.Test,Measurement & Evaluation 2.Importance of Test, Measurement & Evaluation 3. Calculation of BMI & Waist- Hip Ratio 4.Somoto Types 5. Measurement of Health Related Fitness	Students will learn how to develop qualities to become a leader by participating in physical activities/ sports

October	**Ch.8 – Fundamentals Of Anatomy, Physiology & Kinesiology In Sports** Sub topics: 1.Definition & importance of Anatomy, Physiology and Kinesiology 2.Function of Skeleton System, Classification of Bones and Types of joints 3.Properties and functions of Muscles 4.Function and Structure of Respiratory system and Circulatory system 5.Equilibrium- Dynamic & Static and centre of Gravity and its Application in Sports	Students will learn how human body works with the help of vitality of different organs in body.
November	**Ch.9- PSYCHOLOGY AND SPORTS** Sub topics: 1.Definition and importance of Psychology in physical education and sports 2.Define and differentiate between Growth and Development 3.Developmental Characteristics at Different stages of Development 4.Adolescent Problems and their Mana6	Students will be able to judge different personality tirad and deal with different types of personalities
December	**Ch.10- Training and Doping In Sports** Sub topics: 1.Meaning and Concept of Sports Training 2.Principles of Sports Training 3.Warming up and Limbering Down 4.Skill,Techniques and Styles 5.Concepts and Classification of Doping 6. Prohibited Substances and their Side Effects 7.Dealing with Alcohol and Substance Abuse	Students will learn about different steriod ,drugs and supplements which enhance physical component and exess of same can destroy their internal organs if taken on regular basis

ANNUAL PROGRESSION (2021-22)
CLASS – 11
SUBJECT - MATHEMATICS

MONTH	CHAPTER/TOPIC (No. of periods)	SUB-TOPICS	LAB ACTIVITY
APRIL	1. SETS (20)	➢ Sets and their representations. ➢ Empty set, finite and infinite sets. ➢ Equal sets, subsets of a set of real numbers especially intervals (with notations). ➢ Power set and universal set. ➢ Venn diagrams, union and intersection of sets. ➢ Difference of sets, complement of a set and properties of set.	❖ Activity 1.1 Subsets ❖ Activity 1.2 Venn-diagrams ❖ Activity 1.3 Algebra of Operations
	2. RELATIONS AND FUNCTIONS (15)	➢ Ordered pairs, Cartesian product of sets. Number of elements in the Cartesian product of two or more finite sets. ➢ Cartesian product of the set of real's with itself (upto R x R x R). ➢ Definition of relation, pictorial diagrams, domain, co-domain and range of a relation. ➢ Function as a special type of relation. Pictorial representation of a function, domain, co-domain and range of a function. ➢ Real valued functions, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum, exponential logarithmic and greatest integer functions, with their graphs. ➢ Sum, difference, product and quotient of functions.	❖ Activity 2.1 Distinguish between Relations and Functions
MAY	3. TRIGONOMETRIC FUNCTIONS (25)	➢ Positive and negative angles, measuring angles in degrees and radians and conversion from one measure of another. ➢ Definition of trigonometric functions with the help of unit circle. ➢ Truth of the identity $\sin^2 x + \cos^2 x = 1$, for all x. Signs of trigonometric functions. Domain and range of trigonometric functions and their graphs. ➢ Expressing sin (x+y) and cos (x+y) in terms of sin x, sin y, cos x and cos y and their simple applications. Deducing the identities like the	❖ Activity 2.2 Graph of Trigonometric Functions ❖ Activity 2.3 Trigonometric Ratios in different Quadrants

		following : $\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}$, $\cot(x \pm y) = \frac{\cot x \pm \cot y}{1 \mp \cot x \cot y}$ $\sin x + \sin y = 2\sin\frac{x+y}{2}\cos\frac{x-y}{2}$ $\sin x - \sin y = 2\cos\frac{x+y}{2}\sin\frac{x-y}{2}$ $\cos(x+y) = 2\cos\frac{x+y}{2}\cos\frac{x-y}{2}$ $\sin(x+y) = -2\sin\frac{x+y}{2}\sin\frac{x-y}{2}$ ➢ Identities related to sin2x, cos2x, tan2x, sin3x, cos3x and tan3x. General solution of trigonometric equations of the type sin y = sin a, cos y = cos a and tan y = tan a.	
	4. PRINCIPLE OF MATHEMATICAL INDUCTION(07)	➢ Process of the proof by induction, motivating the application of the method by looking at the natural as the least inductive subset of real numbers. ➢ The principal of mathematical induction and simple applications.	❖ Activity 3.1 Interpret Geometrically the meaning of $i = \sqrt{-1}$
JULY	5. COMPLEX NUMBERS AND QUADRATIC EQUATIONS (15)	➢ Need for complex numbers, especially $\sqrt{-1}$, to be motivated by inability to solve some of the quadric equations. ➢ Algebraic properties of complex numbers. Argand plane and polar representation of complex numbers. ➢ Statement of fundamental Theorem of Algebra, solution of quadric equations (with real coefficients) in the complex number system. ➢ Square root of a complex number.	
	6. LINEAR INEQUALITIES (10)	➢ Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line. ➢ Graphical representation of linear inequalities in two variables. ➢ Graphical method of finding a solution of system of linear inequalities in two variables.	❖ Activity 4.1 Graphical Representation of Linear Inequalities

	7. PERMUTATIONS AND COMBINATIONS (15)	➢ Fundamental principle of counting. Factorial n. (n!). ➢ Permutations and combinations, derivation of formulae for ${}^{n}P_{r}$ and ${}^{n}C_{r}$ and their applications, simple applications.	❖ Activity 5.1 Find the number of ways in which 3 cards can be selected from the given 5 cards.
AUGUST	8. BINOMIAL THEOREM (15)	➢ History, statement and proof of the binomial theorem for positive integral indices. ➢ Pascal's triangle, general and middle term in binomial expansion, simple applications.	❖ Activity 6.1 Construction of Pascal's triangle for binomial expansion.
	9. SEQUENCE AND SERIES (15)	➢ Sequence and series. Arithmetic Progression (AP). Arithmetic Mean (AM) ➢ Geometric Progression (GP), general term of a GP, sum of first n terms of a GP, infinite GP and its sum, geometric mean (GM). ➢ Relation between AM and GM Formulae for the following special sums : $\sum_{k=1}^{n} k$, $\sum_{k=1}^{n} k^2$, and $\sum_{k=1}^{n} k^3$	❖ Activity 7.1 Alternative approach of sum of n terms of special series using squares. ❖ Activity 7.2 Comparison between Arithmetic Mean and Geometric Mean. ❖ Activity 7.3 Sum of n terms of special series (using cubes)
	10. STRAIGHT LINES (15)	➢ Brief recall of two dimensional geometry from earlier classes. ➢ Shifting of origin. Slope of a line and angle between two lines. ➢ Various forms of equations of a line : parallel to axis, point-slope form, slope-intercept form, two-point form, intercept form and normal form. General equation of a line. ➢ Equation of family of lines passing through the point of intersection of two lines. ➢ Distance of a point from a line.	❖ Activity 8.1 Equation of family of Lines Passing through the point of intersection of two lines.

SEPTEMBER	11. CONIC SECTIONS (15)	➢ Sections of a cone: circle, ellipse, parabola, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of a conic section. ➢ Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.	❖ Activity 9.1 Construction of Parabola ❖ Activity 9.2 Construction of various Conic Sections
	12. INTERODUCTION TO THREE-DIMENSIONS GEOMETRY (10)	➢ Coordinate axes and coordinate planes in three dimensions. ➢ Coordinates of a point. ➢ Distance between two points and section formula.	
OCTOBER	13. LIMITS AND DERIVATIVES (30)	➢ Derivative introduced as rate of change both as that of distance function and geometrically. ➢ Intuitive idea of limit. ➢ Limit of polynomials and rational functions, trigonometric, exponential and logarithmic functions. ➢ Definition of derivative, relate it to slope of tangent of a curve. ➢ Derivative of sum, difference, product and quotient of functions. ➢ Derivative of polynomial and trigonometric functions.	❖ Activity 10.1 Find analytically Limits
NOVEMBER	14. MATHEMATICAL REASONING (7)	➢ Mathematically acceptable statements. ➢ Connecting words/phrases – consolidating the understanding of “if and only if(necessary and sufficient) condition”, “implies”, “and/or”, “implied by”, “there exists” and their use through variety of examples related to real life and mathematics, ➢ Validating the statements involving the connecting words, difference between contradiction, converse and contra positive.	

DECEMBER	15. STATISTICS (10)	➢ Measures of dispersion: Range, mean deviation, variance and standard deviation of ungrouped/grouped data. ➢ Analysis of frequency distributions with equal means but different variances.	
	16. PROBABILITY (10)	➢ Random experiments: outcomes, sample spaces (set representation). ➢ Events: occurrence of events, 'not', 'and' 'or' events, exhaustive events, mutually exclusive events, Axiomatic (set theoretic) probability, connections with other theories studied in earlier classes. Probability of an event, probability of 'not', 'and' and 'or' events.	❖ Activity 11.1 Sample Space of a coin

ANNUAL PROGRESSION 2021-22

SUBJECT - HISTORY

CLASS - XI

SNO.	Months	Units	Topics	Activity
1	May	**Section A: Early Societies**	• From the beginning of time • Writing and City Life	• Map activitiy • Ppt presentation on Mesopotamian civilisation
2	June	**Section A: Early Societies**	• Revision of the taught portion	• Project work • Map activity
3	July	**Section B: Empires**	• An Empire across three continents • The central Islamic lands	• Preparing project work over assigned topic • Using various sources for depth understanding i.e. Internet, social media etc.
4	August	**Section B: Empires**	• Nomadic empires • The three orders	• Map based activity • Preparing acronym related to chapters
5	September	**Section C: Changing Traditions**	• Changing cultural traditions • Confrontation of cultures	• Tracking other resources i e. Internet or other reference books. • Map activity
6	October	**Section D: Towards Modernisation**	• The Industrial Revolution	• Ppt presentation • Group discussion
7	November	**Section D: Towards Modernisation**	• Displacing Indigenous peoples • Paths to Modernisation	• Showing the documentary of indigenous peoples for clear understanding
8	December	**Revision**	• Revision	• Q/A sessions on previous chapters • Group discussion over relevant topics

वार्षिक पाठ्यक्रम योजना

कक्षा– ग्यारहवीं

सत्र–२०२१–२२

माह	पाठ का नाम	क्रियात्मक गतिविधि
मई,जून एवं जुलाई (३५ दिन)	१– जनसंचार माध्यम एवं पत्रकारिता २– नमक का दरोगा ३– मियाँ नसीरूद्दीन ४– कबीर के पद (हम तो एक–एक करि....) (संतो देखत जग.....) ५–मीरा के पद ६– भारतीय गायिकाओं में बेजोड़:लता मंगेश्कर	१– समाचार वाचन २– धर्म और अधर्म में द्वंद्व (सामूहिक चर्चा) ३– हुनर होना आवश्यक (व्यक्तिगत चर्चा) ४–धार्मिक कुरीतियां एवं पाखंड समाज के लिए घातक (सामूहिक चर्चा) ५– चित्रपट संगीत गायन प्रतियोगिता
अगस्त (२५ दिन)	१–गलता लोहा २–स्पीति में बारिश ३– वे आँखें ४– घर की याद	१– विपरीत परिस्थितियों का प्रतिकूल प्रभाव (आशुभाषण व्यक्तिगत) २–धनी वर्ग गरीबों के शोषण का कारक (सामूहिक चर्चा) ३–स्वतंत्रता सेनानियों का त्याग अविस्मरणीय (सामूहिक चर्चा)
सितम्बर (९ दिन)	१– राजस्थान की रजत बूँदें पुनरावृत्ति	१–कुँई राजस्थानियों के लिए वरदान (सामूहिक चर्चा)
अक्टूबर (१९ दिन)	१–चंपा काले–काले..... २–रजनी ३–गज़ल	१–स्त्री शिक्षा समाज के विकास के लिए आवश्यक(सामूहिक चर्चा) २– एक कुशल राजनेता के लक्षण (आशुभाषण व्यक्तिगत)
नवम्बर (२४ दिन)	१–जामुन का पेड़ २–हे भूख! मत मचल,	१–सरकारी कामकाज का तरीका:आलस्यपूर्ण(वाद–विवाद) २–आर्थिक रूप से कमजोर वर्ग के पिछड़ने का जिम्मेदार कौन? (सामूहिक चर्चा)
दिसम्बर (२४ दिन)	१–हे मेरे जूही के फूल जैसे ईश्वर २–सबसे खतरनाक ३–आओ मिलकर बचाएँ ४–भारत माता	१–ईश्वर ही सर्वशक्तिमान (सामूहिक चर्चा) २–जनजागरूकता की महत्ता (भाषण व्यक्तिगत) ३–मातृभूमि का ऋण(सामूहिक चर्चा)
जनवरी (१५ दिन)	पुनरावृत्ति	
फरवरी	पुनरावृत्ति	

ANNUAL PROGRESSION 2021-22		
Class XII (Subject - Economics)		
Month	**chapter**	**Topic**
MAY	1	introduction to micro economics
Micro economics		central problems of the economy
		difference between micro & macro
	3	producer behaviour: concept of producer, its function & types
		concept of cost, & its types, short run equllibrium, supply & range
JULY	4	forms of market and price determination under different kind of markets
		monopoly, monopolistic, perfect, oligopoly market
Micro economics		curves and schedule for all kind of markets
	5	consumer equllibirium and demand
		types of demand in the market, preferences, exceptions, consumer behaviour, elasticity
AUGUST	1	Introduction : meaning, scope, importance of statistics in economics and real life
	2	collection of data: methods along with its advantages n disadvantages and uses
Statistics		organisation of data: methods along with advantages and disadvantages and uses in economics
		case studies and real life example uses
SEPTEMBER	2	Presentation of data: kinds of presenation, differenece in presenting theory and numbers
		presenation in tables and graphs
		related activity along with case studies
Statistics	3	Statistical tools
		Measures of central tendency: mean, median & mode
		measures of dispersion (range, quartile, mean deviation, co-efficient, variations)
OCTOBER	3	introduction to index number
		meaning, types, price index, inflation and uses, consumer price index
		correlation: (properties, scatter diagram, karl pearsons with 2 variable and spearman's rank correlation

ANNUAL PROGRESSION 2021-22
Class – XI
English Core (301)

S. No.	Month	Hornbill (Textbook) Prose / Poem	Snapshots (Supplementary Book) Discussion of theme, plot, Incidents and characters	Reading and Writing Skills	Grammar	Activity
1.	**APRIL**	L-1 .The Portrait of a Lady	L-1. The Summer of the Beautiful White Horse L-2. The Address.	**Reading Comprehension** Note-Making & Summarizing **Notice**	Determiners Fill ups, error correction & omission(2 each)	Group Discussion on The Portrait Of A Lady is a reminder about a growing distance between the young and the older generation. Group activity comprising all range of learners. One group comprising 6 learners- A comparative study of the prose- The Portrait of a Lady and the poem- A Photograph. The learners would discuss in their groups, draw a comparative analysis, and present the synopsis of the discussion in the class.
2.	**MAY**	L-2. We're not Afraid to Die …(pds5) P-1. -A Photograph(p	L-2.The Address. Introduction, reading, explanation, discussion	**Poster** (Social issues , general awareness, commercial issues) **Advertisements**(classified and display- To-Let, For Sale, Matrimonial, Obituary, Situation Vacant, etc)	Time Reference (Tenses) Modals	1.Research on the Armenian genocide.PPT (a group presentation comprising all range of learners) Three students in one group comprising: 2.Class Reading with suitable expression, pronunciation and intonation. (Individual Activity) (For all range of learners)
3.	**JUILY**	L- 3. Discovering Tut….. The Saga continues…	L-3. Ranga's Marriage.(pds3) Discussion reading, explanation, discussion	**Letter Writing:** Business& Official Letters (for making enquiries, registering complaints, asking for and giving information)	Voices Clauses	Story construction using flash cards containing phrases and clauses. Students would be formed into groups to prepare flash cards containing phrases and clauses. The flash cards would be exchanged among the groups to construct a story using the given phrases and clauses. (group activity) For all range of learners with one group comprising three students:

4.	**AUGUST**	L-4.- The Landscape of the SoulL-5.The Ailing Planet.	L-4. Albert Einstein at School. reading, explanation, discussion	Report Writing (for school magazine & newspaper) Letter to the Editor	Re-arranging/ Jumbled words and phrases.	Listening Activity for all range of Learners to note their progress and as training ground for their ASL. Activity: Listen to an Article about the issue of marriage and gender stereotyping and complete the worksheet.
5.	**SEPTEMBER**	P. The Laburnum Top, The Voice of the Rain.	L-5. Mother's Day.(pds4) Revision for Half Yearly Exam		Editing	
6.	**OCTOBER**	L- 5. The Browning Version.	L-6. Birth. reading, explanation, discussion	Application for a job Article Writing	Error Correction	Full Practice of ASL
7.	**NOVEMBER**	Ch-7- The Adventure, P-4. Childhood.	Ch-7- The Ghat of the Only World reading, explanation, discussion	Speech writing & Factual Description	Grammar Revision (pds5)	Recording &assessment for Session Ending Exam(on basis of class strength)
8.	**DECEMBER**	Ch-8- Silk Road P-4-Father to Son	Poem. The Tale of Melon City.(pds2) reading, explanation, discussion of theme,	Process writing Creative Writing.	Revision	Full Practice of ASL
9.	**JANUARY FEBRUARY**	All Chapters		Letter of placing order and sending replies. Letter of cancellation		Listening Activity for all range of Learners to note their progress and as training ground for their ASL. Activity: listen to an Article about the issue of marriage, gender stereotyping, and complete the worksheet.

ANNUAL SYLLABUS 2021-22

GRADE - XI

SUBJECT - COMPUTER SCIENCE (PYTHON)

OBJECTIVES:

1) To impart knowledge, skills and understanding of the scientific facts.

TEXT BOOK: Computer Science with python by Sumita Arora (Textbook for Class XI)

MONTH	CHAPTER / TOPIC	SUB-TOPIC
MAY	Chapter-12 Computer system overview	1. Components of computer 2. Components of mobile system 3. Types of software
July	Chapter-13 Data Representation	1. Number system 2. Number conversions 3. Character representation- UNICODE,ASCII, ISCII
	Chapter-14 Boolean Logic	1. Logical Operations 2. Laws/Theorems of Boolean Algebra 3. Simplification of Boolean expressions by algebraic method 4. Logic Gates
AUGUST	Chapter 15 Insight into program execution Problem Solving	1. Process of compilation & execution of code 2. Role of OS in program execution 3. Parallel computing 4. Cloud computing 1. Stages to develop a program 2. Algorithm 3. Flowcharts 4. Pseudocodes
	Chapter 1 Getting started with python Chapter 2 Python fundamentals	1. Features of python 2. Using Python interface 1. Character set of python 2. Tokens in python 3. Structure of program
	Chapter 3 Data handling Chapter-4 Conditional & iterative statements	1. Data types in python 2. Operators in python 3. Expressions 1. Types of statement 2. If , if else, nested if 3. For , while loop 4. Jump statements
OCTOBER	Chapter 5 String manipulation Chapter 6 Debugging programs	1. String operators 2. String functions 1. Errors & Exceptions 2. Debugging
NOVEMBER	Chapter-7 List manipulations Chapter 8 Tuples	1. Creating & accessing list 2. List operations 3. List functions 1. Creating & accessing tuple 2. Tuple operations 3. Tuple functions

MONTH	CHAPTER / TOPIC	SUB-TOPIC
DECEMBER	Chapter 9 Dictionaries	1. Creating & accessing dictionary 2. Dictionary operations 3. Dictionary functions
	Chapter 21 Cyber safety	1. Safety measures while using internet 2. Cyber crimes 3. Social networking sites 4. Do's & don'ts of social networking
	Chapter 22 Computer security	1. Types of threats 2. Solution to threats

ANNUAL SYLLABUS 2021-22
GRADE XI
SUBJECT - CHEMISTRY

Objectives:

1) To impart knowledge, skills and understanding of the scientific facts.
2) To encourage scientific aptitude in children.
3) To understand laws and principles governing things in the environment.
4) To give awareness about the role of chemistry in daily life and to be able to apply various concepts studied to everyday situations.
5) To develop problem solving skills in students.
6) To develop an interest in students to study chemistry as a discipline expose the students to various emerging new areas of chemistry and apprise them with their relevance in
Future studies and their application in various spheres of chemical sciences and technology.

TEXT BOOK : Chemistry(Textbook for class XI)- by NCERT

MONTH	CHAPTER/TOPIC	SUB-TOPIC	ACTIVITIES
APRIL	**Chapter-1** Some Basic Concepts of Chemistry	1. General Introduction: Importance and scope of Chemistry. 2. Nature of matter, laws of chemical combination, Dalton's atomic theory: concept of elements, 3. atoms and molecules. 4. Atomic and molecular masses, mole concept and molar mass, percentage composition, 5. Empirical and molecular formula, 6. chemical reactions, stoichiometry and calculations based on stoichiometry.	
	Chapter-2 Structure of Atom	1. Discovery of Electron, Proton and Neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and its limitations, Bohr's model and its limitations, 2. concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, 3. Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p and d orbitals, rules for filling electrons in orbitals - Aufbau principle, Pauli's exclusion principle and Hund's rule, 4. Electronic configuration of atoms, stability of half-filled and completely filled orbitals.	1.Structure of atom using bangles of different size.
	Chapter-3 Classification of Elements and Periodicity in Properties	1. Significance of classification, brief history of the development of periodic table, 2. modern periodic, law and the present form of periodic table, 3. periodic trends in properties of elements –atomic radii, ionic radii, inert gas radii, Ionization enthalpy, electron gain enthalpy, electronegativity, valency. 4. Nomenclature of elements with atomic number greater than 100.	
MAY	**Chapter-4** Chemical Bonding and Molecular Structure	1. Valence electrons, ionic bond, covalent bond, bond parameters, 2. Lewis structure, polar character of covalent bond, covalent character of ionic bond, 3. valence bond theory, resonance, geometry of covalent molecules, 4. VSEPR theory, 5. concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, 6. molecular orbital theory of homonuclear diatomic molecules (qualitative idea only), Hydrogen bond.	1. Make Ball and stick model for various shapes.

		SUMMER BREAK	
JULY	**Chapter-5** States of Matter: Gases and Liquids	1. intermolecular interactions, types of bonding, melting and boiling points, 2. role of gas laws in elucidating the concept of the molecule, Boyle's law, Charles law, Gay Lussac's law, Avogadro's law, 3. ideal behaviour, empirical derivation of gas equation, Avogadro's number, ideal gas equation. Deviation from ideal behaviour, 4. liquefaction of gases, critical temperature, kinetic energy and molecular speeds, Liquid State- vapour pressure, viscosity and surface tension	
	Chapter-6 Chemical Thermodynamics	1. System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. 2. First law of thermodynamics -internal energy and enthalpy, heat capacity and specific heat, H, 3. Hess's law of constant heat summation, enthalpy of bondΔU and Δmeasurement of dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. 4. Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function, Gibb's energy change for spontaneous and nonspontaneous processes, criteria for equilibrium. 5. Third law of thermodynamics (brief introduction).	1. Observe the changes when CaO is dissolved in water and analyse the enthalpy change.
	Chapter-7 Equilibrium	1. Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium - Le Chatelier's principle, 2. ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, 3. hydrolysis of salts, buffer solution, Henderson Equation, solubility product, common ion effect.	1. Running in a treadmill to understand dynamic equilibrium.
AUGUST	**Chapter-8** Redox Reactions	1. Concept of oxidation and reduction, redox reactions, oxidation number 2. balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number, 3. applications of redox reactions.	
	Chapter-9 Hydrogen	1. Position of hydrogen in periodic table, occurrence, isotopes, preparation, properties and uses of hydrogen, 2. hydrides-ionic covalent and interstitial; physical and chemical properties of 3. water,heavy water, hydrogen peroxide -preparation, reactions and structure 4. hydrogen as a fuel	
SEPTEMBER	**Chapter-10** s-Block Elements (Alkali and Alkaline Earth Metals)	1. Group 1 and Group 2 Elements: electronic configuration, occurrence, anomalous properties of the first element of each group, diagonal relationship, 2. trends in the variation of properties, 3. trends in chemical reactivity with oxygen, water, hydrogen and halogens, uses. 4. Preparation and Properties of Some Important Compounds: Sodium Carbonate, Sodium Chloride, Sodium Hydroxide and Sodium Hydrogen carbonate, 5. Biological importance of Sodium and Potassium. 6. Calcium Oxide and Calcium Carbonate and their industrial uses, biological importance of Magnesium and Calcium.	1. Make a chart displaying the mnemonics used for remembering S-block elements.

	Chapter-11 Some p-Block Elements	1. Group 13 Elements: electronic configuration, variation of properties, oxidation states, trends in chemical reactivity, 2. anomalous properties of first element of the group, 3. Boron - physical and chemical properties, 4. some important compounds: Borax, Boric acid, Boron Hydrides, 5. Aluminium: Reactions with acids and alkalies, uses. 6. Group 14 Elements: electronic configuration, variation of properties, oxidation states, 7. trends in chemical reactivity, anomalous behaviour of first elements. 8. Carbon-catenation, allotropic forms, physical and chemical properties; 9. uses of some important compounds: oxides. Important compounds of Silicon and a few uses: Silicon Tetrachloride, Silicones, Silicates and Zeolites, their uses.	1. Make a chart displaying the mnemonics used for remembering elements of group 13, and 14 elements.
	Chapter 12 Organic Chemistry - Some Basic Principles and Techniques	1. General introduction, classification 2. IUPAC nomenclature of organic compounds. 3. electrophiles and nucleophiles, 4. Homolytic and heterolytic fission of a covalent bond: free radicals 5. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. 6. carbocations, carbanions, 7. types of organic reactions.	
OCTOBER	**Chapter-13** Hydrocarbons	1. Aliphatic Hydrocarbons: Alkanes - Nomenclature, isomerism, conformation, physical properties, 2. chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis. 3. Alkenes - Nomenclature, structure of double bond, geometrical isomerism, physical properties preparation. 4. chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), 5. ozonolysis, oxidation, mechanism of electrophilic addition. 6. Alkynes - Nomenclature, structure of triple bond, physical properties, preparation, 7. chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water. 8. Aromatic Hydrocarbons: Introduction, IUPAC nomenclature, 9. benzene: resonance, aromaticity, chemical 10. properties: mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene. 11. Carcinogenicity and toxicity.	1. Preparing 3D models conformations .
	Chapter-14 ENVIRONMENTAL CHEMISTRY	1. meaning of environmental chemistry 2. atmospheric pollution 3. ozone layer depletion and its effects 4. water pollution 5. soil pollution 6. control of environmental pollution 7. importance of green chemistry	1. Collect samples of water from nearby places and record their pH values Discuss your results in the class.

ANNUAL PROGRESSION 2021-22
GRADE - XI
SUBJECT - BUSINESS STUDIES

MONTHS	CHAPTERS/TOPICS	SUB TOPICS	ACTIVITIES
April	Nature and purpose of Business	Evolution of Business, Business, Profession and Employment-Concept, Objectives and Classification of Business, Business Risk	
May	Forms of Business Organizations	Sole Proprietorship-Concept, Merits and Limitations, Partnership-Concept, Types, Partnership Deed, Types of Partners, HUF-Concept, Cooperative Societies-Concept, Merits and Limitations	
July	…continued Public, Private and Global Enterprise	Company-Concept, Merits and Limitations, Types, Public and One Person Company, Stages, Documentations required, Choice of forms of Business Organisation Public and Private sector enterprises-Concept, Forms of Public sector enterprises	
August	…continued Business Services Emerging Modes of Business	Departmental Undertakings, Statutory Corporations, Government Company, MNCs, Joint ventures, Public Private Partnership-Concept Business Services-Meaning and Types, Banking-Types of Accounts and services. Insurance-Concept, Types and Principles, Postal services E-Business-Concept, Scope and Benefits, Business Process Outsourcing-Concept, Need and Scope	Collection of various Bank account receipts and practical filling of forms in the class
September	Revision and Examination		
November	Social Responsibility of Business and Business Ethics Sources of Business Finance Small Business and Enterprise	Concept of Social Responsibility, Case of Social Responsibility, Responsibility towards various groups, Role of Business in Environment Protection, Business Ethics-Concept and Elements Business Finance-Concept, Owners Fund, Borrowed Fund, ADR, GDR, IDR, ICD, Trade Credit etc Entrepreneurship Development-Concept, Need, Process and Features, Small scale enterprises as defined by MSMED Act 2006, Role of Small Business in Rural India, Government schemes and Agencies	
December	Internal Trade International Trade	Internal Trade-Meaning, Types of services rendered by Wholesaler and Retailer, Types of Retail Trade-Itinerants and Fixed Store Retailers, GST-Concept and Features International Trade-Concept and Benefits, Export and Import Trade-Meaning and Procedure, Documentations required in International trade, WTO- Meaning and Objectives	Visit to a mall or a Retail Outlet.

ANNUAL PROGRESSION 2021-22

CLASS - XI

SUBJECT - ACCOUNTANCY

Month	chapter	Topic
MAY	1	meaning/accounting as a source of information/objectives/roles/basic terms
	2	GAAP/basic accounting concepts/systems of accounting/basis of accounting/accounting standards
JULY	3	Business transactions n source document/accounting equation/using debit and credit/books of original entry/the ledger/posting from journal
AUGUST	4	Cash book/subsidiary books(purchases,purchases return, sales,sales return)/journal/balancing of accounts
	5	Need and preparation
SEPTEMBER	6	meaning/objective/preparation/significance/searching and rectification of error n preparation of suspense account
	7	causes,need,factors,method-straight line and WDV method,accounting treatment-charging to asset ac,creating provision for depreciation n accumulated dep ac/disposal of asset
		provisions/reserves/secret reserve
OCTOBER	8	meaning,theory,promissory note,accomodation bill,advantages,maturity of bill,discounting,endorsement, retained till due date,bill sent for collection, dishonour of bill
	9	meaning, trading and profit and loss ac,capital and revenue,deffered revenue expenditure,EBIT, balance sheet(grouping and marshalling of assets n liabilities),opening entry,
NOVEMBER	10	adjustments in preparation of financial statements with respect t closing stock,outstanding exp,prepaid exp and income, accrued income, depreciation,bad debts, provision
		for doubtful debts,provision for discount on debtors,abnormal loss,goods taken for personal use,interest on capital,managers commision, preparation of trading and profit n loss
		account and balance sheet with adjustments
	11	Features/reasons/limitations/ascertainment of profit/loss by statement of affairs method.
DECEMBER	12	Introduction to computer and accounting information system,introduction to computers(elements,capabilities,limitations of computer system)/automation of accounting process
		meaning
		SYLLABUS COMPLETED
JANUARY		REVISION
FEBRUARY		REVISION
MARCH		REVISION