# ST.THOMAS SCHOOL

## SUNARI,AGRA-283105

+91-7505351623, 9634597550

contact@stthomasschoolagra.in

# CLASS-IX

## SYLLABUS

## (2025-26)

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| English Language | **1. Letter Writing**<br>i. Formal Letter<br>ii. Informal Letter<br>**2. Notice and Email**<br>**Total English: Grammar:**<br>i. Phrasal Verbs<br>ii. Sentence Transformation<br>[MCQ'S]<br><br><br>2. | **1. Composition**<br>i. Story Writing<br>ii. Descriptive<br>iii. Narrative<br>iv. Debate<br>v. Picture Composition<br>**2. Letter Writing**<br>i. Formal Letter<br>ii. Informal Letter<br>**3. Notice and Email**<br>**4. Unseen Passage/Poem**<br>**5. Grammar**<br>i. Subject Verb Concord<br>ii. Phrasal Verbs<br>iii. Sentence Synthesis [MCQ'S]<br>iv. Sentence Transformation [MCQ'S] | 1. The Residents' Welfare Association (RWA) of your colony is organising a 'Dental Check-up Camp' for the residents of that area. Write a notice to be put up outside the RWA office informing them about the event and inviting them to get their dental check-up done.<br><br>2. Write an email to the Superintendent of a hospital in your area requesting him/her to send a team of dentists to conduct the Dental Check-up Camp. | 1 Grammar:<br>i. Phrasal Verbs,<br>ii. Transformation of Sentences<br>**2. Letter writting**<br>i. Formal Letter<br>ii. Informal Letter<br>**3. Notice and Email** | **1. Composition**<br>i. Story Writing<br>ii. Descriptive<br>iii. Narrative<br>iv. Debate<br>v. Picture Composition<br>**2. Letter Writing**<br>i. Formal Letter<br>ii. Informal Letter<br>**3. Notice and Email**<br>**4. Unseen Passage/Poem**<br>**5. Grammar**<br>i. Subject Verb Concord<br>ii. Phrasal Verbs<br>iii. Sentence Synthesis [MCQ'S]<br>iv. Sentence Transformation [MCQ'S] | 1. You had participated in a musical festival and stayed in a hotel in Goa. While checking out, you forgot your guitar at the hotel. Write a letter to the manager of the hotel, requesting him to locate the guitar and if he succeeds, to send you through courier. Give relevant details which you think will assist in tracing the instrument.<br><br>2. Write a self-composed story of not more than 300 words.You will even have to learn this story for your oral assessment during invigilation by externals. |

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| English Literature | Treasure Chest<br>Poetry 1 – The Work of Artifice<br>Prose 1 – Bonku Babu's Friend<br>Julius Caesar<br>Play – Act -1 Scene -1 | Treasure Chest<br>Poetry<br>1 – The Work of Artifice<br>2 – Skimbleshanks The Railway Cat<br>3 – I Remember, I Remember<br>Prose<br>1- Bonku Babu's Friend<br>2 – Oliver Asks for More<br>3 – The Model Millionaire<br>Julius Caesar<br>Act – 1  Scene- 1, 2, 3 | Paraphrase the prose "Bonku Babu'sFriend" by Satyajit Ray maintaining its original meaning.<br><br>Give the thematic analysis of the poem "The Work of Artifice" by Marge Piercy.<br>Note: The project is to be prepared on interleaf pages in a Thread File. The total content of complete Literature project must not exceed 1000 words. Paste the picture of the author and the poet on the plane side of the sheet. | Treasure Chest<br>Poetry 4 – Doctor's Journal Entry, August 6, 1945<br>Prose 4 – The Homecoming<br>Julius Caesar<br>Act – 2  Scene  - 1 | Treasure Chest<br>Poetry<br>1 – The Work of Artifice<br>2 – Skimbleshanks The Railway Cat<br>3 – I Remember, I Remember<br>4 – Doctor's Journal Entry, August 6, 1945<br>5 – The Night Mail<br>Prose<br>1- Bonku Babu's Friend<br>2 – Oliver Asks for More<br>3 – The Model Millionaire<br>4 – The Homecoming<br>5 -  The Boy who Broke the Bank<br>Julius Caesar<br>Act – 1  Scene- 1, 2, 3<br>Act – 2 Scene  - 1, 2, 3, 4 | Assume the persona of one of the characters from Julius Caesar, Act 2 and record a diary entry of a particular incident.<br><br>Note: The project is to be prepared on interleaf pages in a Thread File. The total content of complete Literature project must not exceed 500 words. Paste the picture of the author and the poet on the plane side of the sheet. |

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| Hindi पाठ्य पुस्तिका साहित्य सागर ,हिन्दी व्याकरण गरिमा | खण्ड क' लेखन भाग:-प्रस्ताव लेखन, पत्र लेखन (औपचारिक,अनौपचारिक पत्र) अपठित गद्यांश । व्यावहारिक व्याकरण* (लिंग,भाववाचक संज्ञा, पर्यायवाची,विपरीतार्थक शब्द,सम्मोचारित, भिन्नार्थक शब्द, उपसर्ग, प्रत्यय, वाक्य विचार, ) 'खण्ड ख '-(गद्य)पाठ-1 बात अठन्नी की लेखक-सुदर्शन (पद्य) साखी 'कबीरदास जी' | खण्ड क'- लेखन भाग- प्रस्ताव लेखन , पत्र लेखन- औपचारिक एवं अनौपचारिक पत्र,अपठित गद्यांश, लिंग ,भाववाचक संज्ञा ,विशेषण पर्यायवाची तत्सम- तद्भव शब्द, विपरीतार्थक ,अशुद्ध-शुद्ध शब्द, मुहावरे , शुद्ध वाक्य ।एकार्थी ,अनेकार्थी , वाक्यांश के लिए एक शब्द , विराम चिन्ह सम्मोचारित, भिन्नार्थक शब्द, उपसर्ग, प्रत्यय, वाक्य विचार, लोकोक्ति ,विकारी-शब्द, शुद्ध वाक्य। 'खण्ड ख '-पाठ-1बात अठन्नी की । लेखक- सुदर्शन, पाठ-2काकी लेखक-सियारामशरण गुप्त।पाठ-3 महायज्ञ का पुरस्कार लेखक-'यशपाल'। ( पद्य )पाठ-1 साखी 'कबीरदासजी'। पाठ-2 गिरिधर की कुंडलियाँ कवि-'गिरिधर कविराय'। पाठ-3स्वर्ग बना संकते है।कवि-रामधारी सिंह 'दिनकर'। | परियोजना कार्यः- क) कोई भी दो चित्र-लेखन (चित्र सहित ) पाठ्यक्रमानुसार व्याकरण पुस्तिका से। ख)प्रस्ताव लेखन (सूक्ति पर आधारित नैतिक कहानी लिखिए) ग)पत्र (औपचारिक और अनौपचारिक) (एक औपचारिक एक अनौपचारिक) घ)मुहावरे (शरीर के अंगों पर आधारित ,खाद्य सामग्री पर आधारित)-30 मुहावरे(अर्थ एवं वाक्य प्रयोग) | खण्ड क'-लेखन भाग- प्रस्ताव लेखन, अपठित गद्यांश, व्यवहारिक व्याकरण :- एकार्थी शब्द समोच्चारित , भिन्नार्थक, विराम-चिन्ह ,उपसर्ग, प्रत्यय ।लिंग,भाववाचक संज्ञा, पर्यायवाची,विपरीतार्थक शब्द,सम्मोचारित, भिन्नार्थक शब्द, उपसर्ग, प्रत्यय, वाक्य विचार, ) 'खण्ड ख ' गद्य पाठ -4नेताजी का चश्मा लेखक स्वयं प्रकाश ।(पद्य) पाठ-4 वह जन्मभूमि मेरी कवि-सोहनलाल दिवेद्धी | खण्ड क'- लेखन भाग- प्रस्ताव लेखन,पत्र (औपचारिक एवं अनौपचारिक)अपठित गद्यांश, व्यावहारिक व्याकरण :-एकार्थी शब्द समोच्चारित , भिन्नार्थक, विराम-चिन्ह ,उपसर्ग, प्रत्यय ।लिंग,भाववाचक संज्ञा, पर्यायवाची,विपरीतार्थक शब्द, वाक्य विचार, विशेषण , तत्सम- तद्भव शब्द, अशुद्ध-शुद्ध शब्द, मुहावरे , वाक्यांश के लिए एक शब्द , विराम चिन्ह , लोकोक्ति ,विकारी-शब्द, विराम-चिन्ह ,उपसर्ग, प्रत्यय।(समस्त बोर्ड पाठ्यक्रमानुसार) 'खण्ड ख'-(गद्य)-संक्षिप्त कहानियाँ-पाठ-1 बात अठन्नी की लेखक-सुदर्शन पाठ-2 काकी लेखक- सियारामशरण गुप्त पाठ-3महायज्ञ का पुरस्कार लेखक- 'यशपाल' पाठ-4नेताजी का चश्मा लेखक-स्वयं प्रकाश पाठ-5 अपना-अपना भाग्य लेखक-जैनेंद्र कुमार पाठ-6बड़े घर की बेटी लेखक-प्रेमचंद | परियोजना कार्य :- हिंदी साहित्य (हेडिंग एक पेज पर) गद्य भाग (हेडिंग एक पेज पर) साहित्य सागर पुस्तिका से किन्ही दो कहानियों ) i)कहानी का नाम- कहानीकार का नाम क)कहानी का सारांश ख)कहानीकार का परिचय ग)शीर्षक की सार्थकता घ)मुख्य पात्रों का चरित्र चित्रण- पद्य भाग (हेडिंग एक पेज पर) कविता का नाम - (हेडिंग एक पेज पर) (किन्ही दो कविताओं का) क)कवि का परिचय ख)कविता का उद्देश्य ग)कविता का भावार्थ घ)कवि की अन्य एक कवि |
| | | | | | (पद्य) पाठ-1साखी कवि 'कबीरवास' पाठ-2 गिरिधर की कुंडलियाँ कवि 'गिरिधर कविराय' पाठ-3 स्वर्ग बना सकते हैं कवि 'रामधारी सिंह 'दिनकर' पाठ-4वह जन्मभूमि मेरी कवि 'सोहनलाल द्विवेदी' पाठ-5 मेघ आए कवि 'सर्वेश्वर दयाल सक्सेना' पाठ 6 सूर के पद कवि 'सूरदास'। | |

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| **Mathematics** | **1. Pure Arithmetic**<br>Rational and Irrational Numbers<br>Rational, irrational numbers as real numbers,<br>their place in the number system. Surds and<br>rationalization of surds. Simplifying an expression by rationalizing the denominator.<br>Representation of rational and irrational numbers on the number line.<br>Proofs of the irrationality of √2, √3, √5 | **1. Pure Arithmetic**<br>Rational and Irrational Numbers<br>Rational, irrational numbers as real numbers,<br>their place in the number system. Surds and<br>rationalization of surds. Simplifying an expression by rationalizing the denominator.<br>Representation of rational and irrational numbers on the number line.<br>Proofs of the irrationality of √2, √3, √5 | **Project -1:- Prepare the formula sheet of the chapters included in the HY syllabus** | **Trigonometry**<br>(a) Trigonometric Ratios: sine, cosine, tangent<br>of an angle and their reciprocals.<br>(b) Trigonometric ratios of standard angles - 0,<br>30, 45, 60, 90 degrees. Evaluation of an expression involving these ratios.<br>(c) Simple 2-D problems involving one right-angled triangle.<br>(d) Concept of trigonometric ratios of complementary angles and their direct application:<br>sin A = cos (90 - A), cos A = sin (90 − A)<br>tan A = cot (90 − A), cot A = tan (90- A)<br>sec A = cosec (90 − A), cosec A=sec (90 − A) | **1. Pure Arithmetic**<br>Rational and Irrational Numbers<br>Rational, irrational numbers as real numbers, their place in the number system. Surds and rationalization of surds. Simplifying an expression by rationalizing the denominator. Representation of rational and irrational numbers on the number line.<br>Proofs of irrationality. | **Project-2:- Prepare the portfolio on statistics including four real life examples by assessing their data and interpreting in the form of graph** |
| | **2. Commercial Mathematics**<br>Compound Interest<br>(a) Compound interest as a repeated Simple<br>Interest computation with a growing Principal. Use of this in computing Amount over a period of 2 or 3 years.<br>(b) Use of formula. Finding CI<br>from the relation CI = A − P. • Interest compounded half-yearly included.<br>Using the formula to find one quantity given different combinations of A, P, r, n, CI and SI; difference between CI and SI type included. Rate of growth and depreciation.<br>Note: Paying back in equal installments, being given rate of interest and installment amount, not included. | **2. Commercial Mathematics**<br>Compound Interest<br>(a) Compound interest as a repeated Simple<br>Interest computation with a growing Principal. Use of this in computing Amount<br>over a period of 2 or 3 years.<br>(b) Use of formula. Finding CI<br>from the relation CI = A − P.<br>• Interest compounded half-yearly included. Using the formula to find one quantity given different combinations of A, P, r, n, CI and SI; difference between CI and SI type included. Rate of growth and depreciation.<br>Note: Paying back in equal installments, being given rate of interest and installment amount, not included. | | | **2. Commercial Mathematics**<br>Compound Interest<br>(a) Compound interest as a repeated Simple Interest computation with a growing Principal. Use of this in computing Amount over a period of 2 or 3 years.  (b) Use of formula n.<br>Finding CI from the relation CI = A − P.<br>• Interest compounded half-yearly included.<br><br>Using the formula to find one quantity given different combinations of A, P, r, n, CI and SI; difference between CI and SI type included. Rate of growth and depreciation.<br>Note: Paying back in equal installments, being<br>given rate of interest and installment amount, not included. | |

| | | **3. Expansions**<br>Recall of concepts learned in earlier classes.<br>(a ± b)2<br>(a ± b)3<br>(x ± a) (x ± b)<br>(a ± b ± c)2 | | | 3. Algebra<br>(i) Expansions<br>Recall of concepts learned in earlier classes.<br>(a ± b)2<br>(a ± b)3<br>(x ± a) (x ± b)<br>(a ± b ± c)2<br>(ii) Factorisation<br>a2 – b2<br>a3 ± b3<br>ax2 + bx + c, by splitting the middle term.<br>(iii) Simultaneous Linear Equations in two variables. (With numerical coefficients only)<br>• Solving algebraically by:  -<br>Elimination  -<br>Substitution and | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **4. Factorisation**<br>$a^2 - b^2$<br>$a^3 \pm b^3$<br>$ax^2 + bx + c$, by splitting the middle term. | | | Cross Multiplication method<br>• Solving simple problems by framing appropriate equations.<br>(iv) Indices/ Exponents<br>Handling positive, fractional, negative and<br>"zero" indices. Simplification of expressions involving<br>various exponents etc. Use of laws of exponents.<br>(v) Logarithms (a) Logarithmic form vis-à-vis exponential<br>form: interchanging.  (b) Laws of Logarithms and their uses.<br>Expansion of expression with the help of<br>laws of logarithms<br>$\log y = 4 \log a + 2 \log b - 3 \log c$ etc. | |
| | | **5. Simultaneous Linear Equations in two**<br>variables. (With numerical coefficients only)<br>• Solving algebraically by:<br>-  Elimination<br>- Substitution and<br>- Cross Multiplication method<br>• Solving simple problems by framing appropriate equations. | | | 4. Geometry<br>(i) Triangles<br>(a) Congruency: four cases: SSS, SAS, AAS, and RHS. Illustration through cutouts. Simple applications.<br>(b) Problems based on:<br>• Angles opposite equal sides are equal and converse.<br>• If two sides of a triangle are unequal, then the greater angle is opposite the greater side and converse.<br>• Sum of any two sides of a triangle is greater than the third side.<br>• Of all straight lines that can be drawn to a given line from a point outside it, the perpendicular is the shortest.<br>Proofs not required.<br>(c) Mid-Point Theorem and its converse,<br>equal intercept theorem | |

| | | | | | |
|---|---|---|---|---|---|
| | | **6. Indices/ Exponents**<br>Handling positive, fractional, negative and<br>"zero" indices.<br>Simplification of expressions involving various exponents<br>etc. Use of laws of exponents. | | | (i) Proof and simple applications of mid point theorem and its converse.<br>(ii) Equal intercept theorem: proof and simple application.<br>(d) Pythagoras Theorem<br>Area based proof and simple applications of Pythagoras Theorem and its converse.<br>(ii)   Rectilinear Figures<br>(a) Proof and use of theorems on parallelogram. • Both pairs of opposite sides equal<br>(without proof). • Both pairs of opposite angles equal. • One pair of opposite sides equal and parallel (without proof). • Diagonals bisect each other and bisect the parallelogram. • Rhombus as a special parallelogram whose diagonals meet at right angles. • In a rectangle, diagonals are equal, in a square they are equal and meet at right angles. | |
| | | **7. Logarithms**<br>(a) Logarithmic form vis-à-vis exponential form: interchanging.<br>(b) Laws of Logarithms and their uses.<br>Expansion of expression with the help of laws of logarithms | | | (b) Constructions of Polygons Construction of quadrilaterals (including<br>parallelograms and rhombus) and regular hexagon using ruler and compasses only.<br>(c) Proof and use of Area theorems on parallelograms:<br>• Parallelograms on the same base and between the same parallels are equal in area.<br>• The area of a triangle is half that of a parallelogram on the same base and between the same parallels.<br>• Triangles between the same base and between the same parallels are equal in area (without proof).<br>• Triangles with equal areas on the same bases have equal corresponding altitudes. | |

| | | | | | |
|---|---|---|---|---|---|
| | | **8. Triangles**<br>(a) Congruency: four cases: SSS, SAS, AAS, and RHS. Illustration through cutouts. Simple applications. (b) Problems based on:<br>• Angles opposite equal sides are equal and converse.<br>• If two sides of a triangle are unequal, then the greater angle is opposite the greater side and converse.<br>• Sum of any two sides of a triangle is greater than the third side.<br>• Of all straight lines that can be drawn to a given line from a point outside it, the perpendicular is the shortest. Proofs not required. | | (iii) Circle:<br>(a) Chord properties<br>• A straight line drawn from the centre of a circle to bisect a chord which is not a diameter is at right angles to the chord.<br>• The perpendicular to a chord from the centre bisects the chord (without proof).<br>• Equal chords are equidistant from the centre.<br>• Chords equidistant from the centre are equal (without proof).<br>• There is one and only one circle that passes through three given points not in a straight line. | |
| | | **9. Mid-Point Theorem and its converse**<br>equal intercept theorem<br>(i) Proof and simple applications of mid point theorem and its converse.<br>(ii) Equal intercept theorem: proof and simple application. | | (b) Arc and chord properties:<br>• If two arcs subtend equal angles at the centre, they are equal, and its converse. • If two chords are equal, they cut off equal arcs, and its converse (without proof).<br>Note: Proofs of the theorems given above are to be taught unless specified otherwise.<br>**5. Statistics**<br>Collection of data, presentation of data, Graphical representation of data, Mean, Median of ungrouped data. (i) Understanding and recognition of raw, arrayed and grouped data. (ii) Tabulation of raw data using tally-marks. (iii) Understanding and recognition of discrete and continuous variables. (iv) Mean, median of ungrouped data. (v) Class intervals, class boundaries and limits, frequency, frequency table, class size for grouped data. (vi) Grouped frequency distributions (vii)Drawing a frequency polygon. | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **10. Pythagoras Theorem**<br>Area based proof and simple applications<br>of Pythagoras Theorem and its converse. | | **6. Mensuration**<br>Area and perimeter of a triangle and a quadrilateral. Area and circumference of circle.<br>Surface area and volume of Cube and Cuboids. (a) Area and perimeter of triangle (including Heron's<br>formula), all types of Quadrilaterals.<br>(b) Circle: Area and Circumference. Direct application problems including Inner and Outer area.<br>Areas of sectors of circles other than quarter-circle and semicircle are not included. (c) Surface area and volume of 3-D solids: cube and cuboid including problems of type<br>involving: • Different internal and external dimensions of the solid.<br>• Cost. • Concept of volume being equal to area of cross-section x height.<br>• Open/closed cubes/cuboids. | |
| | | **17. Perimeter and Area of Plane Figures**<br>(a) Area and perimeter of triangle (including<br>Heron's  formula), all types of Quadrilaterals. | | **7. Trigonometry**<br>(a) Trigonometric Ratios: sine, cosine, tangent<br>of an angle and their reciprocals.<br>(b) Trigonometric ratios of standard angles - 0,<br>30, 45, 60, 90 degrees. Evaluation of an expression involving these ratios.<br>(c) Simple 2-D problems involving one<br><br>right-angled triangle.<br>(d) Concept of trigonometric ratios of complementary angles and their direct application:<br>sin A = cos (90 - A), cos A = sin (90 − A)<br>tan A = cot (90 − A), cot A = tan (90- A)<br>sec A = cosec (90 − A), cosec A=sec (90 − A) | |

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| PHYSICS | **Ch.1. Measurements and Experimentation** (i) International System of Units, the required SI units with correct symbols are given at the end of this syllabus. Other commonly used system of units - fps and cgs. | **Ch.1. Measurements and Experimentation** (i) International System of Units, the required SI units with correct symbols are given at the end of this syllabus. Other commonly used system of units - fps and cgs. | Prepare a Power Point Presentation on Chapter "Laws of Motion" | **Light** Spherical mirrors; characteristics of image formed by these mirrors. Uses of concave and convex mirrors. (Only simple direct ray diagrams are required). Brief introduction to spherical mirrors - concave and convex mirrors, centre and radius of curvature,pole and principal axis, focus and focal length; location of images from ray diagram for various positions of a small linear object on the principal axis of concave and convex mirrors; characteristics of images. f = R/2 (without proof); sign convention and direct numerical problems using the mirror formulae are included. (Derivation of formulae not required) Uses of spherical mirrors. | All Chapters | Prepare a Power Point Presentation on Chapter "Reflection of Light" |

| | | | | | |
|---|---|---|---|---|---|
| | 3. LAWS OF MOTION<br>(i) Contact and non-contact forces<br>cgs  SI units.<br> amples of contact forces frictional<br>force<br> normal reaction force tension<br>force as applied<br>through strings and force eerted<br>during<br>collision and noncontact forces<br>gravitational<br> electric and magnetic. eneral<br>properties of<br>noncontact forces. cgs and SI units<br>of force and<br>their relation with ravitational<br>units. | **Ch.2. Motion in One Dimension**<br> Scalar and vector quantities,<br>distance, speed, velocity,<br>acceleration; graphs of<br>distance–time and speed–time<br>equations of uniformly accelerated<br>motion with<br>derivations.<br> Examples of Scalar and vector<br>quantities only, rest and<br>motion in one dimension; distance<br>and displacement;<br>speed and velocity; acceleration<br>and retardation;<br>distance-time and velocity-time<br>graphs; meaning of<br>slope of the graphs; [Nonuniform<br>acceleration excluded].<br> Equations to be derived: v = u + at;<br>S = ut + ½at2; S = ½(u+v)t; v2 = u2<br>+ 2aS. [Equation for<br>Sn th is not included]. Simple<br>numerical problems. | | | |

| | | 3. LAWS OF MOTION | | | | |
|---|---|---|---|---|---|---|
| | | (i) Contact and non-contact forces, CGS and SI units. Examples of contact forces: frictional force, normal reaction force, tension force as applied through strings, and force exerted during collision. Non-contact forces: gravitational, electric, and magnetic. General properties of non-contact forces. CGS and SI units of force and their relation with gravitational units. | | | | |
| | | (ii) Newton's First Law of Motion (qualitative discussion): introduction of the idea of inertia, mass, and force. Newton's first law statement and qualitative discussion. Definitions of inertia and force from the first law. Examples of inertia as illustration of the first law. Inertial mass not included. | | | | |
| | | (iii) Newton's Second Law of Motion (including F=ma): weight and mass. | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | | (iv) Newton's Third Law of Motion (qualitative discussion only): simple examples. Statement with qualitative discussion. Examples of action-reaction pairs (A and B): action and reaction always act on different bodies.<br><br>(v) Gravitation: universal law of gravitation, statement and equation, and its importance. Gravitational acceleration due to gravity, free fall. Weight and mass, weight as force of gravity, comparison of mass and weight. Gravitational units of force. Simple numerical problems. Problems on variation of gravity excluded | | | |
| | | **4. PRESSURE IN FLUIDS AND ATMOSPHERIC PRESSUREF**<br>(i) Change of pressure with depth (including the formula p=hρg); Transmission of pressure in liquids; atmospheric pressure.<br>Thrust and Pressure and their units; pressure exerted by a liquid column p=hρg; simple daily life examples: (i) broadness of the base of a dam, (ii) Diver's suit etc. Some consequences of p=hρg; transmission of pressure in liquids; Pascal's law; examples; atmospheric pressure; common manifestations and consequences. Variations of pressure with altitude (qualitative only); applications such as weather forecasting and altimeter. | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | (ii) Buoyancy, Archimedes' Principle; floatation; relationship with density; relative density; determination of relative density of a solid. apparent weight of floating object; application to ship, submarine, iceberg, balloons, etc. Simple numerical problems involving Archimedes' principle, buoyancy, and floatation. | | | | |
| | | **5. UPTHRUST IN FLUIDS, ARCHIMEDES'S PRINCIPLE**<br>(i) Concepts of heat and temperature. Heat as energy.SI unit joule.<br>(ii) Anomalous expansion of water: graphs showing variation of volume and density of water with temperature in the 0 to 0 °C range. Hope's experiment and consequences of Anomalous expansion.<br>(iii) Energy flow and its importance: Understanding the flow of energy as Linear and linking it with the laws of Thermodynamics- 'Energy is neither created nor destroyed' and 'No energy transfer is 100% efficient. | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | | (iv) Energy sources. Solar, wind, water and nuclear energy (only qualitative discussion of steps to produce electricity). Renewable versus non-renewable sources (elementary ideas with example). Renewable energy: biogas, solar energy, wind energy, energy from falling of water, run-of-the river schemes, energy from waste, tidal energy, etc. Issues of economic viability and ability to meet demands. Non-renewable energy – coal, oil, natural gas. Inequitable use of energy in urban and rural areas. Use of hydro electrical powers for light and tube wells. (v) Global warming and Green House effect: Meaning, causes and impact on the life on earth. Projections for the future; what needs to be done. Energy degradation – meaning and examples. | | | |

**6. HEAT & ENERGY**
(i) Reflection of light; images formed by a pair of parallel and perpendicular plane mirrors; Laws of reflection; experimental verification; characteristics of images formed in a pair of mirrors, (a) parallel and (b) perpendicular to each other; uses of plane mirrors. (ii) Spherical mirrors; characteristics of image formed by these mirrors. Uses of concave and convex mirrors. (Only simple direct ray diagrams are required). Brief introduction to spherical mirrors - concave and convex mirrors, centre and radius of curvature, pole and principal axis, focus and focal length; location of images from ray diagram for various positions of a small linear object on the principal axis of concave and convex mirrors; characteristics of images. f = R/2 (without proof);

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---------|------|------------------|-----------|------|-------------|---------|
| | | | Project | | | Project |
| CHEMISTRY | **1. The Language of Chemistry-** (i) Symbol of an element; valency; formulae of radicals and formulae of compounds. Balancing of simple chemical equations. • Symbol – definition; symbols of the elements used often. • Valency - definition; hydrogen combination and number of valence electrons of the metals and non-metals; mono, di, tri and tetra valent elements. • Radicals – definition; formulae and valencies. • Compounds – name and formulae. • Chemical equation – definition and examples of chemical equations with one reactant and two or three products, two reactants and one product, two reactants and two products and two reactants and three or four products; balancing of equations. (by hit and trial method). | **(Including UT-I Syllabus)** **2.Chemical changes and reactions** (i) Types of chemical changes. • Direct combination • Decomposition • Displacement; • Double decomposition (The above to be taught with suitable chemical equations as examples). (ii) Energy changes in a chemical change. Exothermic and endothermic reactions with examples – evolution/absorption of heat, light and electricity **3. Water** (i) Water as a universal solvent. • Solutions as 'mixtures' of solids in water; saturated solutions. • Qualitative effect of temperature on solubility (ii) Hydrated and anhydrous substances. (a) Hydrated substances: | Many natural chemical changes are useful in our daily life find out about ten such chemical change without which life would not have been possible. Make a chart or a Power Point presentation on what happens in each of these chemical changes and how is it useful to us. | **5. The Periodic Table** Dobereiner's Triads, Newland's law of Octaves, Mendeleev's contributions; Modern Periodic Law, the Modern Periodic Table. (Groups and periods) • General idea of Dobereiner's triads, Newland's law of Octaves, Mendeleev's periodic law. • Discovery of Atomic Number and its use as a basis for Modern Periodic law. • Modern Periodic Table (Groups 1 to 18 and periods 1 to 7). • Special reference to Alkali metals (Group 1), Alkaline Earth metals (Group 2) Halogens (Group 17) and Zero Group (Group 18). | **(Including UT II and Half Yearly Syllabus)** **6. Study of the First Element -** Hydrogen Position of the non-metal (Hydrogen) in the periodic table and general group characteristics with reference to valency electrons, burning, ion formation applied to the above-mentioned element. (i) Hydrogen from: water, dilute acids and alkalis. (a) Hydrogen from water: • The action of cold water on sodium potassium and calcium. • The action of hot water on magnesium. • The action of steam on aluminium, zinc, and iron; (reversibility of reaction between iron and steam). • The action of steam on non-metal (carbon). Students can be shown the action of sodium and calcium on water in the laboratory. They must be asked to make observations and write equations for the above reactions. | Carbon dioxide is the leading Greenhouse gas, high level of carbon dioxide causes climate change, explain the harmful effect by using pictures or prepare chart on it. |

| | | | | | |
|---|---|---|---|---|---|
| | (ii) Relative Atomic Masses (atomic weights) and Relative Molecular Masses (molecular weights): either - standard H atom or 1/12th of carbon 12 atom.<br>• Definitions<br>• Calculation of Relative Molecular Mass and percentage composition of a compound. | Water of Crystallisation – meaning and examples.<br>(b) Anhydrous substances: Meaning and examples only<br>(c) Properties:<br>• Efflorescence<br>• Deliquescence<br>• Hygroscopy<br>• Removal of hardness<br>(i) By boiling<br>(ii) By addition of washing soda<br> (Definition and examples of each of the above).<br>(iii)Drying and Dehydrating Agents Meaning and examples only.<br>(iv) Soft water and Hard water<br>• Meaning, (in terms of action of soap)<br>• Advantages and disadvantages of soft water and hard water.<br>• Types and causes of hardness. | | | (ii) The preparation and collection of hydrogen by a standard laboratory method other than electrolysis.<br>In the laboratory preparation, the reason for using zinc, the impurities in the gas, their removal and the precautions in the collection of the gas must be mentioned.<br>(iii) Industrial manufacture of hydrogen by Bosch process.<br>• Main reactions and conditions.<br>• Separation of $CO_2$ and $CO$ from hydrogen.<br>(iv) Oxidation and reduction reactions. Differences in terms of addition and removal of oxygen / hydrogen. | |
| | | **4. Atomic Structure and Chemical bonding**<br>(i) Structure of an Atom, mass number and atomic number, Isotopes and Octet Rule.<br>• Definition of an atom<br>• Constituents of an atom - nucleus (protons, neutrons) with associated electrons; mass number, atomic number.<br>• Electron distribution in the orbits - $2n^2$ rule, Octet rule. Reason for chemical activity of an atom.<br>• Definition and examples of isotopes (hydrogen, carbon, chlorine).<br>(ii) Electrovalent and covalent bonding, structures of various compounds – orbit structure<br>(a) Electrovalent Bond<br>• Definition<br>• Atomic orbit structure for the formation of Electrovalent compounds (e.g. $NaCl$, $MgCl_2$, $CaO$);<br>(b) Covalent Bond<br>• Definition | | **8. Atmospheric pollution**<br>(a) Acid rain – composition, cause and its impact. Sulphur in fossil fuels giving oxides of sulphur when burnt. High temperatures in furnaces and internal combustion engines produce oxides of nitrogen. (Equations to be included). Acid rain affects soil chemistry and water bodies.<br>(b) Global warming:<br>Greenhouse gases – their sources and ways of reducing their presence in the atmosphere.<br>(c) Ozone depletion<br>• Formation of ozone – relevant equations<br>• Function in the atmosphere.<br>• Destruction of the ozone layer – chemicals responsible for this to be named but reactions not required. | **7. Study of Gas Laws**<br>(i) The behaviour of gases under changes of temperature and pressure; explanation in terms of molecular motion (particles, atoms, molecules); Boyle's Law and Charles' Law; absolute zero; gas equation; simple relevant calculations. • The behaviour of gases under changes of temperature and pressure; explanation in terms of molecular motion (particles, atoms, molecules).<br>• Boyle's Law: statement, mathematical form, simple calculations. • Charles' Law: statement, mathematical form, simple calculations. • Absolute zero Kelvin scale of temperature. • Gas equation $P_1 V_1 / T_1 = P_2 V_2 / T_2$; simple relevant calculations based on gas equation. | |

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| Biology | **Unit 1: Basic Biology** **Chapter 2 - Cell-The Unit of Life** The cell, a unit of life, protoplasm, basic difference between prokaryotic and eukaryotic cell; differences between an animal and a plant cell. • A basic understanding of the cell theory, structure of plant and animal cell with functions of various cell organelles. (Protoplasm, Cytoplasm, Cell Wall, Cell Membrane, Nucleus, Nucleolus, Mitochondria, Endoplasmic Reticulum, Ribosome, Golgi bodies, Plastids, Lysosomes, Centrosome and Vacuole). | **Unit 1: Basic Biology** **Chapter 2 - Cell-The Unit of Life** The cell, a unit of life, protoplasm, basic difference between prokaryotic and eukaryotic cell; differences between an animal and a plant cell. • A basic understanding of the cell theory, structure of plant and animal cell with functions of various cell organelles. (Protoplasm, Cytoplasm, Cell Wall, Cell Membrane, Nucleus, Nucleolus, Mitochondria, Endoplasmic Reticulum, Ribosome, Golgi bodies, Plastids, Lysosomes, Centrosome and Vacuole). | Prepare a informative power point presentation on the topic"Plant Growth and Respiration". Contents of Slides Can Include: What is germination? Conditions for germination Types of germination (Epigeal/Hypogeal) Respiration in plants (Aerobic/Anaerobic) Differences between respiration and photosynthesis Fun fact slide or quiz | **Unit 5- Human Anatomy and Physiology** **Chapter10- Nutrition** Nutrition: Classes of food; balanced diet. Malnutrition and deficiency diseases. • Functions of carbohydrates, fats, proteins, mineral salts (calcium, iodine, iron and sodium), vitamins and water in proper functioning of the body. • Sources of vitamins, their functions and deficiency diseases. • Meaning and importance of a 'Balanced Diet'. • Role of cellulose in our diet. • Causes, symptoms and prevention of Kwashiorkor and Marasmus. | **Unit 1: Basic Biology** **Chapter 2 - Cell-The Unit of Life** The cell, a unit of life, protoplasm, basic difference between prokaryotic and eukaryotic cell; differences between an animal and a plant cell. • A basic understanding of the cell theory, structure of plant and animal cell with functions of various cell organelles. (Protoplasm, Cytoplasm, Cell Wall, Cell Membrane, Nucleus, Nucleolus, Mitochondria, Endoplasmic Reticulum, Ribosome, Golgi bodies, Plastids, Lysosomes, Centrosome and Vacuole). • Major differences between a prokaryotic and eukaryotic cell. | Topic- "Common Communicable Diseases and How Hygiene Prevents Them?" Prepare a Research project with PowerPoint explaining diseases like typhoid, cholera, and how they relate to hygiene. |
| | • Major differences between a prokaryotic and eukaryotic cell. Differences between a plant cell and an animal cell should be mainly discussed with respect to cell wall, centrosome, vacuoles and plastids. | • Major differences between a prokaryotic and eukaryotic cell. • Differences between a plant cell and an animal cell should be mainly discussed with respect to cell wall, centrosome, vacuoles and plastids. | | | • Differences between a plant cell and an animal cell should be mainly discussed with respect to cell wall, centrosome, vacuoles and plastids. | |

| | | | | | |
|---|---|---|---|---|---|
| Chapter 3- Tissues-Plant and Animal Tissues Tissues: Types of plant and animal tissues. • A brief understanding of their location, basic structure and functions with examples. • A brief understanding of their role in different physiological processes in plants and animals. | Chapter 3- Tissues-Plant and Animal Tissues Tissues: Types of plant and animal tissues. • A brief understanding of their location, basic structure and functions with examples. • A brief understanding of their role in different physiological processes in plants and animals. | | Chapter 11- Digestive System The structure of a tooth, different types of teeth. • Structure of a tooth to be discussed with the help of a diagram. • Functions of different types of teeth. • Dental formula of an adult. (iii)Digestive System: Organs, digestive glands and their functions (including enzymes and their functions in digestion, absorption and assimilation of digested food). • Organs and glands of the digestive system and their functions with reference to digestion, absorption and assimilation. • Brief idea of peristalsis. | Chapter 3- Tissues-Plant and Animal Tissues Tissues: Types of plant and animal tissues. • A brief understanding of their location, basic structure and functions with examples. • A brief understanding of their role in different physiological processes in plants and animals. | |
| | **Unit 2- Flowering Plants Chapter 4- The Flower** Flower: Structure of a bisexual flower, functions of various parts. • A brief introduction to complete and incomplete flowers. • Essential and non-essential whorls of a bisexual flower; their various parts and functions. • Inflorescence and placentation (meaning only) | | | **Unit 2- Flowering Plants Chapter 4- The Flower** Flower: Structure of a bisexual flower, functions of various parts. • A brief introduction to complete and incomplete flowers. • Essential and non-essential whorls of a bisexual flower; their various parts and functions. • Inflorescence and placentation (meaning only) | |

| | | | | | |
|---|---|---|---|---|---|
| | | Chapter 5- Pollination and Fertilization<br>Pollination: self and cross-pollination. • Explanation, advantages and disadvantages of self and crosspollination. • Agents of pollination and the characteristic features of flowers pollinated by various agents such as insects, wind, and water. • A brief idea as to how nature favours cross pollination. Fertilisation: • Events taking place between pollination and fertilisation leading to the formation of zygote in the embryo sac. • A brief explanation of the terms double fertilization and triple fusion. 120 • Fruit and Seed - definition and significance. | | Chapter 5- Pollination and Fertilization<br>Pollination: self and cross-pollination. • Explanation, advantages and disadvantages of self and crosspollination. • Agents of pollination and the characteristic features of flowers pollinated by various agents such as insects, wind, and water. • A brief idea as to how nature favours cross pollination. Fertilisation: • Events taking place between pollination and fertilisation leading to the formation of zygote in the embryo sac. • A brief explanation of the terms double fertilization and triple fusion. 120 • Fruit and Seed - definition and significance. | |

| | | | | |
|---|---|---|---|---|
| **Unit 3- Plant Physiology**<br>**Chapter 6- Seeds**<br><br>Structure of dicot and monocot seeds, Germination of seeds, types, and conditions for seed germination. • Structure and germination of Bean seed and Maize grain. • Differences between monocot and dicot seeds. • Differences between hypogeal and epigeal germination. • Conditions for seed germination - To be explained and supported by experiments.<br><br>**Chapter 7- Respiration in Plants**<br>Respiration in plants: outline of the process, gaseous exchange.<br>• A brief outline of the process mentioning the terms Glycolysis, Krebs cycle and their significance. | | | **Unit 3- Plant Physiology**<br>**Chapter 6- Seeds**<br><br>Structure of dicot and monocot seeds, Germination of seeds, types, and conditions for seed germination. • Structure and germination of Bean seed and Maize grain. • Differences between monocot and dicot seeds. • Differences between hypogeal and epigeal germination. • Conditions for seed germination - To be explained and supported by experiments.<br><br>**Chapter 7- Respiration in Plants**<br>Respiration in plants: outline of the process, gaseous exchange.<br>• A brief outline of the process mentioning the terms Glycolysis, Krebs cycle and their significance. | |

| | | Unit 6- Health and Hygiene Chapter 15-Hygiene – (A Key to Healthy Life) A brief introduction to maintaining good health. General idea of personal hygiene, public hygiene and sanitation. | | | Unit 4- Diversity in living organisms Chapter 8- Five Kingdom Classification A brief outline of the five Kingdom classification. • Main characteristics of each kingdom with suitable examples: - Monera, Protista, Fungi. - Plantae - Thallophyta, Bryophyta, Pteridophyta and Spermatophyta. • Animalia - non-chordates from Porifera to Echinodermata and Chordates - all five Classes. | |

| | | | | | Chapter 9- Economic Importance of Bacteria and Fungi Economic importance of Bacteria. (a) Useful role of bacteria: • Medicine: antibiotics, serums and vaccines • Agriculture: nitrogen cycle (role of nitrogen fixing, nitrifying and denitrifying bacteria) • Industry -curing of tea, tanning of leather. (b) Harmful role of bacteria - spoilage of food, diseases in plants and animals, bio-weapons. Economic importance of Fungi. A brief idea of the useful role of Fungi in breweries, bakeries, cheese processing, and mushroom cultivation. (Processes of manufacture are not required). | |
|---|---|---|---|---|---|---|

| | | | | | Unit 5- Human Anatomy and Physiology<br>Chapter10- Nutrition<br>Nutrition: Classes of food; balanced diet. Malnutrition and deficiency diseases. • Functions of carbohydrates, fats, proteins, mineral salts (calcium, iodine, iron and sodium), vitamins and water in proper functioning of the body. • Sources of vitamins, their functions and deficiency diseases. • Meaning and importance of a 'Balanced Diet'. • Role of cellulose in our diet. • Causes, symptoms and prevention of Kwashiorkor and Marasmus. | |

| | | | | | Chapter 11- Digestive System<br><br>The structure of a tooth, different types of teeth. • Structure of a tooth to be discussed with the help of a diagram. • Functions of different types of teeth. • Dental formula of an adult. (iii)Digestive System: Organs, digestive glands and their functions (including enzymes and their functions in digestion, absorption and assimilation of digested food). • Organs and glands of the digestive system and their functions with reference to digestion, absorption and assimilation. • Brief idea of peristalsis. | |
|---|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| | | **Chapter 16- Diseases: Cause and Control**<br>A brief introduction to communicable, non-communicable, endemic, epidemic, pandemic and sporadic diseases; modes of transmission. • Meaning of each of the above with examples. • Modes of transmission: air borne, water borne; vectors (housefly, mosquito, cockroach). Bacterial, Viral, Protozoan, Helminthic diseases: • Bacterial: Cholera, typhoid, tuberculosis. • Viral: AIDS, Chicken pox, Hepatitis. • Protozoan: Malaria, Amoebic Dysentery, Sleeping sickness. | | **Chapter 12- Skeleton- Movement and Locomotion**<br>Skeleton - Movement and Locomotion. • Functions of human skeleton • Axial and Appendicular Skeleton • Types of joints with reference to their location: - immovable joints - slightly movable joints - freely movable (hinge joint, ball and socket joint, gliding joint, pivot joint.)<br><br>**Chapter 13- Skin- 'The Jack of All Trades'**<br>Structure and functions of skin. • Various parts of the skin and their functions. • Special derivatives of the skin with reference to sweat glands, sebaceous glands, hair, nails and mammary glands. • Heat regulation - vasodilation and vasoconstriction. | |

| | | | | | Chapter 14- The Respiratory System
Respiratory System: Organs; mechanism of breathing; tissue respiration, heat production. • Structures of the respiratory system. • Differences between anaerobic respiration in plants and in man. • Role of diaphragm and intercostal muscles in breathing to provide a clear idea of the breathing process. • Brief idea of gaseous transport and tissue respiration. • Brief understanding of respiratory volumes. • Effect of altitude on breathing; asphyxiation and hypoxia. | |
|---|---|---|---|---|---|---|

| | | Chapter 17- Aids to Health<br>Aids to Health: Active and passive immunity. • Meaning of Active and passive immunity. • An understanding of the use and action of the following – vaccination, immunization, antitoxin, serum, antiseptics, disinfectants, antibiotics. • An idea of the local defense system and its merits, difference between antiseptics and disinfectants.<br><br>Chapter 18- Health Organizations<br>Health Organisations: Red Cross, WHO. Major activities of the Red Cross and WHO. | | | **Unit 6- Health and Hygiene**<br>**Chapter 15-Hygiene – (A Key to Healthy Life)**<br>A brief introduction to maintaining good health. General idea of personal hygiene, public hygiene and sanitation.<br><br>**Chapter 16- Diseases: Cause and Control**<br>A brief introduction to communicable, non-communicable, endemic, epidemic, pandemic and sporadic diseases; modes of transmission. • Meaning of each of the above with examples. • Modes of transmission: air borne, water borne; vectors (housefly, mosquito, cockroach). Bacterial, Viral, Protozoan, Helminthic diseases: | |

| | | | | | |
|---|---|---|---|---|---|
| | | Chapter 19- Waste Generation and Management<br>Sources of waste - domestic, industrial, agricultural, commercial and other establishments. • Domestic waste: paper, glass, plastic, rags, kitchen waste, etc. • Industrial: mining operations, cement factories, oil refineries, construction units. • Agricultural: plant remains, animal waste, processing waste. • Municipal sewage: Sewage, degradable and non-degradable waste from offices, etc. • e-waste: brief idea about e-waste. (b) Methods of safe disposal of waste. • Segregation, dumping, composting, drainage, treatment of effluents before discharge, incineration, use of scrubbers. | | | Chapter 17- Aids to Health<br>Aids to Health: Active and passive immunity. • Meaning of Active and passive immunity. • An understanding of the use and action of the following – vaccination, immunization, antitoxin, serum, antiseptics, disinfectants, antibiotics. • An idea of the local defense system and its merits, difference between antiseptics and disinfectants.<br><br>Chapter 18- Health Organizations<br>Health Organisations: Red Cross, WHO. Major activities of the Red Cross and WHO. | |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | Chapter 19- Waste Generation and Management Sources of waste - domestic, industrial, agricultural, commercial and other establishments. • Domestic waste: paper, glass, plastic, rags, kitchen waste, etc. • Industrial: mining operations, cement factories, oil refineries, construction units. • Agricultural: plant remains, animal waste, processing waste. • Municipal sewage: Sewage, degradable and non-degradable waste from offices, etc. • e-waste: brief idea about e-waste. (b) Methods of safe disposal of waste. | |

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| History/Civics | **Chapter-1: The Harappan Civilisation** Sources: Great Bath, Citadel, seals, bearded man, dancing girl, dockyard, granaries, script. Urban planning, trade, art & craft, and its decline. | **Chapter-1: The Harappan Civilisation** Sources: Great Bath, Citadel, seals, bearded man, dancing girl, dockyard, granaries, script. Urban planning, trade, art & craft, and its decline. | Highlight the civics issues of your locality and what suggestions would you offer to address them. OR You can choose any topic from the ICSE Board syllabus | Chapter-9: The Mughal Empire Sources: Ain-i-Akbari, Taj Mahal, Jama Masjid and Red Fort. Names of the kings in chronological order. Babur- The three battles waged to consolidate his empire. Akbar- Rajput Policy, Steps towards integration, social and educational reforms, mansabdari system. | **Chapter-1: The Harappan Civilisation** Sources: Great Bath, Citadel, seals, bearded man, dancing girl, dockyard, granaries, script. Urban planning, trade, art & craft, and its decline. | Make a comparatively study of the Harappan and the Mesopotamian civilization |
| | **Chapter-2: The Vedic Period** Sources: Names of the four Vedas and importance of epics. Early Vedic Period- Social Organisation- Family, Position of the king; Rig Vedic Assemblies- Sabha, Samiti, Vidhatha. Brief comparative study of the position of women in Early and Later Vedic society. A brief comparison between the economy of Early and Later Vedic Period. The four class divisions, the four Ashramas and the education system. | **Chapter-2: The Vedic Period** Sources: Names of the four Vedas and importance of epics. Early Vedic Period- Social Organisation- Family, Position of the king; Rig Vedic Assemblies- Sabha, Samiti, Vidhatha. Brief comparative study of the position of women in Early and Later Vedic society. A brief comparison between the economy of Early and Later Vedic Period. The four class divisions, the four Ashramas and the education system. | | Chapter-10: Composite Culture Factors responsible for composite culture, principles of the Bhakti and Sufi movement impact of composite culture, impact of the Bhakti Movement, the Sufi Movement and Christian missionaries. | **Chapter-2: The Vedic Period** Sources: Names of the four Vedas and importance of epics. Early Vedic Period- Social Organisation- Family, Position of the king; Rig Vedic Assemblies- Sabha, Samiti, Vidhatha. Brief comparative study of the position of women in Early and Later Vedic society. A brief comparison between the economy of Early and Later Vedic Period. The four class divisions, the four Ashramas and the education system. | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Chapter-1. Our Constitution**<br>Definition of Constitution - date of adoption, date<br>of enforcement and its significance.<br>. | **Chapter-1,2,3 . Our Constitution + Salient features of the constitution part I and II**<br>Definition of Constitution - date of adoption, date<br>of enforcement and its significance.<br>Features:<br>Single Citizenship, Universal Adult Franchise,<br>Fundamental Rights and Fundamental Duties,<br>Directive Principles of State Policy (meaning),<br>Difference between Fundamental Rights and<br>Directive Principles, Meaning of a Welfare State. | | Chapter 4: Election meaning composition of election (in brief) direct and indirect election; general election , Mid-term election and By-election | **Chapter-3: Jainism and Buddhism**<br>Sources: Angas, Tripitikas and Jatakas (brief<br>mention). Causes for their rise in the 6th century B.C.<br>Doctrines- Jainism-Tri-ratnas, Karma, Equality,<br>Moksha Buddhism- The Four Noble truths, The Eight-fold path,<br>Nirvana. | |
| | | **Chapter-3: Jainism and Buddhism**<br>Sources: Angas, Tripitikas and Jatakas (brief<br>mention). Causes for their rise in the 6th century B.C.<br>Doctrines- Jainism-Tri-ratnas, Karma, Equality,<br>Moksha Buddhism- The Four Noble truths, The Eight-fold path,<br>Nirvana. | | | **Chapter-4: The Mauryan Empire**<br>Sources: Arthashastra, Indika, Ashokan Edicts,<br>Sanchi Stupa. Names of the kings in chronological order and administration; Ashoka's Dhamma - Principles and<br>Impact | |
| | | **Chapter-4: The Mauryan Empire**<br>Sources: Arthashastra, Indika, Ashokan Edicts,<br>Sanchi Stupa. Names of the kings in chronological order and administration; Ashoka's Dhamma - Principles and<br>Impact | | | **Chapter-5. The Sangam Age**<br>Sources: Tirukkural and Megaliths.<br>Society – Position of women<br>Economy - Agriculture and Trade | |

| | | | | | |
|---|---|---|---|---|---|
| | | **Chapter-5. The Sangam Age**<br>Sources: Tirukkural and Megaliths.<br>Society – Position of women<br>Economy - Agriculture and Trade | | | **Chapter-6: The Age of the Guptas**<br>Sources: Account of Fa-hien;<br>Allahabad Pillar<br>Inscription.<br>Names of the kings in chronological<br>order;<br>administration; Contribution to the<br>fields of<br>Education (Nalanda University),<br>Science<br>(Aryabhatta), Sushrutha (medicine)<br>and Culture<br>(works of Kalidasa, Deogarh<br>temple). |
| | | **Chapter-6: The Age of the Guptas**<br>Sources: Account of Fa-hien;<br>Allahabad Pillar<br>Inscription.<br>Names of the kings in chronological<br>order;<br>administration; Contribution to the<br>fields of<br>Education (Nalanda University),<br>Science<br>(Aryabhatta), Sushrutha (medicine)<br>and Culture<br>(works of Kalidasa, Deogarh<br>temple). | | | **Chapter-7: Medieval India**<br>(a) The Cholas<br>Sources: Inscriptions; Brihadishwara<br>Temple.<br>Names of the kings in chrono |
| | | **Chapter-7: Medieval India**<br>(a) The Cholas<br>Sources: Inscriptions; Brihadishwara<br>Temple.<br>Names of the kings in chrono | | | **Chapter-8: The Delhi Sultanate**<br>Sources: Inscriptions; Qutab Minar.<br>Names of the dynasties in<br>chronological order Alauddin Khilji –<br>Market Regulations, Deccan<br>Expedition, Measures against<br>nobility, Military reforms, Revenue<br>reforms Muhammad Bin Tughlaq-<br>Transfer of capital, Token Currency,<br>Taxation in Doab, Plan of<br>conquests. |

| | | | | | |
|---|---|---|---|---|---|
| | | **Chapter-8: The Delhi Sultanate**<br>Sources: Inscriptions; Qutab Minar.<br>Names of the dynasties in chronological order Alauddin Khilji – Market Regulations, Deccan Expedition, Measures against nobility, Military reforms, Revenue reforms Muhammad Bin Tughlaq-Transfer of capital, Token Currency, Taxation in Doab, Plan of conquests. | | | Chapter-9: The Mughal Empire<br>Sources: Ain-i-Akbari, Taj Mahal, Jama<br>Masjid and Red Fort.<br>Names of the kings in chronological order.<br>Babur- The three battles waged to consolidate his empire. Akbar-Rajput Policy, Steps towards integration, social and educational reforms,<br>mansabdari system. | |
| | | | | | Chapter-10: Composite Culture<br>Factors responsible for composite culture,<br>principles of the Bhakti and Sufi movement<br>impact of composite culture, impact of the<br>Bhakti Movement, the Sufi Movement and<br>Christian missionaries. | |
| | | | | | The Modern Age In Europe<br>Chapter 11:Renaissance<br><br>Definition, causes (capture of Constantinople, decline of Feudalism, new trade routes, spirit of enquiry and invention of the printing press) and impact on art, literature and science (Leonardo Da Vinci, William Shakespeare and Copernicus). Consequences of Renaissance.<br><br>Chapter 12:Reformation<br>Meaning, Causes of reformation (dissatisfaction with the practices of the Catholic Church and new learning): Martin Luther's contribution, Counter Reformation. | |

| | | | | | Chapter 13:Industrial Revolution :Definition of the term. Causes of Industrial Revolution, meaning of capitalism and causes for the rise of capitalism, meaning of socialism and causes for the rise of socialism. | |
| --- | --- | --- | --- | --- | --- | --- |
| | | | | | **Chapter-1. Our Constitution** Definition of Constitution - date of adoption, date of enforcement and its significance. . | |
| | | | | | **Chapter-1,2,3 . Our Constitution + Salient features of the constitution part I and II** Definition of Constitution - date of adoption, date of enforcement and its significance. Features: Single Citizenship, Universal Adult Franchise, Fundamental Rights and Fundamental Duties, Directive Principles of State Policy (meaning), Difference between Fundamental Rights and Directive Principles, Meaning of a Welfare State. | |
| | | | | | Chapter 4: Election meaning composition of election (in brief) direct and indirect election; general election , Mid-term election and By-election | |

| | | | | | Chapter 5:The State Legislatures:The Legislative Assembly and the Legislative Council.<br>Meaning of Unicameral and Bicameral Legislatures, term, composition, qualification for membership, powers and functions. | |

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| Geography | **Chapter-1: Earth as a planet**<br> Shape of the earth. Earth as the home of<br> humankind and the conditions that exist.<br><br>**Chapter-2: Concept of latitudes**<br>main latitudes, their  location with degrees, parallels of latitude and their uses.<br>Concept of longitudes - Prime Meridian,<br> time (local, standard and time zones,<br> Greenwich Mean Time (GMT) and<br> International Date Line (IDL). Eastern<br> and Western hemisphere.<br>  Using latitudes and longitudes to find<br> location. Calculation of time.<br> Great Circles and their use. | **Chapter-1: Earth as a planet**<br> Shape of the earth. Earth as the home of<br> humankind and the conditions that exist.<br><br>**Chapter-2: Concept of latitudes**<br>main latitudes, their  location with degrees, parallels of latitude and their uses. Concept of longitudes - Prime Meridian,<br> time (local, standard and time zones,  Greenwich Mean Time (GMT) and  International Date Line (IDL). Eastern  and Western hemisphere. Using latitudes and longitudes to find  location. Calculation of time. Great Circles and their use. | Draw at least one sketch map to organize information about visiting an important place, a Zoo or a Monument.<br>     OR<br>You can choose any topic from the Board Curriculum. | Chapter 10 Tides and ocean currents:Meaning of hydrosphere. Tides - formation and pattern. Ocean Currents – their circulation pattern and effects. (Specifically of Gulf Stream, North Atlantic Drift, Labrador Current, Kuro Shio and Oya Shio.) | **Chapter-1: Earth as a planet**<br> Shape of the earth. Earth as the home of<br> humankind and the conditions that exist.<br><br>**Chapter-2: Concept of latitudes**<br>main latitudes, their  location with degrees, parallels of latitude and their uses. Concept of longitudes - Prime Meridian,<br> time (local, standard and time zones,  Greenwich Mean Time (GMT) and  International Date Line (IDL). Eastern  and Western hemisphere. Using latitudes and longitudes to find  location. Calculation of time. Great Circles and their use. | Uses Important types of maps<br>     OR<br>You can choose any topic from the Board Curriculum. |
| | **Chapter-3: Rotation and Revolution**<br> Rotation – direction, speed and its effects<br> (occurrence of day and night, the sun rising in<br> the east and setting in the west, Coriolis effect)<br> Revolution of the earth and its inclined axis<br>effects: the variation in the length of the day<br> and night and seasonal changes with<br> Equinoxes and Solstices. | **Chapter-3: Rotation and Revolution**<br> Rotation – direction, speed and its effects<br> (occurrence of day and night, the sun rising in<br> the east and setting in the west, Coriolis effect)<br> Revolution of the earth and its inclined axis<br>effects: the variation in the length of the day<br> and night and seasonal changes with<br> Equinoxes and Solstices. | | Chapter 11-Atmposphere Composition and structure of the atmosphere.<br>Troposphere, Stratosphere, Ionosphere and<br>Exosphere; Ozone in the Stratosphere, its<br>depletion.  Global warming and its impact. " | **Chapter-3: Rotation and Revolution**<br> Rotation – direction, speed and its effects<br> (occurrence of day and night, the sun rising in<br> the east and setting in the west, Coriolis effect)<br> Revolution of the earth and its inclined axis<br>effects: the variation in the length of the day<br> and night and seasonal changes with<br> Equinoxes and Solstices. | |

| | | | | | |
|---|---|---|---|---|---|
| | | **Chapter 4**-Earth's Structure Core, mantle, crust – meaning, extent and their composition.<br>**Chapter -5 Landforms of the Earth**<br>Mountains, plateaus, plains (definition, types and their formation): Mountains – fold, residual and block. Plateaus – intermont and volcanic.<br>Plains – structural and depositional. metamorphic, their characteristics and Examples from the world and India.<br>**Chapter 6 -Rocks**<br>difference between minerals and rocks, types of rocks: igneous, sedimentary, formation; rock cycle. | | | **Chapter 4**-Earth's Structure Core, mantle, crust – meaning, extent and their composition.<br>**Chapter -5 Landforms of the Earth**<br>Mountains, plateaus, plains (definition, types and their formation): Mountains – fold, residual and block. Plateaus – intermont and volcanic.<br>Plains – structural and depositional. metamorphic, their characteristics and Examples from the world and India.<br>**Chapter 6 -Rocks**<br>difference between minerals and rocks, types of rocks: igneous, sedimentary, formation; rock cycle. | |
| | | **Chapter 7- Volcanoes**<br>Meaning, Types – active, dormant and extinct. Effects – constructive and destructive. Important volcanic zones of the world. | | | | |
| | | **Chapter 8- Earthquakes**<br>Meaning, causes and measurement.<br>Effects: destructive and constructive.<br>Earthquake zones of the World | | | **Chapter 7- Volcanoes**<br>Meaning, Types – active, dormant and extinct. Effects – constructive and destructive. Important volcanic zones of the world.<br><br>**Chapter 8- Earthquakes**<br>Meaning, causes and measurement.<br>Effects: destructive and constructive.<br>Earthquake zones of the World | |

| | | Chapter 9-Weathering and Denudation | | | Chapter 9-Weathering and Denudation | |
|---|---|---|---|---|---|---|
| | | Meaning, types and effects of weathering. Types: Physical Weathering – block and granular disintegration, exfoliation; Chemical Weathering–oxidation, carbonation, hydration and solution; Biological Weathering – caused by humans, plants and animals. Meaning and agents of denudation; work of river and wind. Stages of a river course and associated land forms – V-shaped valley, waterfall, meander and delta. Wind – deflation hollows and Sand dunes.Map Work+Topo Symbols On an outline map of the World, | | | Meaning, types and effects of weathering. Types: Physical Weathering – block and granular disintegration, exfoliation; Chemical Weathering–oxidation, carbonation, hydration and solution; Biological Weathering – caused by humans, plants and animals. Meaning and agents of denudation; work of river and wind. Stages of a river course and associated land forms – V-shaped valley, waterfall, meander and delta. Wind – deflation hollows and Sand dunes. | |

| | | | | | |
|---|---|---|---|---|---|
| | | candidates will be required to locate, mark and name the following:<br>1. The major Natural Regions of the world - Equatorial, Tropical Monsoon, Tropical Deserts,  Mediterranean type, Tropical grasslands, Temperate grasslands, Taiga and Tundra.<br>2. The Oceans, Seas, Gulfs and Straits - all Major Oceans, Caribbean Sea, North Sea, Black Sea, Caspian Sea, South China Sea, Mediterranean Sea, Gulf of Carpentaria, Hudson Bay, Persian Gulf, Gulf of Mexico, Gulf of Guinea, Bering Strait, Strait of Gibraltar, Strait of Malacca. | | Chapter 10 Tides and ocean currents:Meaning of hydrosphere. Tides - formation and pattern. Ocean Currents – their circulation pattern and effects. (Specifically of Gulf Stream, North Atlantic Drift, Labrador Current, Kuro Shio and Oya Shio.)<br>**Chapter 11-Atmposphere** Composition and structure of the atmosphere.<br>Troposphere, Stratosphere, Ionosphere and Exosphere; Ozone in the Stratosphere, its depletion.  Global warming and its impact. " | |
| | | | | **Chapter 12:Meaning of insolation** and terrestrial radiation. Factors affecting temperature: latitude, altitude, distance from the sea, slope of land, winds and ocean currents.<br>Chapter 13:Atmospheric Pressure and Winds.<br>Meaning and factors that affect atmospheric pressure.<br>Major pressure belts of the world.Factors affecting direction and velocity of wind-pressure gradient, Coriolis Effect, Permanent winds Trades, Westerlies and Polar Easterlies.<br>Periodic winds Land and Sea breezes, Monsoons.<br>Local winds Loo, Chinook, Foehn and Mistral.<br>Variable winds Anticyclones. Cyclones | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | Chapter 14: Humidity meaning and difference between relative and absolute humidity.<br><br>Condensation-forms (clouds, dew, frost, fog and mist).<br><br>Wind-deflation hollows and Sand dunes.<br><br>Precipitation forms (rain, snow, and hail).<br>Types of rainfall reliefforographic, convectional, cyclonic/ frontal with examples from the different parts of the world. | |
| | | | | | Chapter 15:Pollution<br> Types and sources of pollution - Air pollution, water pollution , soil pollution<br>radiation and noise pollution.<br>Chapter 16:Effects of pollution on the environment and human health : Introduction, Effects of pollution,Effects of air pollution on human health, Effects of water pollution, Effects of soil pollution, Effects of noise pollution Effects of Radiation, Bhopal gas tragedy, Chernobyl Disaster.<br>Chapter 17: Preventive Measures Carpools, promotion of public transport, no smoking zone, restricted use of fossil fuels, saving energy and encouragement of organic farming . | |

| | | | | | Chapter 18:Natural Regions of the World Location, area, climate, natural vegetation and human adaptation. Equatorial region, Tropical grasslands, Tropical Deserts, Tropical Monsoon, Mediterranean, Temperate grasslands, Taiga and Tundra. | |
|---|---|---|---|---|---|---|
| | | | | | Map Work For Annual Exam On an outline map of the World, candidates will be required to locate, mark and name the following:<br><br>1)The major Natural Regions of the world -Equatorial, Tropical Monsoon, Tropical Deserts, Mediterranean type, Tropical grasslands, Temperate grasslands. Taiga and Tundra. 2)The Oceans, Seas, Gulfs and Straits Major Oceans, Caribbean Sea, North Sea, Black Sea, Caspian Sea, South China Sea, Mediterranean Sea, Gulf of Carpentaria, Hudson Bay, Persian Gulf, Gulf of Mexico, Gulf of Guinea, Bering Strait, Strait of Gibraltar, Strait of Malacca. | |

| | | | | | 3)Rivers Mississippi, Colorado, Amazon, Paraguay, Nile, Zaire, Niger, Zambezi, Orange, Rhine, Volga, Danube, Murray, Darling, Hwang Ho, Yangtse Kiang. Ob. Indus, Ganga, Mekong, Irrawaddy, Tigris, Euphrates. 4)Mountains Rockies, Andes, Appalachian, Alps, Himalayas, Pyrenees, Scandinavian Highlands, Caucasus, Atlas, Drakensburg, Khinghan, Zagros, Urals, Great Dividing range 5) Plateaus-Canadian Shield, Tibetan Plateau, Brazilian Highlands, Patagonian Plateau, Iranian Plateau, Mongolian Plateau. | |

| Subject | UT-1 | Half-Yearly Exam | | UT-2 | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| Computer Applications | **Chapter-1: Introduction to Object Oriented Programming concepts** (i) Principles of Object Oriented Programming, All the four principles of Object Oriented Programming should be defined and explained using real life examples (Data abstraction, Inheritance, Polymorphism, Encapsulation). (ii) Introduction to JAVA - Types of java programs, Java Compilation process, Java Source code, Byte code, Object code, (JVM), Features of JAVA, steps involved in compilation process, definitions of source code, byte code, object code, JVM, features of JAVA. | **Chapter-1: Introduction to Object Oriented Programming concepts** (i) Principles of Object Oriented Programming, All the four principles of Object Oriented Programming should be defined and explained using real life examples (Data abstraction, Inheritance, Polymorphism, Encapsulation). (ii) Introduction to JAVA - Types of java programs, Java Compilation process, Java Source code, Byte code, Object code, (JVM), Features of JAVA, steps involved in compilation process, definitions of source code, byte code, object code, JVM, features of JAVA. | Write any 10 Program in JAVA which are based on the half-yearly syllabus | **Chapter-6: Mathematical Library** Methods Introduction to package java.lang [ default ], methods of Math class. pow(x,y), sqrt(x), cbrt(x), ceil(x), floor(x), round (x), abs(a), max(a, b), min(a,b), random( ). Java expressions – using all the operators and methods of Math class. | **Chapter-3: Values and data types** Character set, ASCII code, Unicode, Escape sequences, Tokens, Constants and Variables, Data types, type conversions. Escape sequences [\n, \t, \\, \", \'], Tokens and its types [keywords, identifiers, literals, punctuators, operators], primitive types and non-primitive types with examples, Introduce the primitive types with size in bits and bytes, Implicit type conversion and Explicit type conversion. | Write any 10 programs in JAVA which are based on the annual syllabus |

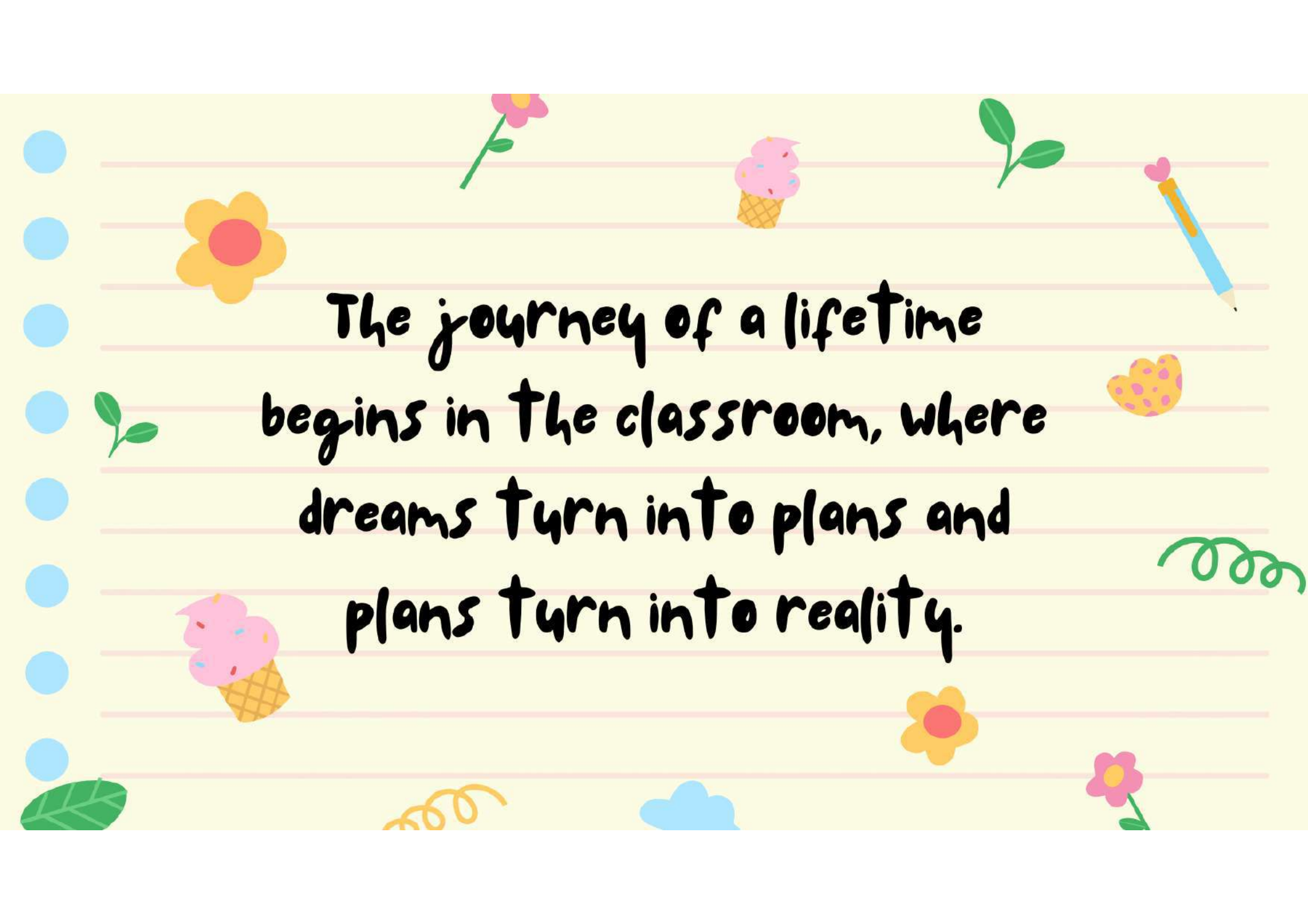| | | | | | |
|---|---|---|---|---|---|
| | **Chapter-2: Elementary Concept of Objects and Classes**<br><br>Modelling entities and their behaviour by objects, a class as a specification for objects and as an object factory, computation as message passing/method calls between objects (many examples should be done to illustrate this). Objects encapsulate state (attributes) and have behaviour (methods). Class as a user defined data type. A class may be regarded as a blueprint to create objects. It may be viewed as a factory that produces similar objects. | **Chapter-2: Elementary Concept of Objects and Classes**<br><br>Modelling entities and their behaviour by objects, a class as a specification for objects and as an object factory, computation as message passing/method calls between objects (many examples should be done to illustrate this). Objects encapsulate state (attributes) and have behaviour (methods). Class as a user defined data type. A class may be regarded as a blueprint to create objects. It may be viewed as a factory that produces similar objects. | | **Chapter-7: Conditional constructs in Java**<br>Application of if, if else, if else if ladder, switch-case, default, break. if, if else, if else if, Nested if, switch case, break statement, fall through condition in switch case, Menu driven programs, System.exit(0) - to terminate the program. | **Chapter-4: Operators in Java**<br>Forms of operators, Types of operators, Counters, Accumulators, Hierarchy of operators, 'new' operator, dot ( . ) operator. Forms of operators (Unary, Binary, Ternary), types of operators (Arithmetic, Relational, Logical, Assignment, Increment, Decrement, Short hand operators), Discuss precedence and associativity of operators, prefix and postfix, Creation of dynamic memory by using new operator, invoking members<br>of class using dot operator, Introduce System.out.println() and System.out.print() for simple output. (Bitwise and shift operators are not included). |
| | | **Chapter-3: Values and data types**<br><br>Character set, ASCII code, Unicode, Escape<br>sequences, Tokens, Constants and Variables, Data<br>types, type conversions.<br>Escape sequences [\n, \t, \\, \", \'], Tokens and its<br>types [keywords, identifiers, literals, punctuators, operators], primitive types and non-primitive types<br>with examples, Introduce the primitive types with<br>size in bits and bytes, Implicit type conversion and<br>Explicit type conversion. | | | **Chapter-5: Input in Java**<br><br>Initialization, Parameter, introduction to packages, Input streams (Scanner Class), types of errors, types of comments Initialization – Data before execution, Parameters – at the time of execution, input stream – data entry during execution – using methods of Scanner class [nextShort(), nextInt( ), nextLong( ), nextFloat ( ), nextDouble( ), next( ), nextLine( ), next ( ).charAt(0) ] Discuss different types of errors occurring during execution and compilation of the program (syntax errors, runtime errors and logical errors). Single line comment (//) and multiline comment (/* ... */ ) |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **Chapter-4: Operators in Java**<br><br>Forms of operators, Types of operators, Counters, Accumulators, Hierarchy of operators, 'new' operator, dot ( . ) operator. Forms of operators (Unary, Binary, Ternary), types of operators (Arithmetic, Relational, Logical, Assignment, Increment, Decrement, Short hand operators), Discuss precedence and associativity of operators, prefix and postfix, Creation of dynamic memory by using new operator, invoking members of class using dot operator, Introduce System.out.println() and System.out.print() for simple output. (Bitwise and shift operators are not included). | | | **Chapter-6: Mathematical Library**<br>Methods Introduction to package java.lang [ default ], methods of Math class. pow(x,y), sqrt(x), cbrt(x), ceil(x), floor(x), round (x), abs(a), max(a, b), min(a,b), random( ). Java expressions – using all the operators and methods of Math class. | |
| | | **Chapter-5: Input in Java**<br><br>Initialization, Parameter, introduction to packages, Input streams (Scanner Class), types of errors, types of comments Initialization – Data before execution, Parameters – at the time of execution, input stream – data entry during execution – using methods of Scanner class [nextShort(), nextInt( ), nextLong( ), nextFloat ( ), nextDouble( ), next( ), nextLine( ), next ( ).charAt(0)] Discuss different types of errors occurring during execution and compilation of the program (syntax errors, runtime errors and logical errors).Single line comment (//) and multiline comment (/* … */ ) | | | **Chapter-7: Conditional constructs in Java**<br>Application of if, if else, if else if ladder, switch-case, default, break. if, if else, if else if, Nested if, switch case, break statement, fall through condition in switch case, Menu driven programs, System.exit(0) - to terminate the program. | |

| | | | | | **Chapter-8. Iterative constructs in Java**<br>Definition, Types of looping statements, entry<br>controlled loops [ for, while], exit controlled loop<br>[do while] , variations in looping statements, and<br>Jump statements.<br>Syntax of entry and exit controlled loops, break and<br>continue, Simple programs illustrating all three<br>loops, inter conversion from for – while – do while finite and infinite, delay, multiple counter variables (initializations and updations). Demonstrate break and continue statements with the help of loops.<br>Loops are fundamental to computation and their need should be shown by examples. | |
|---|---|---|---|---|---|---|

| | | | | | **Chapter-9. Nested for loops** Introduce nested loops through some simple examples. Demonstrate break and continue statements with the help of nested loops. Programs based on nested loops [ rectangular, triangular [right angled triangle only] patterns], series involving single variable. (Nested while and nested do while are not included.) **Chapter- 10. Computing and Ethics** Ethical Issues in Computing. Intellectual property rights; protection of individual's right to privacy; data protection on the internet; protection against Spam; software piracy, cybercrime, hacking, protection against malicious intent and malicious code. The stress should be on good etiquette and ethical practices. | |

| Subject | UT-I | Half yearly Exam | | UT-II | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| Value Education | N A | Ch-1 Respect our creator and his creation<br>Ch-2 Obedience to authority<br>Ch-3 The women freedom fighters of our country<br>Ch-4 The preamble to our constitution<br>Ch-5 Tribute to our armed forces<br>Ch-6 Atitude | N A | N A | Ch- 7 Emotional maturity<br>Ch- 8 Self esteem<br>Ch- 9 Self confidence<br>Ch- 10 Self motivation<br>Ch- 11 Child rights<br>Ch- 12 Gratitude for everyone | N A |

| Subject | UT-I | Half yearly Exam | | UT-II | Annual Exam | |
|---|---|---|---|---|---|---|
| | | | Project | | | Project |
| SUPW | N A | **Main Crafts/Services**<br>Growing Medical Plants<br>**Subsidiary Crafts/Services**<br>First aid boxes<br>**Other Class Assessment**<br>Birthday Card<br>Welcome and thank you Card<br>Rangoli Design (on paper)<br>Jewellery making<br>Mosaic art | **SUPW (Allied Subject Craft)**<br>Art - Weaving;<br>Block Printing | N A | **Main Crafts/Services**<br>Paramedical service<br><br>**Subsidary Crafts/Services**<br>Construction of wastepaper baskets<br><br>**Other Class Assessment**<br>Best out of Waste<br>Paper Lanterns<br>Clay Diya decoration<br>Key holder board | **SUPW (Allied Subject Craft)**<br>Music - Indian -Vocal, Instumental<br>Western - Piano or other instruments |

The journey of a lifetime begins in the classroom, where dreams turn into plans and plans turn into reality.