

**BAL BHARATI PUBLIC SCHOOL
GANGA RAM HOSPITAL MARG, NEW DELHI-110060
CLASS: XI
SYLLABUS- 2022-23**

English

DISTRIBUTION OF SYLLABUS AS PER EXAMS

EXAM	UNIT/ CHAPTER
Cycle Test 1	<p>READING 1. Note Making</p> <p>GRAMMAR 1. Reordering of Sentences</p> <p>WRITING 1. Posters</p> <p>LITERATURE Hornbill 1. The Portrait of a Lady (Prose) 2. A Photograph (Poem)</p> <p>Snapshots 1. The Summer of the Beautiful White Horse</p>
Half Yearly	<p>READING 1. Note Making 2. Comprehension Passage 3. Case Study</p> <p>GRAMMAR 1. Gap Filling (Tenses, Clauses) 2. Reordering/ Transformation of Sentences</p> <p>WRITING 1. Posters 2. Speech</p> <p>LITERATURE Hornbill 1. The Portrait of a Lady (Prose) 2. A Photograph (Poem) 3. We're Not Afraid to Die...if We Can All Be Together (Prose) 4. Discovering Tut: the Saga Continues (Prose)</p>

	<p>5. The Laburnum Top (Poem) Snapshots 1. The Summer of the Beautiful White Horse 2. The Address</p> <p>ASL/Project Work</p>
<p>Cycle Test 2</p>	<p>READING 1. Note Making 2. Comprehension Passage 3. Case Study</p> <p>GRAMMAR 1. Gap Filling (Tenses, Clauses) 2. Reordering/ Transformation of Sentences</p> <p>WRITING 1. Classified Advertisements</p> <p>LITERATURE Hornbill 1. The Voice of the Rain (Poem) 2. The Adventure (Prose) 3. Silk Road (Prose)</p> <p>2. Snapshots: 1. Mother's Day</p>
<p>Annual Exam</p>	<p>READING 1. Note Making 2. Comprehension Passage 3. Case Study</p> <p>GRAMMAR 1. Gap Filling (Tenses, Clauses) 2. Reordering/ Transformation of Sentences</p> <p>WRITING 1. Classified Advertisements 2. Speech 3. Posters 4. Debate</p> <p>LITERATURE Hornbill – 1. The Portrait of a Lady (Prose) 2. A Photograph (Poem)</p>

	<ol style="list-style-type: none"> 3. We're Not Afraid to Die...if We Can All Be Together (Prose) 4. Discovering Tut: the Saga Continues (Prose) 5. The Laburnum Top (Poem) 6. The Voice of the Rain (Poem) 7. Childhood (Poem) 8. The Adventure (Prose) 9. Silk Road (Prose) 10. Father to Son (Poem) <p>2. Snapshots</p> <ol style="list-style-type: none"> 1. The Summer of the Beautiful White Horse 2. The Address 3. Mother's Day 4. Birth 5. The Tale of Melon City <p>ASL/Project Work</p>
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Prescribed Books

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

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

Subject: English				
S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	<p>HORNBILL <i>(Prose)</i></p> <ol style="list-style-type: none"> 1. The Portrait of a Lady 2. We're Not Afraid to Die...if We Can All Be Together 3. Discovering Tut: the Saga Continues 4. The Adventure 5. Silk Road 	<p>General Pupils will be able to:</p> <ul style="list-style-type: none"> • develop greater confidence and proficiency in the use of language skills necessary for social and academic purpose • perceive the overall meaning and organization of the text (i.e., correlation of the vital portions of the text) • identify the central/main point and supporting details, etc., to build communicative competence in various lexicons of English 	<p>Students will gain proficiency in the four skills of language learning, namely, Listening, Speaking, Reading, and Writing. The competencies given below will be developed through the different aspects of language learning, as follows: Reading comprehension: Conceptual understanding, decoding, Analyzing, inferring, interpreting, appreciating, literary, conventions and vocabulary, summarizing and using appropriate format/s.</p>	<p>A multi-skill, learner-centred, activity based approach to promote independent learning will be followed overall. As per the demands of the lesson and proficiency level of students, appropriate strategies will be adopted. These include: Lecture method, Loud/silent reading by students, role-play, dramatization, group discussion, pair/group activities, Use of PPTs, videos as support material. Guidance</p>

	<p><u>(Poetry)</u></p> <ol style="list-style-type: none"> 1. A Photograph 2. The Laburnum Top 3. The Voice of the Rain 4. Childhood 5. Father to Son 	<ul style="list-style-type: none"> • promote advanced language skills with an aim to develop the skills of reasoning, drawing inferences, etc. through meaningful activities • develop ability and acquire knowledge required in order to engage in independent reflection and enquiry • read and comprehend extended texts (prescribed and non-prescribed) in the different genres • make use of contextual clues to infer meanings of unfamiliar vocabulary 	<p><u>Writing tasks:</u> Conceptual Understanding, application of rules, Analysis, Reasoning, appropriacy of style and tone, using appropriate format and fluency, inference, analysis, evaluation and creativity</p>	<p>will be provided to access reliable websites or reference of suitable supplementary material will be suggested for reinforcing the lesson, further practice, and exam preparation.</p>
2.	<p><u>SNAPSHOTS:</u></p> <p><u>(Prose)</u></p> <ol style="list-style-type: none"> 1. The Summer of the Beautiful White Horse 2. The Address 3. Birth <p><u>(Poetry)</u></p> <ol style="list-style-type: none"> 1. The Tale of Melon City <p><u>(Drama)</u></p> <ol style="list-style-type: none"> 1. Mother's Day 	<ul style="list-style-type: none"> • select, compile and collate information for an oral presentation • produce unified paragraphs with adequate details and support • use grammatical structures accurately and appropriately <p>Grammar Pupils will be able to:</p> <ul style="list-style-type: none"> • delve deeper into their usage and functions of language items learnt in previous classes <ul style="list-style-type: none"> • use passive forms in scientific and innovative writings. • convert one kind of sentence/clause into a different kind of structure as well as other items for stylistic variations in different discourses • use modal auxiliaries- based on semantic considerations. <p>Reading Pupils will be able to:</p> <ul style="list-style-type: none"> • skim for main ideas and scan for details 	<p><u>Overall Literary texts:</u> Recalling, reasoning, critical thinking, appreciating literary convention, inference, analysis, creativity with fluency.</p> <p><u>Speaking and Listening activities:</u> all the above competencies, along with accuracy and fluency in the use of language in day to day communicative activities</p>	
3.	<p><u>WRITING TASKS:</u></p> <ol style="list-style-type: none"> 1. Classified Advertisements 2. Posters 3. Speech 4. Debate 			

		<ul style="list-style-type: none">• refer to dictionaries, encyclopedia, thesaurus and academic reference material in any format• select and extract relevant information, using reading skills of skimming and scanning• understand the writer's purpose and tone• comprehend the difference between the literal and the figurative• differentiate between claims and realities, facts and opinions, form business opinions on the basis of latest trends available• comprehend technical language as required in computer related fields, arrive at personal conclusion and logically comment on a given text. <p>Literature Pupils will be able to:</p> <ul style="list-style-type: none">• respond to literary texts• appreciate and analyze special features of languages that differentiate literary texts from non-literary ones• explore and evaluate features of character, plot, setting, etc.• understand and appreciate the oral, mobile and visual elements of drama.• Identify the elements of style such as humour, pathos, satire and irony, etc.		
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		<ul style="list-style-type: none"> • make notes from various resources for the purpose of developing the extracted ideas into sustained pieces of writing <p>Writing</p> <p>Pupils will be able to write/draft:</p> <ul style="list-style-type: none"> • informal, business and official letters. • notices, advertisements and design posters effectively and appropriately • applications, fill in application forms, prepare a personal bio-data for admission into universities, entrance tests and jobs. • Informal/formal reports for school magazines/events/processes/ or in local newspapers about events or occasions. • express opinions, facts, arguments in the form of articles using a variety of accurate sentence structures 		
4.	<p>GRAMMAR:</p> <ol style="list-style-type: none"> 1. Questions on Gap Filling (Tenses, Clauses) 2. Questions on Reordering/ Transformation of Sentences 			

Mathematics**DISTRIBUTION OF SYLLABUS AS PER EXAMS**

EXAM	UNIT/ CHAPTER
Cycle Test 1	Sets, Trigonometry
Half Yearly	Sets, Relation and Functions, Trigonometry, complex Numbers, Permutation and combinations, Binomial Theorem and Sequences and series
Cycle Test 2	Straight Lines , Conic Sections
Annual Exam	Sets, Relation and Functions, Trigonometry, complex Numbers, Permutation and combinations, Binomial Theorem and Sequences and series, Straight Lines , Conic Sections, Introduction to 3D, Limits and Derivatives, Statistics and Probability.

S.NO.	CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	Sets	To apply the concept to problems. To describe a problem pictorially using venn diagrams.	Concept of sets and apply them to problems, problem pictorially using venn diagrams.	Lecture method, demonstration and Practice sheet
2.	Relations and Functions	To find domain and codomain of functions	To understand relation and functions., To identify domain and codomain of functions	Lecture method, demonstration and Practice sheet
3.	Trigonometric Functions	To solve problems on radian and degree measure of angles, To able to use identities in solving problems	To solve problems on radian and degree measure of angles, To able to use identities in solving problems	Lecture method, demonstration and Practice sheet
4.	Complex Numbers and Quadratic Equations	To solve problems on complex numbers	Need of complex numbers, use of complex numbers, modulus and argument of complex numbers.	Lecture method, demonstration and Practice sheet

5.	Linear Inequalities	To find graphical solutions to system of equations	Graphical solutions to system of equations	Lecture method, demonstration and Practice sheet
6.	Permutations and Combinations	To find the number of ways in which a particular combination or arrangement can be done.	Number of ways in which a particular combination or arrangement can be done.	Lecture method, demonstration and Practice sheet
7.	Binomial Theorem	To find expansion of binomial, general and middle terms.	Expansion of binomial, general and middle terms.	Lecture method, demonstration and Practice sheet
8	Sequence and Series	To determine the general term of series in GP, Calculate sum of n terms of series, arithmetic mean and geometric mean.	General term of series in GP, Calculate sum of n terms of series. Relation between AM and GM	Lecture method, demonstration and Practice sheet
9.	Straight Lines	To find Slope of line, Calculate angle between 2 line, To use various forms of equation of line. To calculate distance between 2 parallel lines.	Slope of line, Calculate angle between 2 line, various forms of equation of line. To calculate distance between 2 parallel lines.	Lecture method, demonstration and Practice sheet
10.	Conic Section	To find the equation of circle in various forms. To understand the geometry of conic sections. To find equations of parabola, ellipse, hyperbola. To apply the knowledge of conic section.	Equation of circle in various forms, geometry of conic sections. Equation of parabola, ellipse, hyperbola. To apply the knowledge of conic section.	Lecture method, demonstration and Practice sheet
11.	Introduction to Three Dimensional Geometry	Understanding of Coordinate axes and Coordinate planes in three dimensional planes. To represent point in space, find distance between two points and use section formula	Representation of point in space Find distance between two points and find the ratio in which a line segment is divided by a point using the section formula.	Lecture method, demonstration and Practice sheet
12.	Limits and Derivatives	To find limiting values of different functions, To calculate derivatives using first principle, To use various rules for finding derivatives.	Limiting values of different functions, derivatives using first principle, To use various rules for finding derivatives	Lecture method, demonstration and Practice sheet

13.	Statistics	To find mean deviation about mean and median, To find variance and standard deviation.	Mean deviation about mean and median, variance and standard deviation	Lecture method, demonstration and Practice sheet
14.	Probability	To find sample space, To identify between Exhaustive events and mutually exclusive events, To find probability of an event for simple problems.	Sample space, Exhaustive events and mutually exclusive events, probability of an event for simple problems.	Lecture method, demonstration and Practice sheet

Physics

EXAM	UNIT/ CHAPTER
Cycle Test 1	PHYSICAL WORLD AND MEASUREMENT KINEMATICS LAWS OF MOTION
Half Yearly	Work, Energy and Power Motion of System of Particles and Rigid Body Gravitation Properties of Bulk Matter :Chapter-9: Mechanical Properties of Solids
Cycle Test 2	Properties of Bulk Matter 24 20 Chapter-9: Mechanical Properties of Fluids Chapter-11: Thermal Properties of Matter Thermodynamics
Annual Exam	Behavior of Perfect Gasses and Kinetic Theory of Gasses(whole syllabus)

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S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	<p>Unit I: Physical World and Measurement 08 Periods</p> <p>Chapter–1: Physical World Physics-scope and excitement; nature of physical laws; Physics, technology and society.</p> <p>Chapter–2: Units and Measurements Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Significant figures. Dimensions of physical quantities, dimensional analysis and its applications.</p>	<p>Students will be able to</p> <ol style="list-style-type: none"> 1. Understanding of physics in daily life 2. Correlate Physics, technology and Society. 3. Nature of physical laws. 4. Understand The international system of Units 5. Learn Accuracy, precision of instruments and errors in measurement 	<p>Development of Scientific method of thinking that is applicable in all areas of life</p> <p>Analyzing and modeling a physical process</p> <p>Ability to learn new information rapidly and efficiently</p> <p>Ability to logically and systematically pursue a line of thought</p> <p>Numerical solving skill</p> <p>Problem solving skill</p>	<p>a) Instructor/teacher centered methods.</p> <p>(b) learner-centered methods.</p> <p>(c) content-focused methods.</p> <p>(d) interactive/participative methods Specific teaching methods</p> <p>Lecture Demonstration method.</p>
2.	<p>Unit II: Kinematics</p> <p>Chapter–3: Motion in a Straight Line Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and non-uniform motion, and instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment).</p> <p>Chapter–4: Motion in a Plane Scalar and vector</p>	<p>Student will Understand the concept of :</p> <ol style="list-style-type: none"> 1. Average velocity and average speed 2. Instantaneous velocity and speed 3. Acceleration 4. Kinematic equations for uniformly accelerated motion 5. uniformly accelerated motion 6. Relative velocity 7. Apply the equations of motion 8. Learn to use and analyses of the graphs 	<p>Development of Scientific method of thinking that is applicable in all areas of life</p> <p>Analyzing and modeling a physical process</p> <p>Problem solving skills – allow work from one leading edge technology to another</p> <p>Logical, data-based decision-making</p>	<p>a) Instructor/teacher centered methods.</p> <p>(b) learner-centered methods.</p> <p>(c) content-focused method</p> <p>(d) interactive/participative methods Specific teaching methods. Lecture Demonstration method.</p>

	<p>quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors. Motion in a plane, cases of uniform velocity and uniform acceleration projectile motion, uniform circular motion.</p>	<p>9. Grasp the concept of vectors in daily life. 10. Analyses the motion of two objects relative to each other 11. Understand the role of projectile motion in the world around us.</p>		
	<p>Unit III: Laws of Motion 14 Periods Chapter-5: Laws of Motion Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular</p>	<p>1. The student should understand the significance of Newton's law of inertia by identifying and refuting classic misconceptions concerning the causes of motion. 2. The student should recognize inertia as a property of an object which depends solely upon mass. 3. The student should be able to relate the presence of balanced or unbalanced forces to the state of motion of an object. The student should be able to relate force diagrams and force information to information describing the motion of an object</p>	<p>Development of Scientific method of thinking that is applicable in all areas of life Analyzing and modeling a physical process</p>	<p>a) · Instructor/teacher centered methods. ... · (b) learner-centered methods. ... · (c) content-focused methods. ... · (d) interactive/participative methods. ... · Specific teaching methods. ... · Lecture Demonstration method.</p>

	<p>motion (vehicle on a level circular road, vehicle on a banked road).</p>			
	<p>Unit IV: Work, Energy and Power 14 Periods Chapter-6: Work, Energy and Power Work done by a constant force and a variable force; kinetic energy, work energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: non- conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.</p>	<ol style="list-style-type: none"> 1. The student should be able to define work and identify its units. 2. The student should be able to predict whether a force is doing positive. 	<p>Problem solving skills – allow work from one leading edge technology to another Logical, data-based decision-making</p>	<ol style="list-style-type: none"> a) Instructor/teacher centered methods. (b) learner-centered methods. (c) content-focused methods. (d) interactive/participative methods. <p>Specific teaching methods. Lecture Demonstration method.</p>
	<p>Unit V: Motion of System of Particles and Rigid Body Chapter-7: System of Particles and Rotational Motion Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications. Equilibrium of rigid bodies, rigid body rotation and equations of</p>	<ol style="list-style-type: none"> 1. The student should be able to define Torque and identify its application. 2. The student should be able to predict whether a torque will rotate an object or not. 3. The student should be able to define angular Momentum and identify its units. 	<p>Develop skills for scientific inquiry Develop ability to think scientifically, critically and creatively and solve physics-related problems individually or collaboratively Understand language of science and communicate ideas and views on physics related issues Make informed decisions and judgments on physics-related issues</p>	<ol style="list-style-type: none"> a) Instructor/teacher centered methods. (b) learner-centered methods. (c) content-focused methods. (d) interactive/participative methods. <p>Specific teaching methods. Lecture Demonstration method.</p>

	<p>rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).</p>			
	<p>Unit VI: Gravitation 12 Periods Chapter-8: Gravitation Kepler's laws of planetary motion, universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential, escape velocity, orbital velocity of a satellite.</p>	<p>Students will be able to :</p> <ul style="list-style-type: none"> · 1. Calculate effects of gravitational force on planets. · 2. Discuss the effects of weightlessness on the human body. · 3. Describe and demonstrate how objects in a state of free fall are accelerated by gravity at an equal rate. · 4. Define gravity as the force of attraction between two objects. 	<p>Apply & briefly communicate knowledge, extract tabular information, extrapolate from data in a simple linear graph, interpret pictorial diagrams, demonstrate skills below</p>	<p>a) Instructor/teacher centered methods. (b) learner-centered methods. (c) content-focused methods. (d) interactive/ participative methods. Specific teaching methods. Lecture Demonstration method.</p>
	<p>Unit VII: Properties of Bulk Matter Chapter-9: Mechanical Properties of Solids Elasticity, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy. Chapter-10: Mechanical Properties of Fluids Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid</p>	<p>The student will be able to understand 1.Practicality of Fluid dynamics in real life (2.Pascal's Law, Bernoulli's theorem, Magnus Effect) The student will be able to understand Concept of surface Tension and Surface energy and will be able to relate it with daily life.</p>	<p>Understand some fundamentals of scientific investigations, apply basic physical principles to solve some quantitative problems, provide written explanations to communicate scientific knowledge physics-related problems individually or collaboratively Understand language of science and communicate ideas and views on physics related issues Make informed decisions and judgments on physics-related issues</p>	<p>a) Instructor/teacher centered methods. (b) learner-centered methods. (c) content-focused methods. (d) interactive/ participative methods. Specific teaching methods. Lecture Demonstration method.</p>

	<p>pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its simple applications. Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise.</p> <p>Chapter-11: Thermal Properties of Matter Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; C_p, C_v - calorimetry; change of state - latent heat capacity. Heat transfer- conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law.</p>			
	<p>Unit VIII: Thermodynamics Chapter-12: Thermodynamics Thermal equilibrium and definition of temperature zeroth law of thermodynamics,</p>	<p>The student will be able to understand the</p> <ol style="list-style-type: none"> 1. Concept of Heat 2. work 3. Internal energy of the system. <p>Learners will be able to understand the</p>	<p>Analytical skill Learning skills Judgment skill</p>	<p>a) Instructor/teacher centered methods. ... (b) learner-centered methods. (c) content-focused methods. ... (d) interactive/ participative methods. ...</p>

	<p>heat, work and internal energy. First law of thermodynamics, Second law of thermodynamics: gaseous state of matter, change of condition of gaseous state - isothermal, adiabatic, reversible, irreversible, and cyclic processes.</p>	<p>1.Principle of Heat Engine 2.Reversible and irreversible process</p>		<p>Specific teaching methods. ... Lecture Demonstration method.</p>
	<p>Unit IX:Behavior of Perfect Gases and Kinetic Theory of Gases Chapter-13: Kinetic Theory Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.</p>	<p>The student will be able to understand 1. The concept of Pressure exerted by a gas on the walls of the container. Learners will be able to understand the 2. Concept and relation between different specific heat capacities. 3. Understand the concept of equipartition of energy.</p>	<p>Numerical solving skills Comprehension skills</p>	<p>a) Instructor/teacher centered methods. ... (b) learner-centered methods. ... (c) content-focused methods. ... (d) interactive/ participative methods. ... (e) Specific teaching methods. ... (f) Lecture Demonstration method.</p>
	<p>Unit X: Oscillations and Waves Chapter-14: Oscillations Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their application. Simple</p>	<p>Students will learn the 1. Concept of SHM in daily life and its applications. 2. Calculation of velocities of the object at various points during SHM.</p>	<p>Demonstrate some scientific inquiry skills, combine information to draw conclusions, interpret information in diagrams, graphs and tables to solve problems, provide short explanations conveying</p>	<p>a) Instructor/teacher centered methods. (b) learner-centered methods. (c) content-focused methods. (d) interactive/participative methods. ... Specific teaching methods. Lecture Demonstration method.</p>

	<p>harmonic motion (S.H.M) and its equations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period.</p> <p>Chapter-15: Waves Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats.</p>	<p>Students will be able to understand the</p> <p>1.basic concept of generation of waves along with its Classification</p>	<p>scientific knowledge & cause effect relationships, demonstrate skills</p>	
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PRACTICALS Total Periods: 60

The record, to be submitted by the students, at the time of their annual examination, has to include:

- Record of at least 8 Experiments [with 4 from each section], to be performed by the students.
- Record of at least 6 Activities [with 3 each from section A and section B], to be performed by the students.
- Report of the project carried out by the students.

EVALUATION SCHEME

Time 3 hours Max. Marks:	30 Marks
Two experiments one from each section	7+7 marks
Practical record (experiment and activities)	5 marks
One activity from any section	3 marks
Investigatory Project	3 marks
Viva on experiments, activities and project	5 marks
Total	30 marks

SECTION-A
Experiments

1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume.
2. To measure diameter of a given wire and thickness of a given sheet using screw gauge.
3. To determine volume of an irregular lamina using screw gauge.
4. To determine radius of curvature of a given spherical surface by a spherometer.
5. To determine the mass of two different objects using a beam balance.
6. To find the weight of a given body using parallelogram law of vectors.
7. Using a simple pendulum, plot its L-T² graph and use it to find the effective length of second's pendulum.
8. To study variation of time period of a simple pendulum of a given length by taking bobs of same size but different masses and interpret the result.
9. To study the relationship between force of limiting friction and normal reaction and to find the co-efficient of friction between a block and a horizontal surface.
10. To find the downward force, along an inclined plane, acting on a roller due to gravitational pull of the earth and study its relationship with the angle of inclination θ by plotting graph between force and $\text{Sin}\theta$.

Activities

1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.
2. To determine mass of a given body using a metre scale by principle of moments.
3. To plot a graph for a given set of data, with proper choice of scales and error bars.
4. To measure the force of limiting friction for rolling of a roller on a horizontal plane.
5. To study the variation in range of a projectile with angle of projection.
6. To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane).
7. To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.

SECTION-B

Experiments

1. To determine Young's modulus of elasticity of the material of a given wire.
2. To find the force constant of a helical spring by plotting a graph between load and extension.
3. To study the variation in volume with pressure for a sample of air at constant temperature by plotting graphs between P and V, and between P and 1/V.
4. To determine the surface tension of water by capillary rise method.
5. To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.
6. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.
7. To determine specific heat capacity of a given solid by method of mixtures.
8. To study the relation between frequency and length of a given wire under constant tension using sonometer.
9. To study the relation between the length of a given wire and tension for constant frequency using sonometer.
10. To find the speed of sound in air at room temperature using a resonance tube by two resonance positions.

Activities

1. To observe change of state and plot a cooling curve for molten wax.
2. To observe and explain the effect of heating on a bi-metallic strip.
3. To note the change in level of liquid in a container on heating and interpret the observations.
4. To study the effect of detergent on surface tension of water by observing capillary rise.
5. To study the factors affecting the rate of loss of heat of a liquid.

6. To study the effect of load on depression of a suitably clamped metre scale loaded at (i) its end (ii) in the middle.

7. To observe the decrease in pressure with increase in velocity of a fluid.

Practical Examination for Visually Impaired Students

Class XI Note: Same Evaluation scheme and general guidelines for visually impaired students as given for Class XII may be followed.

A. Items for Identification/Familiarity of the apparatus for assessment in practical's (All experiments) Spherical ball, Cylindrical objects, vernier calipers, beaker, calorimeter, Screw gauge, wire, Beam balance, spring balance, weight box, gram and milligram weights, forceps, Parallelogram law of vectors apparatus, pulleys and pans used in the same 'weights' used, Bob and string used in a simple pendulum, meter scale, split cork, suspension arrangement, stop clock/stopwatch, Helical spring, suspension arrangement used, weights, arrangement used for measuring extension, Sonometer, Wedges, pan and pulley used in it, 'weights' Tuning Fork, Meter scale, Beam balance, Weight box, gram and milligram weights, forceps, Resonance Tube, Tuning Fork, Meter scale, Flask/Beaker used for adding water.

B. List of Practicals

1. To measure diameter of a small spherical/cylindrical body using vernier calipers.

2. To measure the internal diameter and depth of a given beaker/calorimeter using vernier calipers and hence find its volume.

3. To measure the diameter of a given wire using a screw gauge.

4. to measure the thickness of a given sheet using a screw gauge.

5. To determine the mass of a given object using a beam balance.

6. To find the weight of a given body using the parallelogram law of vectors.

7. Using a simple pendulum plot L-T and L-T² graphs. Hence find the effective length of second's pendulum using appropriate length values.

8. To find the force constant of a given helical spring by plotting a graph between load and extension.

9. (i) To study the relation between frequency and length of a given wire under constant tension using a sonometer. (ii) To study the relation between the length of a given wire and tension, for constant frequency, using a sonometer.

10. To find the speed of sound in air, at room temperature, using a resonance tube, by observing the two resonance positions. Note: The above practicals may be carried out in an experiential manner rather than recording observations.

Chemistry

EXAM	UNIT/ CHAPTER
Cycle Test 1	UNIT I
Half Yearly	UNIT I,II,III,IV,V
Cycle Test 2	UNIT VI,VIII
Annual Exam	FULL SYLLABUS

Subject: Chemistry				
S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
Unit I:	<p>Some Basic Concepts of Chemistry</p> <p>General Introduction: Importance and scope of Chemistry. Nature of matter, laws of chemical combination, Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry</p>	<ul style="list-style-type: none"> • appreciate the contribution of India in the development of chemistry understand the role of chemistry in different spheres of life • appreciate significance of atomic mass, average atomic mass, molecular mass and formula mass; • describe the terms – mole and molar mass; • calculate the mass percent of component elements constituting a compound; • determine empirical formula and molecular formula for a compound from the given experimental data; and • perform the stoichiometric calculations. 	<p>Use scientific notations and determine significant figures;</p> <p>Differentiate between precision and accuracy</p> <p>Calculate concentration of solutions</p>	Preparation of standard solution of oxalic acid.
Unit II:	<p>Structure of Atom</p> <p>Discovery of Electron, Proton and Neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and</p>	<ul style="list-style-type: none"> • describe Thomson, Rutherford and Bohr atomic models; • understand the important features of the quantum mechanical model of atom; 	<p>appreciate the dual nature of matter</p> <p>Problem-solving</p> <p>writing the electronic configurations of atoms.</p>	

	<p>its limitations, Bohr's model and its limitations, concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, 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, electronic configuration of atoms, stability of half-filled and completely filled orbitals.</p>	<ul style="list-style-type: none"> • understand nature of electromagnetic radiation and Planck's quantum theory; • explain the photoelectric effect and describe features of atomic spectra; 	<p>position of electron in an atom</p>	
<p>Unit III:</p>	<p>Classification of Elements and Periodicity in Properties</p> <p>Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements -</p>	<ul style="list-style-type: none"> • understand the Periodic Law; • understand the significance of atomic number and electronic configuration as the basis for periodic classification; • classify elements into s, p, d, f blocks and learn their main characteristics; • recognise the periodic trends in physical and chemical properties of elements; 	<p>1.name the elements with $Z > 100$ according to IUPAC nomenclature</p> <p>2.use scientific vocabulary appropriately to communicate ideas related to certain important properties of atoms</p> <p>identify group & period of an element</p>	<p>Graph pertinent data and observe the trends that occur.</p> <p>Answer questions to demonstrate their understanding of the periodic trends.</p>

	atomic radii, ionic radii, inert gas radii, Ionization enthalpy, electron gain enthalpy, electronegativity, valency. Nomenclature of elements with atomic number greater than 100.	<ul style="list-style-type: none"> • compare the reactivity of elements and correlate it with their occurrence in nature; • explain the relationship between ionization enthalpy and metallic character; 	3. compare properties of elements	
Unit IV:	<p>Chemical Bonding and Molecular Structure</p> <p>Valence electrons, ionic bond, covalent bond, bond parameters, Lewis's structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules (qualitative idea only), Hydrogen bond.</p>	<ul style="list-style-type: none"> • explain the formation of different types of bonds; • describe the VSEPR theory and predict the geometry of simple molecules; • explain the valence bond approach for the formation of covalent bonds; • predict the directional properties of covalent bonds; • explain the different types of hybridisation involving s, p and d orbitals and draw shapes of simple covalent molecules; • describe the molecular orbital theory of homonuclear diatomic molecules; • explain the concept of hydrogen bond. 	1. critically analyze chemical information, synthesize the information	Drawing VSEPR structures for various molecules

Unit V:	Chemical Thermodynamics Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics - internal energy and enthalpy, heat capacity and specific heat, measurement of ΔU and ΔH , Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function, Gibb's energy change for spontaneous and non- spontaneous processes, criteria for equilibrium. Third law of	<ul style="list-style-type: none"> • state first law of thermodynamics and express it mathematically; • calculate energy changes as work and heat contributions in chemical systems; • explain state functions: U, H. • correlate ΔU and ΔH; • measure experimentally ΔU and ΔH; • define standard states for ΔH; • calculate enthalpy changes for various types of reactions; • state and apply Hess's law of constant heat summation; • differentiate between extensive and intensive properties; • define spontaneous and nonspontaneous processes; • explain entropy as a thermodynamic state function and apply it for spontaneity; • explain Gibbs energy change (ΔG); and • establish relationship between ΔG and spontaneity, ΔG and equilibrium constant.es; 	1.Chemistry majors apply the principles of chemistry to solve qualitative and quantitative problems	calculating specific heat of a liquid
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	thermodynamics (brief introduction).			
Unit VI	<p>Equilibrium</p> <p>Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium - Le Chatelier's principle, ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, hydrolysis of salts (elementary idea), buffer solution, Henderson Equation, solubility product, common ion effect (with illustrative examples).</p>	<ul style="list-style-type: none"> • explain characteristics of equilibria involved in physical and chemical processes • write expressions for equilibrium constants; • establish a relationship between K_p and K_c; • explain various factors that affect the equilibrium state of a reaction; • classify substances as acids or bases according to Arrhenius, Bronsted-Lowry and Lewis concepts; • classify acids and bases as weak or strong in terms of their ionization constants; • explain the dependence of degree of ionization on concentration of the electrolyte and that of the common ion; • describe pH scale for representing hydrogen ion concentration • explain ionisation of water and its dual role as acid and base; 	<p>1.To predict the direction of chemical reactions and calculate the composition of the final reaction mixture. This allows to control the reaction conditions to favor the formation of desired products</p>	<p>Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the concentration of either of the ions.</p>

		<ul style="list-style-type: none"> describe ionic product (K_w) and pK_w for water; appreciate use of buffer solutions; calculate solubility product constant. 		
Unit VII	<p>Redox Reactions</p> <p>Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number, applications of redox reactions.</p>	<ul style="list-style-type: none"> define the terms oxidation, reduction, oxidant (oxidising agent) and reductant (reducing agent); explain mechanism of redox reactions by electron transfer process; use the concept of oxidation number to identify oxidant and reductant in a reaction; classify redox reaction into combination (synthesis), decomposition, displacement and disproportionation reactions; balance chemical equations using (i) oxidation number (ii) half reaction method; 	<ol style="list-style-type: none"> Critical and thoughtful thinking Develops innovations and proposes solutions to problems based on established methods 	Determination of strength of a given solution of hydrochloric acid by titrating it against standard Sodium Carbonate solution.
Unit VIII:	<p>Organic Chemistry - Some Basic Principles and Techniques</p>	<ul style="list-style-type: none"> write structures of organic molecules in various ways; classify the organic compounds; name the compounds according to IUPAC system of 	1. Systematic naming of organic compounds	Detection of -Nitrogen, Sulphur, Chlorine in organic compounds.

	<p>General introduction, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.</p>	<p>nomenclature and also derive their structures from the given names;</p> <ul style="list-style-type: none"> • understand the concept of organic reaction mechanism; • explain the influence of electronic displacements on structure and reactivity of organic compounds; • recognise the types of organic reactions; • learn the techniques of purification of organic compounds; 	<p>2.visualize both the chemical processes.</p> <p>techniques for identification and purification.</p>	
Unit IX:	<p>Hydrocarbons</p> <p>Classification of Hydrocarbons Aliphatic Hydrocarbons: Alkanes - Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and</p>	<ul style="list-style-type: none"> • distinguish between alkanes, alkenes, alkynes and aromatic hydrocarbons on the basis of physical and chemical properties; • appreciate the role of hydrocarbons as sources of energy and for other industrial applications; • predict the formation of the addition products of unsymmetrical alkenes and 	<ol style="list-style-type: none"> 1. synthesis of various compounds 2. problem solving skills in identification of compounds through word problems 3. critical thinking through problems involving multiple concepts 	<p>A big picture activity:</p> <p>students are tasked with discovering the common link between a series of illustrations containing images depicting organic chemistry concepts or images of everyday scenes linked to organic chemistry</p>

<p>pyrolysis. Alkenes - Nomenclature, the structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.</p> <p>Alkynes - Nomenclature, the structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water.</p> <p>Aromatic Hydrocarbons: Introduction, IUPAC nomenclature, benzene: resonance, aromaticity, chemical properties: mechanism of electrophilic substitution. Nitration,</p>	<p>alkynes on the basis of electronic mechanism;</p> <ul style="list-style-type: none"> ● comprehend the structure of benzene, explain aromaticity and understand mechanism of electrophilic substitution reactions of benzene; ● predict the directive influence of substituents in monosubstituted benzene ring; ● learn about carcinogenicity and toxicity. 	<p>4. detail oriented approach to problems</p>	
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	sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of the functional group in monosubstituted benzene. Carcinogenicity and toxicity.			
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Biology

EXAM	UNIT/ CHAPTER
Periodic Test 1	Chapter-1: The Living World Chapter-2: Biological Classification Chapter-3: Plant Kingdom Chapter-4: Animal Kingdom Chapter-5: Morphology of Flowering Plants Chapter-6: Anatomy of Flowering Plants Chapter-7: Structural Organisation in Animals Chapter-8: Cell-The Unit of Life
Periodic Test 2	All chapters of Periodic Test 1 and Chapter-9: Biomolecules Chapter-10: Cell Cycle and Cell Division Chapter-13: Photosynthesis in Higher Plants Chapter-14: Respiration in Plants
Periodic Test 3	Chapter-15: Plant - Growth and Development Chapter-17: Breathing and Exchange of Gases Chapter-18: Body Fluids and Circulation Chapter-19: Excretory Products and their Elimination Chapter-20: Locomotion and Movement

Annual Exam	Chapter-21: Neural Control and Coordination Chapter-22: Chemical Coordination and Integration All Chapters of Periodic Test 1,2 and 3
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S.NO.	CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	Chapter-1: The Living World	<ul style="list-style-type: none"> • Understand the need for classification • List and explain three domains of life • Define taxonomy and systematics • Develop concept of species and taxonomic hierarchy • Use binomial nomenclature • relate evolution and classification. 	OBSERVATION DRAWING WRITING HANDLING APPARATUS	1. Parts of a compound microscope. 2.SPECIMENS of Bacteria, Oscillatoria, Spirogyra , R h i z o p u s , Mushroom, Yeast, Liverwort, Moss, Fern, Pinus, one monocot and one dicot and one lichen
	Chapter-2: Biological Classification	<ul style="list-style-type: none"> • Explain the basis of Five kingdom classification • List Salient features of Monera Protista and Fungi • Classify Monera,Protista and Fungi into major groups • Explain the structure of Lichens • Differentiate between Viruses and Viroids. 	ANALYSIS DRAWING WRITING TIME MANAGEMENT	1. PERMANENT SLIDES of - Amoeba, Hydra 2.PICTURES of Liver Fluke, Ascaris, Leech, Earthworm, Prawn, Silkworm, Honeybee, Snail,
	Chapter-3: Plant Kingdom	<ul style="list-style-type: none"> • Classify plants into major groups • Enumerate Salient and distinguishing features of Algae, Bryophyta, Pteridophyta, Gymnospermae • List a few examples of Algae, Bryophyta, Pteridophyta, Gymnospermae <p>(Topics excluded – Angiosperms, Plant Life Cycle and Alternation of Generations)</p>	OBSERVATION DRAWING WRITING COMMUNICATION COMPUTERS	ART INTEGRATED ACTIVITY. Prepare a powerpoint presentation on Biodiversity and Online Intersection class XI Panel Discussion with English and Biology faculty

	Chapter-4: Animal Kingdom	<ul style="list-style-type: none"> List Salient features of animals classify animals, non-chordates up to phyla level and chordates up to class level (salient features and at a few examples of each category). 	OBSERVATION ANALYSIS WRITING HANDLING APPARATUS	To arrange all phylum and division of plant kingdom and Animal kingdom in flow chart
	Chapter-5: Morphology of Flowering Plants	<ul style="list-style-type: none"> Explain Morphology of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed. Describe features of family Solanaceae 	OBSERVATION DRAWING WRITING HANDLING APPARATUS	4. FLORAL DISSECTION Dissection of Flower – Family Solanaceae or Liliaceae
	Chapter-6: Anatomy of Flowering Plants	<ul style="list-style-type: none"> Explain Anatomy of dicots and monocots. compare the functions of tissue systems in dicots and monocots. Draw TS of dicot and monocot Root Draw TS of dicot and monocot stem 	OBSERVATION ANALYSIS WRITING HANDLING APPARATUS	PERMANENT SLIDES OF a)TS monocot and dicot stem b)Monocot and dicot root
	Chapter-7: Structural Organisation in Animals	<ul style="list-style-type: none"> Explain Morphology of Frog Describe Anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of frog. Draw digestive system and reproductive systems of frog 		3d MODULE SHOWING ANATOMY OF FROG
	Chapter-8: Cell-The Unit of Life Cell theory and cell as the basic unit	<ul style="list-style-type: none"> State Cell theory and cell as the basic unit of life Compare the structure of prokaryotic and eukaryotic cell Differentiate between Plant cell and animal cell Explain the structure and function of cell envelope-cell membrane, cell wall cell organelles - structure and function endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes Elaborate on structure and functions of vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles 	OBSERVATION ANALYSIS WRITING DRAWING	Mobile App - Cell world

		<ul style="list-style-type: none"> • Explain ultrastructure and function nucleus. • Draw labeled diagrams of Nucleus, endomembrane system, endoplasmic reticulum, golgi bodies, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles 		
	Chapter-9: Biomolecules	<p>Chemical constituents of living cells: structure and function of proteins, carbohydrates, lipids, nucleic acids; Enzyme - types, properties, enzyme action.</p> <p>(Topics excluded: Nature of Bond Linking Monomers in a Polymer, Dynamic State of Body Constituents – Concept of Metabolism, Metabolic Basis of Living, The Living State)</p>	OBSERVATION ANALYSIS WRITING HANDLING APPARATUS	<p>1. Powerpoint presentation showing primary secondary and tertiary structures of proteins and nucleic acids</p> <p>2. To test the presence of Sugar in Urine To test the presence of Albumin in Urine</p>
	Chapter-10: Cell Cycle and Cell Division	<ul style="list-style-type: none"> • Explain the phases of cell cycle • Draw a schematic diagram showing phases of Cell cycle • List the characteristic features of all the stages of mitosis • Draw diagrams of all the stages of mitosis namely Prophase, metaphase, anaphase, telophase • List the characteristic features of all the stages of meiosis • Draw diagrams of all the stages of meiosis • Write the significance of mitosis and meiosis. 	OBSERVATION DRAWING WRITING ANALYSIS	Permanent slides showing various stages of mitosis and meiosis. Art Integrated Activity Prepare Mitosis and Meiosis Cards Using Beautiful colours and creativity to show crossing over, terminalisation of chiasmata, chromosomes moving over spindle fibers . solve it like a jigsaw puzzle online in group of 6
	Chapter-13: Photosynthesis in Higher Plants	<ul style="list-style-type: none"> • understand Photosynthesis as a means of autotrophic nutrition • Describe the site of photosynthesis • Explain the pigments involved in photosynthesis (elementary idea) • Differentiate between photochemical and biosynthetic phases of photosynthesis • Compare the function of the two photosystems in green plants • List the difference between light reaction and calvin cycle. 	PSYCHOMOTOR SKILLS ANALYSIS OBSERVATION WRITING	Youtube video from shiksha house. Separate plant pigments through paper chromatography.

		<ul style="list-style-type: none"> • Illustrate cyclic and non-cyclic photophosphorylation • Describe chemiosmotic hypothesis • Understand photorespiration; C3 and C4 pathways • Enumerate the factors affecting photosynthesis. • Relate the absorption spectrum of a pigment to its color. 		
1.	Chapter-14: Respiration in Plants	<ul style="list-style-type: none"> • State the need of Exchange of gases • Explain cellular respiration - glycolysis, fermentation (anaerobic) • Explain TCA cycle and electron transport system (aerobic)with the help of schematic diagrams and flowcharts. • Calculate energy relations - number of ATP molecules generated • Describe amphibolic pathways • State and find respiratory quotient. 	OBSERVATION ANALYSIS WRITING HANDLING APPARATUS	you tube videos by best for neet To study the rate of respiration in flower buds / leaves / germinating seeds.
	Chapter-15: Plant - Growth and Development	<ul style="list-style-type: none"> • Describe the process and importance of Seed germination • Elaborate the phases of plant growth and plant growth rate • List the conditions of growth • State differentiation, dedifferentiation and redifferentiation • Explain sequence of developmental processes in a plant cell • List the functions of growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA; 	OBSERVATION ANALYSIS WRITING HANDLING APPARATUS	
	Chapter-17: Breathing and Exchange of Gases	<ul style="list-style-type: none"> • Recall Respiratory organs in animals • Draw a labeled diagram of human Respiratory system • Explain the structure of human respiratory system • Describe mechanism of breathing and its regulation in humans • Elaborate the process of exchange and transport of gases in the body. 	OBSERVATION ANALYSIS WRITING DRAWING	

		<ul style="list-style-type: none"> • Understand Nervous regulation of respiration • Calculate respiratory volume • List the disorders related to respiration - asthma, emphysema, occupational respiratory disorders. 		
1.	Chapter-18: Body Fluids and Circulation	<ul style="list-style-type: none"> • Explain the Composition of blood, blood groups, coagulation of blood • Describe composition of lymph and its function • Draw the diagram of human circulatory system - Structure of human heart and blood vessels • List the functions of human heart and blood vessels • Explain cardiac cycle, cardiac output, ECG • Describe double circulation • List the centers of regulation of cardiac activity • Identify disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure 	OBSERVATION DRAWING WRITING HANDLING APPARATUS	
15	Chapter-19: Excretory Products and their Elimination	<ul style="list-style-type: none"> • Explain various modes of excretion - ammonotelism, ureotelism, uricotelism • Describe human excretory system - structure and function • Demonstrate urine formation, osmoregulation with the help of flow charts. • Explain regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus. • Identify the role of other organs in excretion • List various Renal disorders - uremia, renal failure, renal calculi, nephritis • Understand the role of dialysis and artificial kidney, kidney transplant. 	OBSERVATION ANALYSIS WRITING PSYCHOMOTOR	

16	Chapter-20: Locomotion and Movement	<ul style="list-style-type: none"> • Classify types of movement - ciliary, flagellar, muscular • Explain the structure of skeletal muscle • List the types and importance of contractile proteins • Describe the process of muscle contraction • Understand the components of skeletal system and its functions • Categorize different types of joints and their working • List and study various disorders of muscular and skeletal systems - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout. 	OBSERVATION ANALYSIS WRITING BODILY KINESTHETIC	Sports Integrated Activity Yoga and Muscle Contraction and Relaxation- Spread your mats and perform : Sukhasana, Tadasana, Shashankasana, Padamasana, Naukasana, Vrikshasana.
17	Chapter-21: Neural Control and Coordination	<ul style="list-style-type: none"> • Classify various types of Neurons and nerves • List the components of Nervous system in humans • Explain the components and functions of central nervous system • Describe the functions and working of peripheral nervous system • Illustrate the importance of visceral nervous system • Describe the process of generation and conduction of nerve impulse 	OBSERVATION ANALYSIS WRITING PSYCHOMOTOR	Flow charts , videos,
18	Chapter-22: Chemical Coordination and Integration	<ul style="list-style-type: none"> • List various Endocrine glands, their location , and functions of hormones secreted by them. • Demonstrate the function of human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea) • Explain the role of hormones as messengers and regulators • List the characteristics and need of hormones and hormonal control. • List and describe hypo - and hyperactivity and related disorders such 	OBSERVATION ANALYSIS WRITING DRAWING	Case studies Mind Maps Online videos

		<p>as dwarfism, acromegaly, cretinism, goiter, exophthalmic goitre, diabetes, Addison's disease.</p> <p>Note: Diseases related to all the human physiological systems to be taught in brief</p>		
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Accountancy

EXAM	UNIT/ CHAPTER
Cycle Test 1	<ol style="list-style-type: none"> 1. Unit 1: Theoretical Framework <ol style="list-style-type: none"> a. Introduction to Accounting b. Basic Accounting Terms 2. Unit 2: Accounting Process <ol style="list-style-type: none"> a. Basis of Accounting: cash basis and accrual basis b. Accounting Equation c. Rules of Debit and Credit. d. Journal
Half Yearly	<ol style="list-style-type: none"> 1. Unit 1: Theoretical Framework <ol style="list-style-type: none"> a. Introduction to Accounting b. Theory Base of Accounting 2. Unit 2: Accounting Process <ol style="list-style-type: none"> a. Recording of Business Transactions b. Bank Reconciliation Statement c. Depreciation, Provisions and Reserves
Cycle Test 2	<ol style="list-style-type: none"> 1. Unit 2: Accounting Process <ol style="list-style-type: none"> a. Trial balance and Rectification of Errors 2. Unit 3: Financial Statements of Sole Proprietorship
Annual Exam	<ol style="list-style-type: none"> 1. Unit 1: Theoretical Framework 2. Unit 2: Accounting Process 3. Unit 3: Financial Statements of Sole Proprietorship

Subject: Accountancy

S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	<p>PART A: FINANCIAL ACCOUNTING - I</p> <p>Unit 1: Theoretical Framework Introduction to Accounting</p> <ul style="list-style-type: none">Accounting- concept, meaning, as a source of information, objectives, advantages and limitations, types of accounting information; users of accounting information and their needs. Qualitative Characteristics of Accounting Information. Role of Accounting in Business.Basic Accounting Terms- Entity, Business Transaction, Capital, Drawings. Liabilities (Non Current and Current). Assets (Non Current, Current); Expenditure (Capital and Revenue), Expense, Revenue, Income, Profit, Gain, Loss, Purchase, Sales, Goods, Stock, Debtor, Creditor, Voucher, Discount (Trade discount and Cash Discount)	<p>After going through this Unit, the students will be able to:</p> <ul style="list-style-type: none">describe the meaning, significance, objectives, advantages and limitations of accounting in the modern economic environment with varied types of business and non-business economic entities.identify / recognise the individual(s) and entities that use accounting information for serving their needs of decision making.explain the various terms used in accounting and differentiate between different related terms like current and non-current, capital and revenue.give examples of terms like business transaction, liabilities, assets, expenditure and purchases.explain that sales/purchases include both cash and credit sales/purchases relating to the accounting yeardifferentiate among income, profits and gains.state the meaning of fundamental accounting	<p>Acquire basic knowledge & understanding of Accounting</p> <p>Bridges gap between theory & actual work</p>	<p>Lecture cum interactive method</p> <p>Case study</p> <p>Numerical solving</p>

	<p>Theory Base of Accounting</p> <ul style="list-style-type: none"> • Fundamental accounting assumptions: GAAP: Concept • Basic accounting concept : Business Entity, Money Measurement, Going Concern, Accounting Period, Cost Concept, Dual Aspect, Revenue Recognition, Matching, Full Disclosure, Consistency, Conservatism, Materiality and Objectivity • System of Accounting. Basis of Accounting: cash basis and accrual basis • Accounting Standards: Applicability in IndAS • Goods and Services Tax (GST): Characteristics and Advantages. 	<p>assumptions and their relevance in accounting.</p> <ul style="list-style-type: none"> • describe the meaning of accounting assumptions and the situation in which an assumption is applied during the accounting process. • explain the meaning, applicability, objectives, advantages and limitations of accounting standards. • appreciate that various accounting standards developed nationally and globally are in practice for bringing parity in the accounting treatment of different items. • acknowledge the fact that recording of accounting transactions follows a double entry system. • explain the bases of recording accounting transactions and to appreciate that accrual basis is a better basis for depicting the correct financial position of an enterprise. • Explain the meaning, advantages and characteristic of GST. 		
2.	<p>Unit-2: Accounting Process</p> <p>Recording of Business Transactions</p> <ul style="list-style-type: none"> • Voucher and Transactions: Source documents and Vouchers, Preparation of Vouchers, Accounting 	<p>After going through this Unit, the students will be able to:</p> <ul style="list-style-type: none"> • explain the concept of accounting equation and appreciate that every transaction affects either both the sides of the equation 	<p>Understanding of how vouchers are prepared.</p> <p>Problem solving</p>	<p>Hands on learning by preparing various accounting books</p> <p>PPT</p>

	<p>Equation Approach: Meaning and Analysis, Rules of Debit and Credit.</p> <ul style="list-style-type: none"> Recording of Transactions: Books of Original Entry- Journal Special Purpose books: Cash Book: Simple, cash book with bank column and petty cash book Purchases book Sales book Purchases return book Sales return book Journal proper <p>Note: Including trade discount, freight and cartage expenses for simple GST calculation.</p> <ul style="list-style-type: none"> Ledger: Format, Posting from journal and subsidiary books, Balancing of accounts <p>Bank Reconciliation Statement:</p> <ul style="list-style-type: none"> Need and preparation, Bank Reconciliation Statement <p>Depreciation, Provisions and Reserves</p> <ul style="list-style-type: none"> Depreciation: Meaning, Features, Need, Causes, factors Other similar terms: Depletion and Amortisation Methods of Depreciation: <ul style="list-style-type: none"> i. Straight Line Method (SLM) 	<p>or a positive effect on one item and a negative effect on another item on the same side of the accounting equation.</p> <ul style="list-style-type: none"> explain the effect of a transaction (increase or decrease) on the assets, liabilities, capital, revenue and expenses. appreciate that on the basis of source documents, accounting vouchers are prepared for recording transactions in the books of accounts. develop the understanding of recording of transactions in a journal and the skill of calculating GST. explain the purpose of maintaining a Cash Book and develop the skill of preparing the format of different types of cash books and the method of recording cash transactions in Cash books. describe the method of recording transactions other than cash transactions as per their nature in different subsidiary books . appreciate that at times bank balance as indicated by cash book is different from the bank balance as shown by the pass book / bank statement and to reconcile both the balances, bank reconciliation statements are prepared. 	<p>Decision making</p> <p>Analyzing & calculating skills</p> <p>Analytical skills: Strategic decision making</p> <p>Data analysis & communication of complex ideas</p>	<p>Problem based learning</p> <p>Identification of types of errors</p> <p>Drawing conclusions based on analysis.</p> <p>Case study</p>
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	<p>ii. Written Down Value Method (WDV)</p> <p>Note: Excluding change of method</p> <ul style="list-style-type: none"> • Difference between SLM and WDV; Advantages of SLM and WDV • Method of recording depreciation <ul style="list-style-type: none"> i. Charging to asset account ii. Creating provision for depreciation/accumulated depreciation account • Treatment of disposal of asset • Provisions, Reserves, Difference Between Provisions and Reserves. • Types of Reserves: <ul style="list-style-type: none"> i. Revenue reserve ii. Capital reserve iii. General reserve iv. Specific reserve v. Secret Reserve • Difference between capital and revenue reserve <p>Trial balance and Rectification of Errors</p> <ul style="list-style-type: none"> • Trial balance: objectives, meaning and preparation <p>(Scope: Trial balance with balance method only)</p> <ul style="list-style-type: none"> • Errors: classification- errors of omission, commission, principles, and compensating; their effect on Trial Balance. • Detection and rectification of errors; 	<ul style="list-style-type: none"> • develop understanding of preparing bank reconciliation statements. • appreciate that for ascertaining the position of individual accounts, transactions are posted from subsidiary books and journals proper into the concerned accounts in the ledger and develop the skill of ledger posting. • explain the necessity of providing depreciation and develop the skill of using different methods for computing depreciation. • understand the accounting treatment of providing depreciation directly to the concerned asset account or by creating provision for depreciation account. • appreciate the method of asset disposal through the concerned asset account or by preparing an asset disposal account. • appreciate the need for creating reserves and also making provisions for events which may belong to the current year but may happen in next year. • appreciate the difference between reserve and reserve fund. • state the need and objectives of preparing trial balance and develop the skill of preparing trial balance. 		
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	<p>(i) Errors which do not affect trial balance (ii) Errors which affect trial balance</p> <ul style="list-style-type: none"> • preparation of suspense account. 	<ul style="list-style-type: none"> • appreciate that errors may be committed during the process of accounting. • understand the meaning of different types of errors and their effect on trial balance. • develop the skill of identification and location of errors and their rectification and preparation of suspense account. 		
3.	<p>Part B: Financial Accounting - II</p> <p>Unit 3: Financial Statements of Sole Proprietorship</p> <p>Financial Statements Meaning, objectives and importance; Revenue and Capital Receipts; Revenue and Capital Expenditure; Deferred Revenue expenditure. Opening journal entry. Trading and Profit and Loss Account: Gross Profit, Operating profit and Net profit. Preparation. Balance Sheet: need, grouping and marshalling of assets and liabilities. Preparation. Adjustments in preparation of financial statements with respect to closing stock, outstanding expenses, prepaid expenses, accrued income, income received in advance, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, Abnormal loss, Goods</p>	<p>After going through this Unit, the students will be able to:</p> <ul style="list-style-type: none"> • state the meaning of financial statements and the purpose of preparing financial statements. • state the meaning of gross profit, operating profit and net profit and develop the skill of preparing trading and profit and loss account. • explain the need for preparing a balance sheet. • understand the technique of grouping and marshalling of assets and liabilities. • appreciate that there may be certain items other than those shown in trial balance which may need adjustments while preparing financial statements. • develop the understanding and skill to do adjustments for items and their presentation in financial 	<p>Gaining in depth knowledge about financial statements & their accounting treatment</p> <p>Logical thinking</p> <p>Understanding treatment of various items in financial statements</p>	<p>PPT</p> <p>Lecture cum interactive method</p> <p>Numerical solving</p> <p>Case Study</p>

	<p>taken for personal use/staff welfare, interest on capital and managers commission. Preparation of Trading and Profit and Loss account and Balance Sheet of a sole proprietorship with adjustments.</p>	<p>statements like depreciation, closing stock, provisions, abnormal loss etc.</p> <ul style="list-style-type: none"> develop the skill of preparation of trading and profit and loss account and balance sheet 		
<p>Part C: Project Work (Any One)</p> <p>1. Collection of source documents, preparation of vouchers, recording of transactions with the help of vouchers. 2. Preparation of Bank Reconciliation Statement with the given cash book and the pass book with twenty to twenty-five transactions. 3. Comprehensive project of any sole proprietorship business. This may state with journal entries and their ledgering, preparation of Trial balance. Trading and Profit and Loss Account and Balance Sheet. Expenses, incomes and profit (loss), assets and liabilities are to be depicted using pie chart / bar diagram.</p>				

Business Studies

EXAM	UNIT/ CHAPTER
Cycle Test 1	Unit 1,2 Unit 1: Evolution and Fundamentals of Business Unit 2:Forms of Business organizations
Half Yearly	Unit 1,2,3,4,5 Unit 1: Evolution and Fundamentals of Business Unit 2: Forms of Business organizations Unit 3: Public, Private and Global Enterprises Unit 4: Business Services Unit 5: Emerging Modes of Business
Cycle Test 2	Unit 6,7 Unit 6: Social Responsibility of Business and Business Ethics Unit 7: Sources of Business Finance
Annual Exam	Whole syllabus

Subject : Business Studies

S.NO.	CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
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<p>1.</p>	<p>Term 1 Part 1: Foundations of Business Evolution and Fundamentals of Business</p> <ul style="list-style-type: none"> ● History of Trade and Commerce in India: Indigenous Banking System, Rise of Intermediaries , Transport, Trading Communities: Merchant Corporations, Major Trade Centres, Major Imports and Exports, Position of Indian Sub-Continent in the World Economy. ● Business – meaning and characteristics ● Business, profession and employment Concept ● Objectives of business 	<ul style="list-style-type: none"> ● To acquaint the History of Trade and Commerce in India ● Understand the meaning of business with special reference to economic and non-economic activities. ● Discuss the characteristics of business. ● Understand the concept of business, profession and employment. ● Differentiate between business, profession and employment. ● Appreciate the economic and social objectives of business. ● Examine the role of profit in business. ● Understand the broad categories of business activities- industry and commerce. ● Describe the various types of industries. ● Discuss the meaning of commerce, trade and auxiliaries to trade. ● Discuss the meaning of different types of trade and auxiliaries to trade. · Examine the role of commerce trade and auxiliaries to trade. 	<ul style="list-style-type: none"> ● Employability – students will be able to know the variety of job opportunities 	<ul style="list-style-type: none"> ● Lecture Method ● Illustrate comparison between business and other economic activities
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| | <ul style="list-style-type: none">• Classification of business activities - Industry and Commerce• Industry-types: primary, secondary, tertiary
Meaning and subgroups• Commerce-trade: (types-internal, external; wholesale and retail) and auxiliaries to trade; (banking, insurance, transportation, warehousing, communication, and advertising) – meaning• Business risk-Concept | | | |
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2.	<p>Forms of Business organizations</p> <ul style="list-style-type: none"> · Sole Proprietorship- Concept, merits and limitations. · Partnership- Concept, types, merits and limitation of partnership, registration of a partnership firm, partnership deed 	<ul style="list-style-type: none"> • List the different forms of business organizations and understand their meaning. • Identify and explain the concept, merits and limitations of Sole Proprietorship • Identify and explain the concept, merits and limitations of a Partnership firm. • Understand the types of partnership on the basis of duration and on the 	<ul style="list-style-type: none"> • Decision making 	<ul style="list-style-type: none"> • Use examples from everyday life for explaining types of economic and non-economic activities in their neighborhood. • Follow a well-defined teaching sequence with a pace based on the student's needs.
	<p>Unit 3: Public, Private and Global Enterprises</p> <ul style="list-style-type: none"> · Public sector and private sector enterprises – Concept · Forms of public sector enterprises: Departmental Undertakings, Statutory Corporations and Government Company · Global Enterprises – Feature. Public private partnership – concept 	<ul style="list-style-type: none"> • Develop an understanding of Public sector and private sector enterprises • Identify and explain the features, merits and limitations of different forms of public sector enterprises • Develop an understanding of global enterprises, public private partnership by studying their meaning and features 	<ul style="list-style-type: none"> • Problem Solving • critical evaluation • task oriented 	<ul style="list-style-type: none"> • Lecture method with PPT • Padlet

	<p>Unit 4: Business Services</p> <ul style="list-style-type: none"> • Business services – meaning and types. Banking: Types of bank accounts - savings, current, recurring, fixed deposit and multiple option deposit account • Banking services with particular reference to Bank Draft, Bank Overdraft, Cash credit. E-Banking meaning, Types of digital payments • Insurance – Principles. Types – life, health, fire and marine insurance – concept • Postal Service - Mail, Registered Post, Parcel, Speed Post, Courier - meaning 	<ul style="list-style-type: none"> • Understand the meaning and types of business services. • Discuss the meaning and types of Business service Banking Develop an understanding of different types of bank account. • Develop an understanding of the different services provided by banks • Recall the concept of insurance • Understand Utmost Good Faith, Insurable Interest, Indemnity, Contribution, Doctrine of Subrogation and Causa Proxima as principles of insurance • Discuss the meaning of different types of insurance-life, health, fire, marine insurance. • Understand the utility of different telecom services 	<ul style="list-style-type: none"> • Resourcefulness • Communication Skills • Analytical skills 	<p>visit to a bank ay g a movie clipping of OMG and it with the concept of insurance.</p>
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	<p>Unit 5: Emerging Modes of Business E - business: concept, scope and benefits</p>	<ul style="list-style-type: none"> • Give the meaning of e-business. • Discuss the scope of e-business. • Appreciate the benefits of e-business • Distinguish e-business from traditional business. 	<ul style="list-style-type: none"> • Problem solving • Decision Making • Analyzing 	<ul style="list-style-type: none"> • Videos and Lecture Method
	<p>Term 2 Unit 6: Social Responsibility of Business and Business Ethics</p> <ul style="list-style-type: none"> • Concept of social responsibility • Case of social responsibility • Responsibility towards owners, investors, consumers, employees, government and community. • Role of business in environment protection • Business Ethics - Concept and Elements 	<ul style="list-style-type: none"> • State the concept of social responsibility. • Examine the case for social responsibility. • Identify the social responsibility towards different interest groups. • Appreciate the role of business in environment protection. • State the concept of business ethics. • Describe the elements of business ethics. 	<ul style="list-style-type: none"> • Awareness towards the society • Responsibility • Ethics • Environment Protection 	<ul style="list-style-type: none"> • Role Play • Lecture Method

	<p>Part B: Finance and Trade</p> <p>Unit 7: Sources of Business Finance</p> <ul style="list-style-type: none"> • Concept of business finance • Owners' funds- equity shares, preferences share, retained earnings • Borrowed funds: debentures and bonds, loan from financial institution and commercial banks, public deposits, trade credit, Inter Corporate Deposits (ICD). 	<ul style="list-style-type: none"> • State the meaning, nature and importance of business finance. • Classify the various sources of funds into owners' funds. • State the meaning of owners' funds. • State the meaning of borrowed funds. • Discuss the concept of debentures, bonds, loans from financial institutions and commercial banks, Trade credit and inter corporate deposits. • Distinguish between owners' funds and borrowed funds. 	<ul style="list-style-type: none"> • Logical, Critical • Analytical Thinking • Managing Skills 	<ul style="list-style-type: none"> • Collect and read articles from business magazines and newspapers on corporate social responsibility (CSR)
	<p>Unit 8: Small Business and Enterprises</p> <ul style="list-style-type: none"> • Entrepreneurship Development (ED): Concept, Characteristics and Need. Process of Entrepreneurship Development: Start-up India Scheme, ways to fund start-up. Intellectual 	<ul style="list-style-type: none"> • Understand the concept of Entrepreneurship Development (ED), Intellectual Property Rights • Understand the meaning of small business • Discuss the role of small business in India • Appreciate the various Government schemes and agencies for development of small scale industries. NSIC and DIC with special 	<ul style="list-style-type: none"> • Critical thinking • Sound Judgement • decision making 	<ul style="list-style-type: none"> • Real life example with Videos • case studies

	<p>Property Rights and Entrepreneurship</p> <ul style="list-style-type: none">· Small scale enterprise as defined by MSMED Act 2006 (Micro, Small and Medium Enterprise Development Act)· Role of small business in India with special reference to rural areas· Government schemes and agencies for small scale industries: National Small Industries Corporation (NSIC) and District Industrial Centre (DIC) with special reference to rural, backward areas	<p>reference to rural, backward areas.</p>		
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	<p>Unit 9: Internal Trade</p> <ul style="list-style-type: none"> • Internal trade - meaning and types • services rendered by a wholesaler and a retailer • Types of Retail-Trade- Itinerant and small scale fixed shops retailers • Large scale Retailers- Departmental stores, chain stores – concept • GST (Goods and Services Tax): Concept and key-features 	<ul style="list-style-type: none"> • State the meaning and types of internal trade. • Appreciate the services of wholesalers and retailers. • Explain the different types of retail trade. • Highlight the distinctive features of departmental stores, chain stores and mail order business. • Understand the concept of GST 	<ul style="list-style-type: none"> • Communication skills • Analyzing • Differentiating 	<ul style="list-style-type: none"> • Visit to a chain store and departmental store
	<p>Unit 10: International Trade</p> <ul style="list-style-type: none"> • International trade: concept and benefits • Export trade – Meaning and procedure • Import Trade - Meaning and procedure • Documents involved in International Trade; indent, letter of credit, shipping order, 	<ul style="list-style-type: none"> • Understand the concept of international trade. • Describe the scope of international trade to the nation and business firms • State the meaning and objectives of export trade. • Explain the important steps involved in executing export trade • State the meaning and objectives of import trade. • Discuss the important steps involved 		<ul style="list-style-type: none"> • Videos • Lecture Method

	shipping bills, mate's receipt (DA/DP) <ul style="list-style-type: none"> World Trade Organization (WTO) meaning and objectives 	in executing import trade. <ul style="list-style-type: none"> Develop an understanding of the various documents used in international trade. Identify the specimen of the various documents used in international trade. Highlight the importance of the documents needed in connection with international trade transactions State the meaning of the World Trade Organization. Discuss the objectives of the World Trade Organization in promoting international trade. 		
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Economics

EXAM	UNIT/ CHAPTER
Cycle Test 1	UNIT 1 UNIT 2
Half Yearly	UNIT 1, UNIT 2 UNIT 4,UNIT 5 Project work
Cycle Test 2	UNIT 6
Annual Exam	UNITS 1,2,3,4,5,6,7 Project work

Subject: Economics				
S.NO.	UNIT	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ACTIVITY
1.	<p>PART</p> <p>A:STATISTICS FOR ECONOMICS</p> <p>Unit 1: Introduction</p> <p>What is Economics? Meaning, scope, functions and importance of statistics in Economics</p>	<p>To equip the students with basic tools of statistics and economics to analyse economic issues. Help build scientific temperament.</p>	<p>Analytical thinking</p>	<p>Interactive method</p>
2.	<p>Unit 2: Collection, Organisation and Presentation of data</p> <p>Collection of data - sources of data - primary and secondary; how basic data is collected with concepts of Sampling; methods of collecting data; some important sources of secondary data: Census of India and National Sample Survey Organisation.</p> <p>Organisation of Data: Meaning and types of variables; Frequency Distribution.</p>	<p>To equip learners with understanding of basic statistical tools so that they can easily analyse, understand and present economic information.</p>	<p>Data collection, data organization , data presentation.</p>	<p>Students can be instructed to develop/conduct/analyse case studies using tools learnt.</p> <p>Project work</p>

	<p>Presentation of Data: Tabular Presentation and Diagrammatic Presentation of Data: (i) Geometric forms (bar diagrams and pie diagrams), (ii) Frequency diagrams (histogram, polygon and Ogive) and (iii) Arithmetic line graphs (time series graph).</p>			
3	<p>Unit 3: Statistical Tools and Interpretation For all the numerical problems and solutions, the appropriate economic interpretation may be attempted. This means, the students need to solve the problems and provide interpretation for the results derived. Measures of Central Tendency- Arithmetic mean, median and mode Correlation – meaning and properties, scatter</p>	<p>To familiarize the students with various measures of central tendency, different methods of calculating mean ,median and mode,in different series. Understanding,working and application of index numbers and correlation.,</p>	<p>Problem solving skills, numerical ability,scientific temperament.</p>	<p>Assignments,worksheets,numerical calcs on measures of central tendency</p>

	<p>diagram; Measures of correlation - Karl Pearson's method (two variables ungrouped data) Spearman's rank correlation.</p> <p>Introduction to Index Numbers - meaning, types - wholesale price index, consumer price index and index of industrial production, uses of index numbers; Inflation and index numbers.</p>			
4	<p>Part B: Introductory Microeconomics</p> <p>Unit 4:</p> <p>Introduction</p> <p>Meaning of microeconomics and macroeconomics; positive and normative economics</p> <p>What is an economy?</p> <p>Central problems of an economy: what, how and for whom to produce; concepts of production possibility</p>	<p>Learners are able to define ,understand and distinguish between basic micro economic concepts</p>	<p>Logical thinking, Differentiating,Analyzing,Decision making</p>	<p>Interactive learning,PPT,Class discussion</p>

	frontier and opportunity cost.			
5	<p>Unit 5: Consumer's Equilibrium and Demand</p> <p>Consumer's equilibrium - meaning of utility, marginal utility, law of diminishing marginal utility, conditions of consumer's equilibrium using marginal utility analysis.</p> <p>Indifference curve analysis of consumer's equilibrium- the consumer's budget (budget set and budget line), preferences of the consumer (indifference curve, indifference map) and conditions of consumer's equilibrium.</p> <p>Demand, market demand, determinants of demand, demand</p>	<p>Students understand theories and principles associated with consumer behaviour and demand. Are able to graphically illustrate consumer equilibrium using budget line, indifference curves etc</p> <p>Students can distinguish between market and individual demand, explain and graphically depict movement and shift in demand. Students are able to calculate elasticity of demand and interpret results</p>	<p>Analytical approach, Decision making for individual entities; Firms and Households</p>	<p>Lecture method, Interactive learning, PPT, Graphic approach, Enquiry guided approach, Numerical solving</p>

	<p>schedule, demand curve and its slope, movement along and shifts in the demand curve; price elasticity of demand - factors affecting price elasticity of demand; measurement of price elasticity of demand - percentage-change method and total expenditure method.</p>			
6	<p>Unit 6: Producer Behaviour and Supply</p> <p>Meaning of Production Function – Short-Run and Long-Run Total Product, Average Product and Marginal Product. Returns to a Factor Cost: Short run costs - total cost, total fixed cost, total</p>	<p>Learners can analyse the relationship between inputs used in production, understand laws of production, cost and revenue, depict and explain producer's equilibrium. students can differentiate between firm and industry</p>	<p>Thinking skills, thinking within the constraints of assumptions</p>	<p>Interactive approach, discussion method, lecture method, PPT, flowcharts</p>

	<p>variable cost; Average cost; Average fixed cost, average variable cost and marginal cost-meaning and their relationships. Revenue - total, average and marginal revenue - meaning and their relationship. Producer's equilibrium- meaning and its conditions in terms of marginal revenue marginal cost. Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movements along and shifts in supply curve, price elasticity of supply; measurement of price elasticity of</p>			
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	supply - percentage-change method.			
7.	<p>Unit 7: Forms of Market and Price Determination under Perfect Competition with simple applications</p> <p>Perfect competition - Features;</p> <p>Determination of market equilibrium and effects of shifts in demand and supply.</p> <p>Simple Applications of Demand and Supply: Price ceiling, price floor.</p>	Students understand the price mechanism as governed by the forces of demand and supply in a perfectly competitive market. They can comprehend and predict the impact of price ceiling and price floor	Logical reasoning ,Predicting outcomes	Lecture method, Graphic approach, interactive learning,, flash cards
8	PART C PROJECT IN ECONOMICS			

Physical Education

EXAM	UNIT/ CHAPTER
Cycle Test 1	Unit I Changing Trends & Career in Physical Education Unit II Olympism
Half Yearly	Unit I Changing Trends & Career in Physical Education Unit II Olympism Unit III Yoga

	Unit IV Physical Education & Sports for CWSN (Children with Special Needs - Divyang) Unit V Physical Fitness, Health and Wellness
Cycle Test 2	Unit VI Test, Measurement & Evaluation Unit VII Fundamentals of Anatomy, Physiology in Sports
Annual Exam	Unit I Changing Trends & Career in Physical Education Unit II Olympism Unit III Yoga Unit IV Physical Education & Sports for CWSN (Children with Special Needs - Divyang) Unit V Physical Fitness, Health and Wellness Unit VI Test, Measurement & Evaluation Unit VII Fundamentals of Anatomy, Physiology in Sports Unit VIII Fundamentals of Kinesiology and Biomechanics in Sports Unit IX Psychology & Sports Unit X Training and Doping in Sports

Subject: Physical Education

S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
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1.	Unit I Changing Trends & Career in Physical Education	<p>After completing the study of the unit, you will be able to:</p> <ol style="list-style-type: none"> 1. Concept, Aims & Objectives of Physical Education 2. Changing Trends in Sports- playing surface, wearable gears and sports equipment, technological advancements 3. Career Options in Physical Education 4. Khelo-India and Fit-India Program 	<p>Students learnt how to conduct various tournaments. Roles and responsibility of Each committee in organizing the tournament.</p> <ol style="list-style-type: none"> 1. Changing Trends in Sports- playing surface, wearable gears and sports equipment, technological advancements 2. Career Options in Physical Education 3. Khelo-India and Fit-India Program 	<p>Lecture Method and Demonstration Method. MS Office, PPT You tube videos</p>
2.	Unit II Olympism	<p>After completing the study of the unit, you will be able to: Ancient and Modern Olympics</p> <ol style="list-style-type: none"> 1. Olympism – Concept and Olympics Values (Excellence, Friendship & Respect) 2. Olympics - Symbols, Motto, Flag, Oath, and Anthem 3. Olympic Movement Structure - IOC, NOC, IFS, Other members 	<p>After completing the study of this Unit, Students will be able to:</p> <ol style="list-style-type: none"> 1. Differentiate between Modern and Ancient Olympic Games, Paralympics and Special Olympic games 2. Identify the Olympic Symbols and Ideals 3. Incorporate values of Olympism in your life. 4. Describe the role, responsibilities and functioning of IOC and IOA 	<p>Lecture Method and Demonstration Method. MS Office, PPT You tube videos</p>

3	Unit III Yoga	<ol style="list-style-type: none"> 1. Meaning & Importance of Yoga 2. Introduction to Ashtanga Yoga 3. Introduction to Yogic Kriyas (Shat Karma 	<p>At the end of this unit students will be able to:</p> <ol style="list-style-type: none"> 1. Recognize the concept of yoga and aware with the importance of it 2. Identify the elements of yoga 3. Identify the Asanas, Pranayama, meditation and yogic kriyas 4. Classify various yogic activities for enhancement of concentration 5. Know about relaxation techniques for improving concentration 	<p>Lecture Method and Demonstration Method. MS Office, PPT You tube videos</p>
4	Unit IV Physical Education & Sports for CWSN (Children with Special Needs - Divyang)	<ol style="list-style-type: none"> 1. Concept of Disability and Disorder 2. Types of Disability, its causes & nature (Intellectual disability, Physical disability) 3. Aim & Objective of Adaptive Physical Education 4. Role of various professionals for children with special needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist & Special Educator) 	<p>At the end of the unit, students will be able to:</p> <ol style="list-style-type: none"> 1. Identify the factors that affect access to physical activity for CWSN. 2. Recognize the need of Physical Education and sports for CWSN. 3. outline and describe the aim and objectives of Adapted Physical Education 4. distinguish the role of Paralympics, Special Olympics and Deaflympics 5. describe concept of inclusion, need of inclusion and its implementation 6. Explain strategies for increasing access and participation in sports. 	<p>Lecture Method and Demonstration Method. MS Office, PPT You tube videos</p>

			7. identify different professionals, their role and services for CWSN	
5	Unit V Physical Fitness, Health and Wellness	<ol style="list-style-type: none"> 1. Meaning and Importance of Wellness, Health and Physical Fitness 2. Components/Dimensions of Wellness, Health and Physical Fitness 3. Traditional Sports & Regional Games for promoting wellness 	<p>At the end of the unit, students will be able to:</p> <ul style="list-style-type: none"> · Describe concept of a healthy life style · Explain wellness and its importance and define the components of wellness. · Classify Physical Fitness and recognise its importance in life. · Distinguish between skill-related and health-related components of physical fitness. 	Lecture Method and Demonstration Method. MS Office, PPT You tube videos
6	Unit VI Test, Measurement & Evaluation	<ol style="list-style-type: none"> 1. Concept of Test, Measurement & Evaluation in Physical Education & sports 2. Classification of Test in Physical Education and Sports. 3. Test administration guidelines in physical education and sports 	<p>At the end of the unit, students will be able to:</p> <ul style="list-style-type: none"> · define the terms test, measurement, and evaluation, · differentiate norm- and criterion-referenced standards, · differentiate formative and summative evaluation, · discuss the importance of measurement and evaluation processes, · understand BMI: A popular clinical standard and its computation · differentiate between Endomorphy, Mesomorphy & Ectomorphy · describe the procedure of Anthropometric Measurement 	Lecture Method and Demonstration Method. MS Office, PPT You tube videos

7	Unit VII Fundamentals of Anatomy, Physiology in Sports	<ol style="list-style-type: none"> 1. Definition and Importance of Anatomy and Physiology in exercise and sports 2. Functions of Skeletal system, classification of bone and types of joints. 3. Function and Structure of Circulatory system and heart. 4. Function and Structure of Respiratory system 	<p>At the end of the unit, students will be able to:</p> <ul style="list-style-type: none"> · identify the importance of anatomy, physiology and kinesiology. · Recognize the main functions of the skeleton. · Understand the functions of bones and identify various types of joints. · Figure out the properties and functions of muscles and understand how they work. · Understand the anatomy of the respiratory system and describe its working. · Identify and analyse the layout and functions of Circulatory System. · Articulate and demonstrate the concept and application of equilibrium and center of gravity in sports. 	Lecture Method and Demonstration Method. MS Office, PPT You tube videos
8	Unit VIII Fundamentals of Kinesiology and Biomechanics in Sports	<ol style="list-style-type: none"> 1) Definition and Importance of Kinesiology and Biomechanics in sports 2) Principles of Biomechanics 3) Types of Body Movements - Flexion, Extension, Abduction, Adduction, Rotation, Circumduction, Supination & Pronation 4) Axis and Planes – Concept and its application in body movements 	<p>At the end of the unit, students will be able to:</p> <ul style="list-style-type: none"> · Identify the importance of anatomy, physiology and kinesiology. · Recognize the main functions of the skeleton. · Understand the functions of bones and identify various types of joints. · Figure out the properties and functions of muscles and understand how they work. 	Lecture Method and Demonstration Method. MS Office, PPT You tube videos

9	Unit IX Psychology & Sports	<ol style="list-style-type: none"> 1. Definition & Importance of Psychology in Physical Education & Sports 2. Adolescent Problems & Their Management 3. Team Cohesion and Sports 	<p>At the end of the unit, students will be able to:</p> <ol style="list-style-type: none"> 1. identify the role of Psychology in Physical Education 2. Correlate the psychological concepts with the sports and athlete specific situations 3. Differentiate characteristics of growth and development at different stages. 4. Determine the issues related to adolescent behavior 5. recognize different management strategies for adolescent relate disuse 	<p>Lecture Method and Demonstration Method. MS Office, PPT You tube videos</p>
10	Unit X Training and Doping in Sports	<ol style="list-style-type: none"> 1. Concept and Principles of Sports Training. 2. Training Load: Over Load, Adaptation, and Recovery. 3. Concept of Doping and its disadvantages 	<p>At the end of the unit, students will be able to:</p> <ol style="list-style-type: none"> I. Identify the need of training in sports II. Recount principles of sports training III. Explain the significance of warming up and cooling down IV. Differentiate between skill, technique and style V. Identify doping and types of doping VI. Recognize side effects of prohibited substances VII. Recognize the effect of alcohol abuse and substance on sports performance 	<p>Lecture Method and Demonstration Method. MS Office, PPT You tube videos</p>

Entrepreneurship

EXAM	UNIT/ CHAPTER
Cycle Test 1	Unit 1 Entrepreneur: Concept and Functions Unit 2 An Entrepreneur
Half Yearly	Unit 1 Entrepreneur: Concept and Functions Unit 2 An Entrepreneur Unit 3 Entrepreneurial Journey Unit 4 : Entrepreneurship as Innovation and Problem Solving
Cycle Test 2	Unit 5: Understanding the Market Unit 6: Business Finance and Arithmetic
Annual Exam	Whole Syllabus

Subject: Entrepreneurship				
S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	Unit 1: <ul style="list-style-type: none"> • Entrepreneurship: Concept and Functions • Entrepreneurship – Concept, Functions and Need • Myths about Entrepreneurship • Advantage and Limitations of Entrepreneurship • Process of Entrepreneurship • Entrepreneurship – The Indian Scenario 	<ul style="list-style-type: none"> • Understand the concept of Entrepreneurship • Explain the functions of an Entrepreneur • Appreciate the need of Entrepreneurship in our economy Assess how entrepreneurship can help shape one’s career • State the myths, advantages and limitations of Entrepreneurship • Discuss the steps in the process of Entrepreneurship 	Competencies- Vision, Decision making, Logical, Critical and Analytical Thinking, Managing Skills	<ul style="list-style-type: none"> • open the class with a case discussion • interrogating curiosity of students to be an entrepreneur • listing what all qualities are imp to be an entrepreneur on board • PPT • lecture cum discussion

2.	Unit 2: An Entrepreneur <ul style="list-style-type: none"> Types of Entrepreneurs Competencies and characteristics Entrepreneurial Values, Attitudes and Motivation Intrapreneur: Meaning and Importance 	<ul style="list-style-type: none"> Understand the motivation to become an entrepreneur Differentiate between various types of entrepreneurs Explain the competencies of an Entrepreneur Appreciate the importance of Ethical Entrepreneurship Appreciate the difference between Entrepreneur and Intrapreneur 	Competencies: Need Achievement, Motivation, Ethics, opportunity seeking, Passion, Independence	<ul style="list-style-type: none"> youtube animation videos on types of entrepreneur role modeling on different entrepreneurial personalities case discussions lecture
3	Unit 3: Entrepreneurship Journey <ul style="list-style-type: none"> Idea generation Feasibility Study opportunity assessment Business Plan: meaning, purpose and elements Execution of Business Plan 	<ul style="list-style-type: none"> Understand ways of idea generation. Discuss the concept of types of feasibility study Draft a basic business plan Understand the reasons for success and failure of business plan 	Scanning the environment; Information seeking; creativity; Innovativeness; divergent thinking; Perseverance	<ul style="list-style-type: none"> comparative study on feasibility and Business plan lecture cum interactive method display of specimen of business plan project report to be prepared on Business plan mind maps
4	<ul style="list-style-type: none"> Unit 4: Entrepreneurship as Innovation and Problem Solving Entrepreneurs as problem solvers Innovations and Entrepreneurial Ventures Global and Indian Role of Technology E-commerce and Social Media Social Entrepreneurship 	<ul style="list-style-type: none"> After going through this unit, the student/ learner would be able to: Understand the role of entrepreneurs as problem solvers Appreciate the role of global and Indian innovations in entrepreneurial ventures Understand the use of technology and digitization for new businesses. Discuss the concept of social entrepreneurship 	Risk taking; Determination; Initiative; problem solving ability; Adaptability to changing technologies	<ul style="list-style-type: none"> case discussion on social entrepreneurship ppt on technological innovations in entrepreneurship lecture cum case study discussion
5	Unit 5: Understanding the Market <ul style="list-style-type: none"> Market: Concept Types Micro and Macro Market Environment Market Research - Concept Importance and Process Marketing Mix 	<ul style="list-style-type: none"> After going through this unit, the student/ learner would be able to: Scan the market environment Learn how to conduct market research Understand the elements of marketing mix 	Task oriented, Opportunity seeking, resourcefulness, organizational skills, Analytical and logical reasoning	<ul style="list-style-type: none"> lecture case studies on topic of business environment project based learning: market survey and market research Demo of elements of marketing mix

6	Unit 6: Business Finance and Arithmetic <ul style="list-style-type: none"> Unit of Sale, Unit Price and Unit Cost - for single product or service Types of Costs - Start up, Variable and Fixed Break Even Analysis - for single product or service 	After going through this unit, the student/ learner would be able to: <ul style="list-style-type: none"> Discuss - Unit Cost, Unit of Sale, Unit Price of a product or service Understand the components of COST - Start-up and operational costs Calculate break even of single product and service 	Arithmetic skills, critical analysis, decision making, self-confidence, problem solving	<ul style="list-style-type: none"> numerical practice lecture smart class module
7	Unit 7: Resource Mobilization <ul style="list-style-type: none"> Types of Resources – Physical, Human, Financial and Intangible. Selection and utilization of human resources and professionals like Accountants, Lawyers, Auditors, Board Members, etc. 	<ul style="list-style-type: none"> Identify the different types of resource tools – Physical and material, Human, Financial, Intangibles 	Resourcefulness; Collaboration; Managing Risk; Organizational Skills; Informed Decision Making	<ul style="list-style-type: none"> min maps to understand classification of resources participatory lecture approach PPT on the topic support diagrams on board

History

Textbook: Themes in World History

EXAM	UNIT/ CHAPTER
Cycle Test 1	Section I EARLY SOCIETIES Introduction Theme 2: Writing and City Life Section II EMPIRES Introduction Theme 3: An Empire across Three Continents
Half Yearly	Section I EARLY SOCIETIES Introduction Theme 2: Writing and City Life Section II EMPIRES Introduction Theme 3: An Empire across Three Continents

	Theme 5: Nomadic Empires Section III CHANGING TRADITIONS Introduction Theme 6: The Three Orders
Cycle Test 2	Section III CHANGING TRADITIONS Introduction Theme 7: Changing Cultural Traditions Section IV TOWARDS MODERNISATION Introduction Theme 10: Displacing Indigenous Peoples
Annual Exam	Section I EARLY SOCIETIES Introduction Theme 2: Writing and City Life Section II EMPIRES Introduction Theme 3: An Empire across Three Continents Theme 5: Nomadic Empires Section III CHANGING TRADITIONS Introduction Theme 6: The Three Orders Theme 7: Changing Cultural Traditions Section IV TOWARDS MODERNISATION Introduction Theme 10: Displacing Indigenous Peoples Theme 11: Paths to Modernisation

Subject: History				
S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY

1.	<p>Section I EARLY SOCIETIES Introduction Theme 2: Writing and City Life</p>	<p>At the completion of this unit students will be able to:</p> <ul style="list-style-type: none"> · Compare and analyze the transformation from Neolithic to Bronze Age Civilization in order to understand the myriad spheres of human development. · Explain the progress of human civilization with the growth of city life · Understand the connection between growth of human civilization and the tradition of writing · Analyze the outcomes of a sustained tradition of writing. · Elucidate the interwoven social and cultural aspects of civilization in order to understand the connection between city life and culture of contemporary civilizations. 	<ul style="list-style-type: none"> · analysis; · Comparison and draw conclusion; · Chronological sequence of milestones of human cultural evolution ·Map Skills 	<ul style="list-style-type: none"> · Lecture method · PPT & YouTube videos · Activity based · Question & Answer based interactive method · Learning Apps
2.	<p>Section II EMPIRES Introduction Theme 3: An Empire across Three Continents</p>	<p>At the completion of this unit students will be able to:</p> <ul style="list-style-type: none"> · Explain and relate the dynamics of the Roman Empire in order to understand their polity, economy, society and culture. · Analyze the implications of Roman's contacts with the subcontinent Empires · Examine the domains of cultural transformation in that period · Explain the phenomena of rise, growth and fall of Empire · Assess the prominent historical figures like Julius 	<p>Understanding Perceive; Probe & dissect, Draw parallels, Problem solving / Decision making Timelines/ Chronological sequencing Map Skills</p>	<ul style="list-style-type: none"> · Lecture · Chronological sequence using timelines · Anecdotes · Question & Answer based interactive method · PPT & YouTube · Learning Apps

		Caesar and others in shaping of history of their time		
3.	Section II EMPIRES Theme 5: Nomadic Empires	At the completion of this unit students will be able to: <ul style="list-style-type: none"> Identify the living patterns of nomadic pastoralist society. Trace the rise and growth of Genghis Khan in order to understand him as an oceanic ruler. Analyze socio-political and economic changes during the period of the descendants of Genghis Khan. Explain the phenomena of rise, growth and fall of Empire Distinguish between the Mongolian people's perspective and the world's opinion about Genghis Khan. 	Synthesis & Understanding Comprehension Analysis, differentiate, Problem solving/ Decision making Map Skills	<ul style="list-style-type: none"> Myths & Legends Lecture Question & Answer based interactive method PPT & YouTube Online learning apps
4.	Section III CHANGING TRADITIONS Introduction Theme 6: The Three Orders	At the completion of this unit students will be able to: <ul style="list-style-type: none"> Explain the myriad aspects of feudalism with special reference to the first, second, third and fourth order of the society. Relate between ancient slavery and serfdom Assess the 14th century crisis and rise of the nation states. Display an understanding of the innovation and technological changes that brought about a change in the awareness and attitude of the people 	<ul style="list-style-type: none"> Understanding, Comprehension Analysis, Compare & discriminate, Problem solving/ Decision making Map Skills 	<ul style="list-style-type: none"> Storytelling Lecture Question & Answer based interactive method PPT & YouTube Online learning apps

5.	<p>Section III CHANGING TRADITIONS Theme 7: Changing Cultural Traditions</p>	<p>At the completion of this unit students will be able to</p> <ul style="list-style-type: none"> · Analyze the causes, events, and effects of the Renaissance, Reformation, Scientific Revolution, and Age of Exploration. · Relate the different facets of Italian cities to understand the characteristics of Renaissance Humanism and Realism. · Compare and contrast the condition of women in the Renaissance period. · Recognize major influences on the architectural, artistic, and literary developments in order to understand the facades of Renaissance. · Critical analysis of the Roman Catholic Church by Martin Luther and Erasmus and their impact on later reforms. · Evaluate the Roman Catholic Church's response to the Protestant Reformation in the forms of the Counter and Catholic Reformations 	<ul style="list-style-type: none"> · Understanding, · Comprehension · Investigate, · Correlate, · Problem solving/ Decision making · Map Skills · Art Appreciation 	<ul style="list-style-type: none"> · Storytelling · Lecture · Question & Answer based interactive method · PPT & YouTube · Online learning apps
6.	<p>Section IV TOWARDS MODERNISATION Introduction Theme 10: Displacing Indigenous Peoples</p>	<p>At the completion of this unit students will be able to:</p> <ul style="list-style-type: none"> · Recount some aspects of the history of the native people of America to understand their condition. · To analyze the realms of settlement of Europeans in Australia and America. · Compare and contrast the lives and roles of indigenous people in these continents 	<ul style="list-style-type: none"> · Understanding, · Comprehension · Scrutinize; · Interrelate; · Problem solving/ Decision making · Map Skills; · Empathy 	<ul style="list-style-type: none"> · Storytelling · Lecture · Question & Answer based interactive method · PPT & YouTube · Online learning apps

		<ul style="list-style-type: none"> To understand how past actions are being addressed in the present. 		
7.	<p>Section IV TOWARDS MODERNISATION Theme 11: Paths to Modernization</p>	<p>At the completion of this unit students will be able to</p> <ul style="list-style-type: none"> Deduce the histories of China and Japan from the phase of imperialism to modernization Explore the Japanese political, cultural and economic system prior to and after the Meiji Restoration. Analyze the domains of Japanese nationalism prior and after the Second World War. Summarize the nationalist upsurge in China from Dr Sun Yet Sen to Mao Ze Dong to understand the era of communism. To analyze the Chinese path to modernization under Deng Xio Ping and Zhou en Lai in order to understand the transformation from rigid communism to liberal socialism. To study and understand the role of past political events in shaping the current economic success story of South Korea Demonstrate an understanding of the concept of modernization and its application in various forms in East Asia during the 19th and 20th centuries. 	<ul style="list-style-type: none"> Understanding, Comprehension Evaluate & deduct; Observe, Problem solving/ Decision making illustrate Map Skills 	<ul style="list-style-type: none"> Storytelling Lecture Question & Answer based interactive method PPT & YouTube Online learning apps

Map List

Chap no	Pg no.	Sites
Unit I		
2.	Pg 30-31	Countries: Turkey, Egypt, Iran, Arabia, Syria, Lebanon. Water bodies: Tigris, Euphrates, Caspian Sea, Aral Sea, Black Sea, Red Sea, Persian Gulf, Mediterranean Sea. Sites: Babylonia, Uruk, Mari, Ur, Assyria, Baghdad.
Unit II		
3.	59	Gaul, Macedonia, Egypt, Morocco, Campania, Numidia, Tunisia. Cities: Rome, Tangier, Carthage, Alexandria, Fayyum, Damascus, Antioch, Constantinople, Naples
5.	106	Extent of Mongol empire, Mongolia, China, Persia, Russian Principalities, Byzantine Empire. Cities: Karakorum, Bukhara, Merv, Samarkand, Balkh, Herat, Nishapur, Bagdad, Moscow.
	117	Extent of Golden Hordes, Extent of Chagtai Empire, Ilkhan Empire, Empire of Great Khan, Sultanate of Delhi. Cities: Karakorum, Bukhara, Merv, Samarkand, Balkh, Herat, Nishapur, Bagdad, Moscow.
Unit III		
6.	133	Gaul, Vienna, Rome, Corsica, Sardinia, London, Normandy, Sicily.
7.	153	Padua, Bologna, Venice, Florence, Rome, Genoa. Countries which supporting Protestant Movement and countries under Catholic Church
Unit IV		
10.	219	area under USA in 1783, Louisiana Purchase from France 1803, Georgia,
	227	Darwin, Perth, Adelaide, Melbourne, Canberra, Sydney, Tasmania, New Zealand
11.	233	Hokkaido, Honshu, Shikoku, Kyushu, Tokyo, Kyoto, Hiroshima, Nagasaki, Shanghai, Manchuria, Taiwan, North Korea, South Korea
	250	Manchuria, Yenan, Juichin, Kiangsi, Hunan, Kwangsi, Yunnan

Political Science

EXAM	UNIT/ CHAPTER
Cycle Test 1	Book 1 Constitution at Work Theme: Constitution Chap-1 Constitution: Why and How Chap- 10 The making of the Constitution Chap-2 Fundamental Rights and Duties
Half Yearly	Book 1 Constitution at Work Theme: Constitution Chap-2 Directive Principles of State Policy Chap-9 Constitutional Amendments Chap-3 Election and Representation Book 2 Political Theory Chap-1 Political Theory: An Introduction Chap-2 Liberty Chap-3 Equality
Cycle Test 2	Book 1 Constitution at Work Chap- 4 Executive Chap-5 Legislature Chap-6 Judiciary Book 2 Political Theory Chap- 4 Justice Chap- 5 Rights Chap- 6 Citizenship
Annual Exam	Book 1 Constitution at Work Chap-7 Federalism Chap - 8 Local Government Book 2 Political Theory Chap- 7 Nationalism Chap-8 Secularism
Project Work	20 marks

Subject: Political Science				
S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	<p>Book 1 'Constitution At Work' Theme Constitution</p> <ul style="list-style-type: none"> · Constitution: The Philosophy and Making of the Constitution · Fundamental Rights and Duties · Directive Principles of State Policy · Constitutional Amendments0 	<p>Understand historical processes and circumstances in which the Constitution was drafted, along with the important concerns.</p> <p>Identify certain key features of the Constitution and analyse how the provisions have worked in actual political life.</p>	<p>Critical Thinking and Writing</p> <p>Collaboration</p> <p>Information Literacy</p> <p>Media Literacy</p> <p>Problem solving</p>	<p>Discussion method</p> <p>Handouts on process of making of the Constitution</p> <p>Brainstorming</p> <p>Documentary</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p>
2.	<p>Chap-3 Elections and Representation</p> <p>Elections and Democracy, Election System in India, Electoral Reforms.</p>	<p>Identify the different methods of election and exercise the right to vote.</p> <p>Make informed choices.</p>	<p>Critical Thinking and Writing</p> <p>Collaboration</p> <p>Information Literacy</p> <p>Media Literacy</p> <p>Problem solving</p>	<p>Discussion method</p> <p>Handouts on Electoral reforms</p> <p>Brainstorming</p> <p>Documentary</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p> <p>Discussion method</p> <p>Brainstorming</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p>

3.	<p>Chap-4 Executive</p> <p>What is an Executive? Different Types of Executive. Parliamentary Executive in India, Prime Minister and Council of Ministers. Permanent Executive: Bureaucracy.</p>	<ul style="list-style-type: none"> • Interpret the powers and functions of the Executive. • Illustrate the different types of Parliamentary Executive exercised worldwide. • Classify and compare various countries into different types of Executive with moulded designations. • Develop a model of Indian Parliamentary Executive. • Build upon merits and demerits of each type. • Construct knowledge about the significance of Executive as an organ of the government 	<p>-Critical Thinking and Writing</p> <ul style="list-style-type: none"> • Collaboration • Information Literacy • Media Literacy • Problem solving 	<p>Lecture method</p> <p>Notes</p> <p>Brainstorming</p> <p>Documentary</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p>
4.	<p>Chap-5 Legislature</p> <p>Why do we need a Parliament? Unicameral / Bicameral Legislature.</p> <p>Functions and Power of the Parliament, Parliamentary committees.</p> <p>Parliamentary Officials: Speaker, Deputy Speaker, Parliamentary Secretary.</p>	<ul style="list-style-type: none"> • Analyse the importance of Legislature. • Rephrase the functions and powers of the Parliament in India. • Categorise the law-making procedure. • Evaluate how the Parliament controls the Executive. • Illustrate through flow chart and examples how Parliament regulates itself. 	<p>Critical Thinking and Writing</p> <p>Collaboration</p> <p>Creative thinking and Writing</p> <p>Problem solving</p> <ul style="list-style-type: none"> • Initiative • ICT • Accessing and Analyzing Information 	

5.	<p>Chap-6 Judiciary</p> <p>Why do we need an Independent Judiciary? Structure of the Judiciary, Judicial Review, Judicial Activism, Judicial Overreach.</p>	<ul style="list-style-type: none"> · List down the reasons as to why Independence of the Judiciary is significant for democratic institutions. · Identify the case laws which helped evolving the Constitution and legitimised ultimate authority of the Judiciary over anything. · Defend provisions of the Constitution which devote maximum power to Judiciary. · Interpret the various case laws and jurisdiction of Supreme Court. · Value Rule of Law and framework · Design a flow chart on the events signifying Judicial Review and Judicial Activism in action. · Simplify the relationship of Judiciary and Parliament. 	<ul style="list-style-type: none"> · Critical Thinking and Writing · Collaboration · Creative thinking and Writing · Problem solving · Initiative · ICT · Accessing and Analyzing Information · Decision-making 	<p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p> <p>Handouts on Judicial Overreach</p>
6.	<p>Chap- 7 Federalism</p> <p>What is Federalism?</p> <p>Evolution & Growth of the Indian Federalism: Quasi Federalism, Cooperative Federalism & Competitive Federalism.</p>	<p>Work in groups to create an action plan resolving a local, state, or national federalism issue.</p> <p>Identify various types of federalism including: cooperative, competitive, and regulated/fiscal federalism.</p> <p>Effectively use a variety of technology to collaborate and showcase finalized action plans</p>	<p>Critical Thinking and Writing</p> <p>Collaboration</p> <p>Creative thinking and Writing</p> <p>Problem solving</p> <p>Initiative</p> <p>ICT</p> <p>Accessing and Analyzing Information</p> <p>Decision-making</p>	<p>Discussion method</p> <p>Handouts on Competitive and Cooperative Federalism</p> <p>Brainstorming</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p>

7.	<p>Chap-8 Local Government</p> <p>Why do we need Local Governments?</p> <p>Growth of Local Government in India,</p> <p>73rd and 74th Amendments,</p> <p>Working and Challenges of Local Governments.</p>	<p>Classify the growth of Local government in India in different phases.</p> <ul style="list-style-type: none"> Analyse the reasons behind bringing 73rd and 74th Amendments Assess the provisions made for empowering the local government in India and other countries. Appreciate the role of various role models and leading organisations in strengthening the idea. Suggest the mechanisms which can further expand the scope and strengthen the local India. 	<p>Critical Thinking and Writing</p> <ul style="list-style-type: none"> Collaboration Creative thinking and Writing Problem solving Initiative ICT Social and Cross-Cultural Interaction <p>Accessing and Analyzing Information</p> <p>Decision-making</p> <p>Media Literacy</p>	<p>Discussion method</p> <p>PDF on Three-tier Panchayati Raj System by Government of India</p> <p>Brainstorming</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p>
8.	<p>Book 2 'Political Theory'</p> <p>Chap-1 Political Theory : An Introduction</p> <p>What is Politics?</p> <p>Politics V/s Political Theory,</p> <p>Importance of Political Theory</p>	<ul style="list-style-type: none"> Understand the meaning and nature of Political Science, Politics, Political Theory Explain what Political Theory and its aspects are. Recognize concepts and Ideologies. Apply the concepts in day-to-day life. 	<ul style="list-style-type: none"> Problem solving Ethics and Social Responsibility 	<p>Discussion Method</p> <p>Flipped Learning Method</p> <p>Sway and PPT</p>

9.	<p>Chap- 2 Liberty Liberty V.s Freedom, Negative and Positive Liberty</p>	<ul style="list-style-type: none"> • Understand the meaning of Freedom and Liberty. • Explain why it is necessary to put Constraints/Restrictions. • Recognize concepts and Political Philosophers. • Apply the concepts in day-to-day life. • Analyze Harm Principle 	<ul style="list-style-type: none"> • Critical Thinking and Writing • Collaboration • Information Literacy • Media Literacy • Problem solving • Ethics and Social Responsibility 	<p>Discussion Method</p> <p>Flipped Learning Method</p> <p>Sway</p>
10.	<p>Chap-3 Equality</p> <p>What is Equality? Significance of Equality. Various dimensions of Equality. How can we promote Equality?</p>	<ul style="list-style-type: none"> • Explain the meaning of equality and why it matters. • Critically examine the global inequalities. • Recognize concepts and Ideologies with reference to the topic. • Apply the concepts in day-to-day life. 	<ul style="list-style-type: none"> • Critical Thinking and Writing • Collaboration • Information Literacy • Media Literacy • Problem solving • Ethics and Social Responsibility 	<p>Discussion method</p> <p>Brainstorming</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p> <p>TEdex articles</p>
11	<p>Chap-4 Justice</p> <p>What is Justice? Different dimensions of Justice, Distributive Justice</p>	<ul style="list-style-type: none"> • To understand the meaning of Justice and Just Distribution. • To identify injustices in a true sense and justify accordingly. • To deliberate principles of Justice To construct the 	<ul style="list-style-type: none"> • Critical Thinking and Writing • Collaboration • Information Literacy • Media Literacy • Problem solving • Ethics and Social Responsibility 	<p>Discussion method</p> <p>Brainstorming</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p> <p>Sway</p>

		relation between Equality and Justice		
12	<p>Chap-5 Rights</p> <p>What are Rights? Where do Rights come from? Legal Rights and the State. Kinds of Rights. Human Rights.</p>	<ul style="list-style-type: none"> • Explain the meaning of Rights and its origin • Develop the skills for logical reasoning and decision making with regards to Rights and Responsibilities. • Meaningfully participate in the issues and concerns of Human Rights. • Understand different themes and thinkers associated with the concept. • Justify the creation of State and the Constitution • Discuss and contemplate on kinds of Rights 	<ul style="list-style-type: none"> • Critical Thinking and Writing • Collaboration • Information Literacy • Media Literacy • Problem solving • Ethics and Social Responsibility 	<p>Discussion method</p> <p>Brainstorming</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p> <p>Sway</p>
13	<p>Chap-6 Citizenship</p> <p>What is citizenship? Citizen and Citizenship, Citizen and Nation, Global Citizenship</p>	<ul style="list-style-type: none"> • Explain the meaning and importance of citizenship • Analyze its implications for citizens and non-citizens. • Critically examine the provisions of CAA. 	<ul style="list-style-type: none"> • Critical Thinking and Writing • Collaboration • Information Literacy • Media Literacy • Problem solving • Ethics and Social Responsibility 	<p>Discussion method</p> <p>Brainstorming</p> <p>NCERT Textbook</p> <p>Flipped Blended Learning Method</p> <p>Articles on CAA (Citizenship Amendment Act)</p>

		<ul style="list-style-type: none"> • Create a list of rights and responsibilities of citizens. 		
14	Chap-7 Nationalism Nations and Nationalism, Variants of Nationalism, Nationalism, Pluralism and Multiculturalism	<ul style="list-style-type: none"> • Understand the concepts of nation and nationalism. • Acknowledge the strengths and limitations of nationalism. • Appreciate the need for ensuring a link between democracy and nationalism. 	<ul style="list-style-type: none"> • Critical Thinking and Writing • Collaboration • Information Literacy • Media Literacy • Problem solving • Ethics and Social Responsibility 	Discussion method Brainstorming NCERT Textbook Flipped Blended Learning Method Mind-maps
15	Chap-8 Secularism What is Secularism? What is a Secular State? The Western and the Indian perspectives to Secularism. Salient Features of Indian Secularism.	<ul style="list-style-type: none"> • Understand and Appreciate the importance of secularism in a democratic society like India, and learn something about the distinctiveness of Indian secularism. • Identify the significance of multiculturalism. 	<ul style="list-style-type: none"> • Critical Thinking and Writing • Collaboration • Information Literacy • Media Literacy • Problem solving • Ethics and Social Responsibility 	Discussion method Brainstorming NCERT Textbook Flipped Blended Learning Method Integrating Book 1 chap-10

Psychology

EXAM	UNIT/ CHAPTER
Cycle Test 1	Chapter-1 What is Psychology Chapter-2 Methods of enquiry in psychology
Half Yearly	Chapter-1 What is Psychology Chapter-2 Methods of enquiry in psychology Chapter-4 Human Development Chapter-9 Motivation and Emotion

Cycle Test 2	Chapter-5 Sensory, Attentional and Perceptual Processes Chapter-6 Learning
Annual Exam	Full Syllabus

Subject: Psychology				
S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	WHAT IS PSYCHOLOGY	<p>1. Knowledge: Students will be able to understand the nature and the role of psychology in understanding mind and behaviour.</p> <p>2. Comprehension: Students will be able to understand the different fields of psychology, its relationship with other disciplines and professions.</p> <p>3. Application: Students will be able to: Apply the knowledge of psychology in daily life. Associate the concepts of psychology in working of human mind and able to understand the what it covers that the subject covers.</p> <p>4 .Analysis: Students will be able to do a comparative analysis of the various approaches of psychology.</p> <p>5. Evaluation: Students will be able to assess the applicability of the approaches in human life and the will be able to assess the advantages and disadvantages of different approaches , different themes of research and applications.</p> <p>6. Synthesis: Students will be able to integrate the tenets of different approaches into a holistic concept of psychology as an independent discipline.</p>	Students will understand psychology as a subject, and various branches of psychology.	Lecture Method, demonstration, Teacher Centered Methods and practice worksheets

2.	Methods of Enquiry in Psychology	<p>1. Knowledge: Students will be able to understand and explain the goals and nature of psychological enquiry.</p> <p>2. Comprehension: Students will gain the knowledge of various methods and techniques used in field of psychological research.</p> <p>3. Application: Students will be able to apply the knowledge of some very important methods.</p> <p>4. Analysis: Students will be able to do a comparative analysis of the theories of personality, and the methods of personality assessment.</p> <p>5. Evaluation: Students will be able to assess the advantages and disadvantages different approaches , different themes of research and applications.</p> <p>6. Synthesis: Students will be able to integrate the tenets of different approaches into a holistic concept of psychology as an independent discipline.</p>	Students will learn about psychological research, various steps and methods involved in it.	Lecture Method, demonstration, Teacher Centered Methods and practice worksheets
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3.	HUMAN DEVELOPMENT	<p>1. Knowledge: Students will be able to learn and remember concepts and definitions of key terms.</p> <p>2. Comprehension: Students will be able to understand the influence of heredity, environment and context on human development.</p> <p>3. Application: Students will be able to identify the stages of development and describe the major characteristics of infancy, childhood, adolescence, adulthood and old age.</p> <p>4. Analysis: Students will be able to do a comparative analysis of their own course of development and related experiences.</p> <p>6. Synthesis: Students will be able to: Observe the developmental milestones and the age specific behaviour Understand various expectations associated with a particular stage.</p>	Students will understand the development of a child from infancy to adulthood with various real life examples and theories.	Lecture Method, demonstration, Teacher Centered Methods and practice worksheets
4.	SENSORY, ATTENTIONAL AND PERCEPTUAL PROCESSES.	<p>1. Knowledge: Students will be able to remember concepts and definitions of key terms.</p> <p>2. Comprehension: Students will be able understand the nature of sensory processes.</p> <p>3. Application: Students will be able to explain the processes and types of attention, and will be able to analyze the problems of form and space perception.</p> <p>4. Analysis: Students will be able to do a comparative analysis of the role of socio-cultural factors in perception, and how this reflect on sensory, attentional and perceptual processes in everyday life.</p> <p>5. Evaluation:</p>	Students will understand various sensory processes and their limitations.	Lecture Method, demonstration, Teacher Centered Methods and practice worksheets

		<p>Students will be able to assess the relative appropriateness and efficacy of Sensory, Attentional and Perceptual Processes</p> <p>6.Synthesis: Students will be able to develop an integrated and holistic concept of perceptual processes, and understand the most appropriate Attentional Processes , Perceptual Processes and Socio-Cultural Influences on Perception..</p>		
5.	LEARNING	<p>1.Knowledge: Students will be able to remember concepts and definitions of key terms.</p> <p>2.Comprehension: Students will be able to describe the nature of learning and Paradigms of Learning.</p> <p>3.Application: Students will be able to apply the knowledge of concepts involved indifferent forms or types of learning and the procedures used in such types of learning.</p> <p>4.Analysis: Students will be able to differentiate between Classical Conditioning , Operant Conditioning, Observational Learning, Cognitive Learning and Verbal Learning .</p> <p>5.Evaluation: Students will be able to assess the applicability of the approaches towards understanding the various psychological processes that occur during learning and influence its course and will able to explain the determinants of learning.</p> <p>6.Synthesis: Students will be able to familiarise themself with some applications of learning principles.</p>	Students will be able to understand the process of learning. They will gain more knowledge about learning disability and its management.	Lecture Method, demonstration, Teacher Centered Methods and practice worksheets

6.	HUMAN MEMORY	<p>1. Knowledge: Students will be able to remember concepts and definitions of key terms.</p> <p>2. Comprehension: Students will be able to understand the nature of memory, and able to distinguish between different types of memory</p> <p>3. Application: Students will be able to apply the knowledge of concepts involved in explaining how the contents of long-term memory are represented and.</p> <p>4. Analysis: Students will be able to:</p> <ol style="list-style-type: none"> 1 Appreciate the constructive and reconstructive processes in memory 2 Understand the nature and causes of forgetting 3 Learn the strategies for improving memory <p>5. Evaluation: Students will be able to assess the applicability of the Information Processing Approach and will able to differentiate between Sensory, Short-term and Long-term Memories.</p> <p>6. Synthesis: Students will be able to understand the nature and causes of forgetting and learn the strategies for improving memory.</p>	Students will learn about different types of memory and strategies to enhance memory.	Lecture Method, demonstration, Teacher Centered Methods and practice worksheets
7.	Thinking	<p>1. Knowledge: Students will be able to remember concepts and definitions of key terms.</p> <p>2. Comprehension: Students will be able to describe the nature of thinking and reasoning.</p> <p>3. Application: Students will be able to demonstrate an understanding of some cognitive processes involved in problem solving and decision-making, understand the nature and process of creative thinking and learn ways of enhancing it,</p>	Students will understand the concept and process of thinking.	Lecture Method, demonstration, Teacher Centered Methods and practice worksheets

		<p>understand the relationship between language and thought, and describe the process of language development and its use.</p> <p>4. Analysis: Students will be able to differentiate between Inductive and deductive reasoning</p> <p>5. Evaluation: Students will be able to assess the applicability of the approaches towards understanding the various psychological processes that occur</p>		
8.	Motivation and Emotion	<p>1. Knowledge: Students will be able to remember concepts and definitions of key terms.</p> <p>2. Comprehension: Students will be able to understand the nature of human motivation,</p> <p>3. Application: Students will be able to describe the nature of some important motives, and describe the nature of emotional expression .</p> <p>4. Analysis: Students will be able to differentiate between culture and emotion,</p> <p>5. Evaluation: Students will learn how to manage their own emotions.</p>	Students will understand the concept of motivation and difference between culture and emotional expression.	Lecture Method, demonstration, Teacher Centered Methods and practice worksheets

Practical (Projects, experiments, small studies, etc.) 30 marks

The students shall be required to undertake one project and conduct two experiments. The project would involve the use of different methods of enquiry like observation, survey, interview, questionnaire, small studies related to the topics covered in the course (e.g. Human development, Learning, Memory, Motivation, Perception, Attention and Thinking). Experiments could focus on cause-and-effect relationships.

Practical Examination

Practical (Experiments) file 05 Marks

Project File 05 Marks

Viva Voce (Project and experiments) 05 Marks

One experiment (05 marks for conduct of experiment and 10 marks for reporting) 15 Marks

Painting

EXAM	UNIT/ CHAPTER
Cycle Test 1	Practical - still life.
Half Yearly	<p>Practical - Composition and still life with Portfolio Assessment</p> <p>Theory</p> <p>unit - 1</p> <p>A. Pre-Historic Rock-Paintings Introduction 1) Period and Location 2) Study and appreciation of following Pre-historic paintings: i. Wizard's Dance, Bhimbethaka</p> <p>B. Introduction 1) Period and Location. 2) Extension: In about 1500 miles. i. Harappa & Mohenjo-daro (Now in Pakistan) ii. Ropar, Lothal, Rangpur, Alamgirpur, Kali Bangan, Banawali and Dholavira (in India)</p> <p>Study and appreciation of following: Sculptures and Terra cottas: i. Dancing girl (Mohenjo-daro) Bronze, 10.5 x 5 x 2.5 cm. Circa 2500 B.C. (Collection: National Museum, New Delhi). ii. Male Torso (Harappa) Red lime Stone, 9.2 x 5.8 x 3 cms. Circa 2500 B.C. (Collection: National Museum, New Delhi) iii. Mother Goddess (Mohenjo-daro) terracotta, 22 x 8 x 5 cm Circa 2500 B.C. (Collection: National Museum, New Delhi). Study and appreciation of following Seal: i. Bull (Mohenjo-daro) Stone (Steatite), 2.5 x 2.5 x 1.4 cm. Circa 2500 B.C. (Collection: National Museum, New Delhi). Decoration on earthen wares: Painted earthen-ware (Jar) Mohenjo-daro (Collection: National Museum, New Delhi).</p> <p>Unit 2</p> <p>Buddhist, Jain and Hindu Art (3rd century B.C. to 8th century A.D.) 24 Periods 1. General Introduction to Art during Mauryan, Shunga, Kushana (Gandhara and Mathura styles) and Gupta period: 2. Study and appreciation of following Sculptures: i. Lion Capital from Sarnath (Mauryan period) Polished sandstone, Circa 3rd Century B.C. (Collection: Sarnath Museum, U.P.) ii. Chauri Bearer from Didar Ganj (Yakshi) (Mauryan period) Polished sandstone Circa 3rd Century B.C. (Collection: Patna Museum, Bihar) iii. Seated Buddha from Katra Mound, Mathura- (Kushan Period Mathura Style) Red-spotted Sand Stone, Circa 3rd</p>

	<p>Century AD. (Collection: Govt. Museum, Mathura) iv. Jain Tirathankara (Gupta period) Stone Circa 5th Century A.D. (Collection: State Museum, Lucknow U.P.)</p> <p>3. Introduction to Ajanta Location Period, No of caves, Chaitya and Vihara, paintings and sculptures, subject matter and technique etc.</p>
Cycle Test 2	practical - Composition
Annual Exam	<p>Practical - composition and still life with Portfolio Assessment</p> <p>Theory</p> <p>Unit 3 Temple Sculpture, Bronzes and artistic aspects of Indo-Islamic Architecture 24 Periods (A) Artistic aspects of Indian Temple sculpture (6th Century A.D. to 13th Century A.D.) 1) Introduction to Temple Sculpture (6th Century A.D. to 13th Century A.D.) 2) Study and appreciation of following Temple-Sculptures: i. Descent of Ganga (Pallava period, Mahabalipuram, Tamil Nadu), granite rock Circa 7 th Century A.D. ii. Trimuti (Elephanta, Maharashtra) Stone Circa 9th Century A.D. iii. Lakshmi Narayana (Kandariya Mahadev Temple) (Chandela period, Khajuraho, Madhya Pradesh) Stone Circa 10th Century A.D. iv. Cymbal Player, Sun Temple (Ganga Dynasty, Konark, Orrisa) Stone Circa 13th Century A.D. v. Mother and Child (Vimal-Shah Temple, Solanki Dynasty, Dilwara, Mount Abu; Rajasthan) white marble, Circa 13th Century A.D. (B) Bronzes : 1. Introduction to Indian Bronzes. 2. Method of casting (solid and hollow) 3. Study and appreciation of following South Indian Bronze: i. Nataraj (Chola period Thanjavur Distt.,Tamil Nadu) 12th Century A.D. (Collection : National Museum, New Delhi) 8 (C) Artistic aspects of the indo-Islamic architecture: 1. Introduction 2. Study and appreciation of following architecture: i. Qutub Minar, Delhi ii. Gol Gumbad of Bijapur</p>

Subject: Painting				
S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	<p>Practical</p> <p>Still life /object study</p> <p>composition/ human figures</p>	<p>To develop skill of using drawing and painting material (surface, tools and equipment, etc.) effectively.</p> <p>To sharpen their observation skills through study of common objects and various geometrical and non-geometrical forms found in life and nature.</p> <p>To develop their skills to draw and paint these observations.</p> <p>To develop an understanding of painting-composition (The use of the elements and the principles of painting-composition).</p> <p>To create the forms and the colour schemes in imagination with an ability to express them effectively in drawing and painting.</p> <p>To express the different feelings and moods of life and nature in lines, forms and colours.</p>	<p>Creativity</p> <p>Confidence</p> <p>Non-Verbal Communication</p> <p>Collaboration</p> <p>Focus and Concentration.</p> <p>Patience.</p> <p>Early Problem Solving Skills.</p>	<p>Lecture method with PPT</p> <p>virtual learning through art gallery visit.</p> <p>images / plates</p> <p>demonstration</p> <p>live sketches and drawings</p>

FRONT OFFICE OPERATIONS

EXAM	UNIT/ CHAPTER
Cycle Test 1	Unit 1: Let's Recall Tourism Unit 2: Evolution and Growth of Hotels
Half Yearly	Unit 3: Communication Skills Unit 4: Pronunciation & Body Language Unit 5: Grooming Standards

	Employability Skill Unit 1: Communication Skills Unit 2: Self-Management Skills
Cycle Test 2	Unit 6: Telephone Manners Unit 7: Guest Services in Hotels
Annual Exam	Unit 1: Let's Recall Tourism Unit 2: Evolution and Growth of Hotels Unit 3: Communication Skills Unit 4: Pronunciation & Body Language Unit 5: Grooming Standards Unit 6: Telephone Manners Unit 7: Guest Services in Hotels Unit 8: Role of Technology in Hospitality Employability Skill Unit 1: Communication Skills Unit 2: Self-Management Skills Unit 3: Basic ICT Skills Unit 4: Entrepreneurial Skills Unit 5: Green Skills

THEORY (Subject Specific Skill)

S.NO.	CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	Let's Recall Tourism	After completing the study of the unit, you will be able to understand the following things: <ul style="list-style-type: none"> · The Concept of Tourism · The Growth of Tourism Industry · Elements of Tourism 	Students will get to know about the history of tourism and different elements of tourism that combine together to form tourism activity.	Lecture Method MS Office, PowerPoint Presentation YouTube videos

2.	Evolution and Growth of Hotels	After completing the study of the unit, you will be able to understand the following things: Nature of Hospitality Industry Evolution and Growth of the Hotel Industry in the world Hotels and their Categories	Students will get to know about how the hotel industry evolved and classification of hotels on different basis.	Lecture Method MS Office, PowerPoint Presentation YouTube videos
3	Communication Skills	After completing the study of the unit, you will be able to understand the following things: Meaning of Communication Communication Process Communication Models Communication Theory Types of Communication	Students will get to know about the importance of the communication process in the professional world along with barriers while communicating.	Lecture Method MS Office, PowerPoint Presentation YouTube videos
4	Pronunciation & Body Language	After completing the study of the unit, you will be able to understand the following things: Positive Body Language Negative Body Language Body Language Blunder	Students will get to know about how body language works in the professional world and different things that give a sign of negative body language.	Lecture Method MS Office, PowerPoint Presentation YouTube videos
5	Grooming Standards	After completing the study of the unit, you will be able to understand the following things: Importance of Grooming Grooming Specifications for Men Grooming Specifications for Women	Students will get to know about the importance of grooming in hotels along with different standards followed by hotels for men and women's grooming.	Lecture Method MS Office, PowerPoint Presentation YouTube videos
6	Telephone Manners	After completing the study of the unit, you will be able to understand the following things: Importance of Telephony System Telephone Etiquettes & Manners Qualities to transmit by Telephone Operator Telephone Exchange Machine and Networking System used in a Hotel	Students will get to know about telephone etiquettes while talking to guests over phone. Different systems used in hotels for communicating with guests.	Lecture Method MS Office, PowerPoint Presentation YouTube videos

7	Guest Services in Hotels	After completing the study of the unit, you will be able to understand the following things Message and Mail Handling Paging and Key Handling Wakeup call and Safe Deposit Lockers	Students will get to know about different services that guests can have during their stay in a hotel.	Lecture Method MS Office, PowerPoint Presentation YouTube videos
8	Role of Technology in Hospitality	After completing the study of the unit, you will be able to understand the following things: Use of a Computer system Computers in Hospitality Industry Importance of Computers in Hotels Limitations of Computer	Students will get to know about the role of computers in the hospitality industry.	Lecture Method MS Office, PowerPoint Presentation YouTube videos

PART A: EMPLOYABILITY SKILLS

- Unit 1: Communication Skills
- Unit 2: Self-Management Skills
- Unit 3: Basic ICT Skills
- Unit 4: Entrepreneurial Skills
- Unit 5: Green Skills

PRACTICAL

40 Marks

- Project
- Viva
- Practical file/ Student Portfolio
- Demonstration of Skill competency via Lab Activities

TOURISM

EXAM	UNIT/ CHAPTER
Cycle Test 1	Unit-1: Introduction to Tourism Unit-2: Tourism: A Historical Account

Half Yearly	Unit-1: Introduction to Tourism Unit-2: Tourism: A Historical Account Unit-3: Concepts of Tourism Unit-4: Tourism Components – I Unit-5: Tourism Components – II Employability Skill Unit 1: Communication Skills Unit 2: Self-Management Skills
Cycle Test 2	Unit-6: Inter Linkage between Geography and Tourism Industry Unit-7: Inter Linkage between History and Tourism Industry
Annual Exam	Unit-1: Introduction to Tourism Unit-2: Tourism: A Historical Account Unit-3: Concepts of Tourism Unit-4: Tourism Components – I Unit-5: Tourism Components – II Unit-6: Inter Linkage between Geography and Tourism Industry Unit-7: Inter Linkage between History and Tourism Industry Unit-8: Tourism Organizations and Trends Employability Skill Unit 1: Communication Skills Unit 2: Self-Management Skills Unit 3: Basic ICT Skills Unit 4: Entrepreneurial Skills Unit 5: Green Skills

THEORY (Subject Specific Skill)

S.NO.	CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY

<p>1.</p>	<p>Introduction to Tourism</p>	<p>After completing the study of the unit, you will be able to understand the following things:</p> <ul style="list-style-type: none"> ● Definition of Tourism. ● Elements of tourism – Man, time and space. ● Definition and differentiation - Tourist, travelers, visitor, transit visitor and excursionist. ● Leisure, recreation and tourism and their Interrelationship - Diagram. ● Characteristics of tourism – Service Characteristics, how to overcome service characteristics. ● Components of tourism – A’s of Tourism (Tourism resources, attractions, product, market, industry and destination). 	<p>Students will get to know about Tourism, its characteristics and all different things required for tourism activity.</p>	<p>Lecture Method MS Office, PowerPoint Presentation YouTube videos</p>
<p>2.</p>	<p>Tourism: A Historical Account</p>	<p>After completing the study of the unit, you will be able to understand the following things:</p> <ul style="list-style-type: none"> ● Travel in early times. ● 'Renaissance' and 'Age of Grand Tours'. ● Industrial revolution and tourism. ● Tourism in modern times. ● Tourism in India: an account - Tirthatan, Deshartan, Paryatan, modern travel. ● Tourism circuits. 	<p>Students will get to know about History of Tourism and Tourism in present time.</p>	<p>Lecture Method MS Office, PowerPoint Presentation YouTube videos</p>

<p>3</p>	<p>Concepts of Tourism</p>	<p>After completing the study of the unit, you will be able to understand the following things:</p> <ul style="list-style-type: none"> ● Tourism systems. ● Tourism Motivators ● Barriers to Tourism - Overcoming barriers to tourism. ● Forms of Tourism - Inbound outbound, domestic (UNWTO – Diagram). ● Types of Tourism ● Defining Tourism Impacts – Socio cultural, economic and environmental. 	<p>Students will get to know about what all things motivate individuals for tourism activity and things that become barriers for tourism as well. Impact of Tourism on different aspects of life.</p>	<p>Lecture Method MS Office, PowerPoint Presentation YouTube videos</p>
<p>4</p>	<p>Tourism Components – I</p>	<p>After completing the study of the unit, you will be able to understand the following things:</p> <ul style="list-style-type: none"> ● Attraction – Resources, products, sites, destinations. ● Types of Attraction - man-made and symbiotic. ● Accessibility - Modes of Transportation and significance. ● Amenities: Health and hygiene, security. 	<p>Students will get to know about different types of attractions along with different modes of transportation and amenities required at tourist destinations.</p>	<p>Lecture Method MS Office, PowerPoint Presentation YouTube videos</p>

<p>5</p>	<p>Tourism Components – II</p>	<p>After completing the study of the unit, you will be able to understand the following things:</p> <ul style="list-style-type: none"> ● Significance of Accommodation. ● Types of Accommodation – Based on facilities, based on location, based on length of stay. ● Meal Plan for booking accommodation. ● Available packages – Short trip, weekend trip, long trip. ● Activities. ● Ancillary services – Guides, escorts, shopping for souvenirs, health services, documentation, telecommunication, Foreign Exchange. 	<p>Students will get to know about different types of accommodation they can stay along with meals they can get during stay.</p>	<p>Lecture Method MS Office, PowerPoint Presentation YouTube videos</p>
<p>6</p>	<p>Inter Linkage between Geography and Tourism Industry</p>	<p>After completing the study of the unit, you will be able to understand the following things:</p> <ul style="list-style-type: none"> ● Significance of Geography in tourism. ● Defining – Longitude, latitude, time calculation. ● Physical and Cultural Geography. ● Geographical features and their role in Tourism – Canyon, Hills, rivers, lakes, deserts, beaches etc. with examples. ● Map reading and cartography. ● Indian geography. 	<p>Students will get to know that tourism is related to geography. Importance of geographical features while travelling to different places.</p>	<p>Lecture Method MS Office, PowerPoint Presentation YouTube videos</p>

7	Inter Linkage between History and Tourism Industry	<p>After completing the study of the unit, you will be able to understand the following things:</p> <ul style="list-style-type: none"> • Significance and importance of History in tourism. • Heritage Tourism - types, promotion. • Defining - Heritage, historical sites, Archaeological sites. • Guiding around Heritage sites. • Role of ASI and ASI sites. • World heritage sites in India. 	<p>Students will get to know about the linkage between our history and tourism activity. They will also get to know about different historical monuments along with the role of ASI to protect them.</p>	<p>Lecture Method MS Office, PowerPoint Presentation YouTube videos</p>
8	Tourism Organizations and Trends	<p>After completing the study of the unit, you will be able to understand the following things:</p> <ul style="list-style-type: none"> • Defining the role of the Ministry of Tourism Govt. of India. • Defining the role of State Tourism Development Corporations. • Public-private partnerships in tourism. • Role of local bodies and NGOs. • Functions of UNWTO, IATA, IATO, TAAI. • Factors responsible for growth and development of tourism. • General Trends in National & International Tourism trends. • Emerging trends. 	<p>Students will get to know about different organizations that deal with all tourism activity along with the emerging trend in modern times.</p>	<p>Lecture Method MS Office, PowerPoint Presentation YouTube videos</p>

PART A: EMPLOYABILITY SKILLS

- Unit 1: Communication Skills
- Unit 2: Self-Management Skills
- Unit 3: Basic ICT Skills
- Unit 4: Entrepreneurial Skills
- Unit 5: Green Skills

PRACTICAL

40 Marks

- Project
- Viva
- Practical file/ Student Portfolio
- Demonstration of Skill competency via Lab Activities

Home Science

EXAM	UNIT/ CHAPTER
Cycle Test 1	Unit I: Introduction to Home Science Unit II: Understanding oneself: Adolescence Ch.- Understanding the Self. Ch.- Food, Nutrition, Health and Fitness Ch. - Management of Resources
Half Yearly	Unit I: Introduction to Home Science Unit II: Understanding oneself: Adolescence Ch.- Understanding the Self. Ch.- Food, Nutrition, Health and Fitness Ch. - Management of Resources Ch.- Fabric Around us Ch-Media and Communication Technology Unit III: Understating family, community and society Ch. - Concerns and needs in diverse contexts: a. Nutrition, Health and Hygiene b. Resources Availability and Management
2 Cycle Test	Unit IV: Childhood Ch.-Survival, Growth and Development Ch.- Nutrition, Health and Wellbeing Ch.- Our Apparel
Annual Exam	Unit I Introduction to Home Science Unit II: Understanding oneself: Adolescence Ch.- Understanding the Self. Ch.- Food, Nutrition, Health and Fitness Ch. - Management of Resources Ch.- Fabric Around us Ch-Media and Communication Technology Unit III: Understating family, community and society Ch. - Concerns and needs in diverse contexts:

<p>a. Nutrition, Health and Hygiene b. Resources Availability and Management Unit IV: Childhood Ch.-Survival, Growth and Development Ch.- Nutrition, Health and Wellbeing Ch.- Our Apparel UnitV: Adulthood Ch.- Health and Wellness Ch.- Financial Management and planning Ch.- Care and Maintenance of fabrics</p>

Subject: Home Science				
S.NO.	UNIT/ CHAPTER	LEARNING OUTCOMES	SKILL DEVELOPED	TEACHING METHODOLOGY/ ACTIVITY
1.	Introduction to Home Science	Pupils will be able to: <ul style="list-style-type: none"> • Understand what is Home Science • Know about the areas of Home Science • Analyse how Home Science is important for both boys and girls • Understand career options of Home Science 	Understanding Comprehensive Analysis	Lecture Method MS Office, PowerPoint Presentation
2.	Understanding oneself: Adolescence	Pupils will be able to: <ul style="list-style-type: none"> • discuss the importance of knowing oneself and the significance of developing a positive sense of self • list the factors that influence the development of selfhood and identity • analyse why the period of adolescence is critical for the development of self and identity • describe the characteristics of self during infancy, childhood and adolescence • define the terms – food, nutrition, nutrients, health, fitness and the role of food and nutrition in maintaining health 	Understanding Learning Analysis Reasoning Comprehensive Problem Solving Decision making	Lecture Method MS Office, PowerPoint Presentation YouTube videos

		<ul style="list-style-type: none">• understand the term, balanced diet and apply the concept in planning and consuming diets• understand the basis for defining the Recommended Dietary Allowances (RDAs) and the difference between Dietary Requirement and RDA• understand the basis for classifications of foods into appropriate groups• analyse the factors which influence adolescent food habits• identify the causes, symptoms and nutritional interventions related to eating disorders.• discuss the diversity in fabrics• name and classify the fabrics commonly seen around• explain the concept of yarn and fabric making.• describe the properties of each group of fabrics• make informed selection of textile products for specific end use• define the concept of communication• discuss the significance of communication in everyday life• enlist the different types of communication• describe the process of communication• explain the classification and functions of media• analyse the various communication technologies.		
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3.	<p>Understating family, community and society Concerns and needs in diverse contexts:</p> <p>a. Nutrition, Health and Hygiene</p> <p>b. Resources Availability and Management</p>	<p>Pupils will be able to:</p> <ul style="list-style-type: none"> • discuss the importance of health and its dimensions • understand the interrelationship of nutrition and health identify the consequences of undernutrition and overnutrition • select appropriate and healthy food choices • identify the interrelationship between nutrition and disease • explain the importance of hygiene and sanitation for preventing food- borne diseases • discuss the meaning and types of learning • describe the role of education in the context of family, school, community and society • explain the significance of extension education and methods • examine some of the extension programmes in India 	<p>Understanding</p> <p>Learning</p> <p>Analysis</p> <p>Reasoning</p> <p>Comprehensive</p> <p>Problem Solving</p> <p>Decision making</p>	<p>Lecture Method MS Office, PowerPoint Presentation</p>
11.	Childhood	<p>Pupils will be able to:</p> <ul style="list-style-type: none"> • explain the concepts of survival, growth and development • analyse the relationship between growth and health. • understand the characteristics of different stages of childhood and developmental milestones • describe the nutritional needs of children at different stages of development • make suggestions for planning balanced meals for children • identify important health and nutrition related problems of children • describe the immunization schedule. 	<p>Understanding</p> <p>Learning</p> <p>Analysis</p> <p>Reasoning</p> <p>Comprehensive</p> <p>Problem Solving</p> <p>Decision making</p>	<p>Lecture Method MS Office, PowerPoint Presentation YouTube videos</p>

		<ul style="list-style-type: none"> • discuss the clothing functions and the factors influencing selection of clothes • identify general clothing needs of the children. • recognise the characteristic features and clothing requirements of children from different age groups • understand the clothing needs of children with special needs. 		
12.	Adulthood	<p>Pupils will be able to:</p> <ul style="list-style-type: none"> • discuss the importance of health and fitness • explain the health concerns and challenges of adults • describe the concept of wellness and the steps to promote and maintain good health and wellness in adults. • understand the meaning and concept of financial management • know the different types of income • explain the steps in making family budgets. • describe meaning of savings and investments • understand the principles of sound investments. • understand the aspects of care and maintenance of different fabrics • know the procedure of removing different stains • identify the process of laundry • describe the role of water, soaps and detergents in laundering • describe use and care of the fabric in relation to their properties. 		

