

SYLLABUS (2022-23)**STD. XI SCIENCE**

Important Note : Our School follows CBSE Curriculum and guidelines. In case CBSE introduces any change in the syllabus of All India Senior School Certificate Examination (AISSCE), then it will be intimated accordingly.

SUBJECT – ENGLISH CORE (CODE-301)

| MONTH | CHAPTER NO. & NAME |
|------------------|---|
| June | Hornbill Ch -1: Portrait of a Lady |
| July | Hornbill Ch -1: Portrait of a Lady (Contd.) Poem - Photograph Hornbill Ch -2: We are not afraid to die..... Writing – Notices Grammar – Determiners |
| August | Hornbill Ch -3 : Discovering Tut Poem – Laburnum Top Snapshots Ch -1 : Summer of The Beautiful White Horse Snapshots Ch -2 : The Address Grammar – Tenses Writing - Advertisements, Letter Reading – Unseen Passage, Note making |
| September | REVISION |
| October | Hornbill Ch -4 : Landscape of The Soul Ch -5 : Ailing Planet Poem – Voice of The Rain Snapshots Ch -3 : Ranga’s Marriage Writing – Article Writing, Report Writing |
| November | Hornbill Ch - 6 : Browning Version Poem – Childhood Snapshots Ch - 4 : Albert Einstein At School Ch -5 : Mother’s Day Grammar – Re-arranging of sentences Writing – Speech Writing |
| December | Poem – Voice of The Rain Writing – Posters Reading – Unseen Passage, Note-Making |
| January | Hornbill Ch -8 : Silk Road Snapshots Ch -7 : Birth Grammar – REVISION Writing –REVISION |

SUBJECT - PHYSICS THEORY (CODE-042)

| MONTH | CHAPTER NO. & NAME |
|------------------|---|
| June | Ch-1: Physical World |
| July | Ch-2: Units and Measurements Ch-3: Motion in a Straight Line Ch-4: Motion in a Plane |
| August | Ch-5: Laws of Motion Ch-6: Work energy and Power Ch-8: Gravitation |
| September | REVISION |
| October | Ch-7: System of Particles and Rotational Motion |
| November | Ch-9: Mechanical Properties of Solids Ch-10: Mechanical Properties of Fluids |
| December | Ch-11: Thermal Properties of Matter Ch-12: Thermodynamics Ch-13: Kinetic Theory |
| January | Ch-14: Oscillations Ch-15: Waves REVISION |

SUBJECT - CHEMISTRY THEORY (CODE - 043)

| MONTH | CHAPTER NO.& NAME |
|------------------|---|
| June | Ch-2: Structure of Atom |
| July | Ch-2: Structure of Atom (cont.) Ch-3: Classification of Elements and Periodicity in Properties Ch-4: Chemical Bonding and Molecular Structure Ch – 1 Some basic concept of chemistry |
| August | Ch-5: States of Matter Ch-8: Redox Reactions Ch-7: Equilibrium Ch-11: p Block Elements |
| September | REVISION |
| October | Ch-6: Chemical Thermodynamics Ch-9: Hydrogen |
| November | Ch-12: Organic Chemistry – Some Basic Principles and Techniques Ch-10: s Block Elements |
| December | Ch-13: Hydrocarbons |
| January | REVISION |

SUBJECT – BIOLOGY THEORY (CODE - 044)

| MONTH | CHAPTER NO. & NAME |
|------------------|--|
| June | Ch-1 The Living World |
| July | Ch-2 Biological Classification Ch-3 Plant Kingdom Ch-4 Animal Kingdom |
| August | Ch-5 Morphology in Flowering Plants Ch-7 Structural Organization in Animals Ch-8 Cell-The Unit of Life Ch-9 Bio-molecules |
| September | REVISION |
| October | Ch-10 Cell Cycle and Cell Division Ch-13 Photosynthesis in Higher Plants Ch-14 Respiration in Plants |
| November | Ch-15 Plant - Growth and Development Ch-17 Breathing and Exchange of Gases Ch-18 Body Fluids and Circulation Ch-19 Excretory Products and their Elimination |
| December | Ch-20 Locomotion and Movement Ch-21 Neural Control and Coordination |
| January | Ch-22 Chemical Coordination and Integration REVISION |

SUBJECT - MATHEMATICS THEORY (CODE- 041)

| Month | Chapter No. & Topic |
|------------------|--|
| June | Ch – 1: Sets |
| July | Ch – 1: Sets(CONTINUED) Ch – 2 : Relations & Functions Ch – 9 : Sequence and Series |
| August | Ch – 9 : Sequence and Series(CONTINUED) Ch - 5 : Complex Numbers and Quadratic Equations Ch – 13 : Limits |
| September | REVISION |
| October | Ch – 10 : Straight Lines |
| November | Ch – 7 : Permutations & Combinations Ch – 3 : Trigonometric Functions |
| December | Ch – 13 Derivatives Ch – 16 : Probability Ch – 6 : Linear Inequalities |
| January | Ch – 11 : Conic Sections REVISION |

SUBJECT - PHYSICAL EDUCATION THEORY (CODE - 048)

| MONTH | CHAPTER NO. & NAME |
|------------------|---|
| June | Ch-1 : Changing Trends & Career in Physical Educations |
| July | Ch-2: Olympic Value Education |
| August | Ch-3: Physical Fitness, Wellness & Lifestyle Ch-4: Physical Education & Sports for CWSN Ch-5: Yoga |
| September | REVISION |
| October | Ch-6: Physical Activity & Leadership Training Ch-7: Test, Measurement & Evaluation |
| November | Ch-8: Fundamentals of Anatomy, Physiology& Kinesiology Ch-9: Psychology & Sports |
| December | Ch-10: Training & Doping in Sports |
| January | REVISION Final Examination |

SUBJECT - COMPUTER SCIENCE THEORY (CODE-083)

| MONTH | CHAPTER NO. & NAME |
|------------------|--|
| June | Introduction to Python |
| July | Computational Thinking and Programming – 1 |
| August | Computational Thinking and Programming – 1 (Cont.....) |
| September | REVISION |
| October | Computational Thinking and Programming – 1(Cont.....) |
| November | Computer Systems and Organization |
| December | Society, Law and Ethics |
| January | REVISION |

SUBJECT- INFORMATICS PRACTICES THEORY (065)

| MONTH | CHAPTER NUMBER & NAME |
|------------------|---|
| June | Introduction to Python |
| July | Basics of Python programming, Python interpreter – interactive and script mode, the structure of a program, indentation, identifiers, keywords, constants, variables, types of operators ,precedence of operators ,data types, mutable and immutable data types, statements, expressions, evaluation and comments, input and output statements, data type conversion, debugging. Control Statements: if-else, for loop |
| August | Lists : list operations- creating,initializing,traversingandmanipulatinglists,listmethodsandbuilt-infunctions. Dictionary: concept of key-value pair, creating , initializing, Traversing, updating and deleting elements, dictionary methods and built-in functions. |
| September | REVISION |
| October | Database Concepts: Introduction to database concepts and its need, Database Management System. Relational data model :Concept of domain, tuple, relation, candidate key, primary key, alternate key Advantages of using Structured Query Language, Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL, creating a database using MySQL, Data Types Data Definition: CREATE TABLE Data Query: SELECT,FROM, WHERE .Data Manipulation: INSERT |
| November | Introduction to computer and computing: evolution of computing devices, components of a computer system and their interconnections, Input/output devices. Computer Memory: Units of memory, types of memory – primary and secondary, data deletion , its recovery and related security concerns. Software : purpose and types –system and application software, generic and specific purpose software. |
| December | Artificial Intelligence, Machine Learning, Natural Language Processing, Immersive experience (AR, VR), Robotics, Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, Cloud Computing and Cloud Services (SaaS ,IaaS , PaaS); Grid Computing, Block chain technology. |
| January | REVISION |

SUBJECT – ENGLISH PROJECT ASSESSMENT (CODE - 301)

| MONTH | PROJECT WORK |
|-------|--|
| June | Make a project file on the given topic |

SUBJECT – PHYSICS PRACTICAL (CODE -042)

| MONTH | NAME OF EXPERIMENTS |
|-----------|---|
| June | <ul style="list-style-type: none"> To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Calipers and hence find its volume. |
| July | <ul style="list-style-type: none"> To measure diameter of a given wire and thickness of a given sheet using screw gauge. |
| August | <ul style="list-style-type: none"> To determine radius of curvature of a given spherical surface by a spherometer. To determine the mass of two different objects using a beam balance. To find the weight of a given body using parallelogram law of vectors. |
| September | REVISION |
| October | <ul style="list-style-type: none"> To determine Young's modulus of elasticity of the material of a given wire. To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body. |
| November | <ul style="list-style-type: none"> To determine specific heat capacity of a given solid by method of mixtures. |
| December | <ul style="list-style-type: none"> To study the relationship between the temperature of a hot body and time by plotting a cooling curve. |
| January | REVISION |

SUBJECT – CHEMISTRY PRACTICAL (CODE -043)

| MONTH | NAME OF EXPERIMENTS |
|-----------|---|
| July | <ul style="list-style-type: none"> Titration of Oxalic Acid |
| August | <ul style="list-style-type: none"> Titration of Mohr's Salt Salt Analysis Presence of Anions |
| September | Practical Exam |
| October | <ul style="list-style-type: none"> To prepare the crystals of potash alum from crude sample. |
| November | <ul style="list-style-type: none"> Detection of Various Functional Groups in Organic Compounds <ol style="list-style-type: none"> Alcohols Phenols Aldehydes Ketones Carbonyl Amino |
| December | To prepare the crystals of copper sulphate from the given impure sample |

SUBJECT – BIOLOGY PRACTICAL (CODE - 044)

| MONTH | NAME OF EXPERIMENTS |
|--------------|--|
| July | Microscope studies Transverse Section |
| August | Study and describe a locally available common flowering plant, from any one family: Solanaceae or Liliaceae (Poaceae, Asteraceae or Brassicaceae can be substituted in case of particular geographical location) including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams). Study of osmosis by Potato osmometer |
| September | .REVISION |
| October | Separation of plant pigments through paper chromatography. Study of distribution of stomata in the upper and lower surfaces of leaves |
| November | Study of the rate of respiration in flower buds/leaf tissue and germinating seeds. |
| December | REVISION |

SUBJECT – MATHEMATICS PROJECT ASSESSMENT (CODE -041)

| MONTH | NAME OF ACTIVITY |
|------------------|--|
| July | 1. To find the values of sine and cosine functions in second, third and fourth quadrants using their given values in first quadrant |
| August | 2. To interpret geometrically the meaning of $i = -1$ and its integral power 3. To verify that the graph of a given inequality, say $5x + 4y - 40 < 0$, of the form $ax + by + c < 0$, $a, b > 0$, $c < 0$ represents only one of the two half planes 4. To find the number of ways in which three cards can be selected from given five cards |
| September | REVISION |
| October | 5. To construct a Pascal's Triangle and to write binomial expansion for a given positive integral exponent |
| November | 6. An alternative approach to obtain formula for the sum of squares of first n natural numbers. 7. To demonstrate that the Arithmetic mean of two different positive numbers is always greater than the Geometric mean. 8. To verify that the equation of a line passing through the point of intersection of two lines $a_1 x + b_1 y + c_1 = 0$ and $a_2 x + b_2 y + c_2 = 0$ is of the form $(a_1 x + b_1 y + c_1) + \lambda (a_2 x + b_2 y + c_2) = 0$ |
| December | REVISION |

SUBJECT – PHYSICAL EDUCATION PRACTICAL (CODE - 048)

| MONTH | NAME OF PRACTICALS |
|------------------|--|
| July | Procedure for Asanas |
| August | Procedure for Asanas Fundamental skills of major game |
| September | REVISIONs |
| October | Fundamental skills of major game |
| November | AAPHER Test Pull-Ups(Boys) Sit-Ups Shuttle Run Standing Long Jump 12 minutes Running |
| December | AAPHER Test Pull-Ups(Boys) Sit-Ups Shuttle Run Standing Long Jump 12 minutes Running |

SUBJECT – COMPUTER SCIENCE PRACTICAL (CODE - 083)

| MONTH | NAME OF PRACTICAL |
|------------------|---|
| July | Python Program: Basic formula based program like area of circle etc. Swap 2 number <ul style="list-style-type: none"> • Find the largest and smallest numbers in a list. • Find the third largest number in a list. • Test for primality. • Find whether a string is a palindrome or not. |
| August | Python Program: Given two integers x and n, compute x^n . <ul style="list-style-type: none"> • Compute the greatest common divisor and the least common multiple of two integers. • Test if a number is equal to the sum of the cubes of its digits. Find the smallest and largest such numbers. |
| September | REVISION |
| October | Python Program: Based on loop, list, tuples and Dictionary |
| November | Python Program: Based on loop, list, tuples and Dictionary |
| December | REVISION |
| January | REVISION |

SUBJECT - INFORMATICS PRACTICES PRACTICAL (CODE - 065)

| MONTH | CHAPTER NUMBER & NAME |
|------------------|---|
| June | Introduction to Python |
| July | 1. To find average and grade for given marks. 2. To find the sale price of an item with a given cost and discount (%). 3. To calculate perimeter/circumference and area of shapes such as triangle, rectangle, square and circle. 4. To calculate Simple and Compound interest. 5. To calculate profit-loss for a given Cost and Sell Price. 6. To calculate EMI for Amount, Period and Interest. 7. To calculate tax - GST / Income Tax. |
| August | 8. To find the largest and smallest numbers in a list. 9. To find the third largest/smallest number in a list. 10. To find the sum of squares of the first 100 natural numbers. 11. To print the first 'n' multiples of a given number. 12. To count the number of vowels in a user entered string. 13. To print the words starting with a particular alphabet in a user entered string. 14. To print the number of occurrences of a given alphabet in a given string. 15. Create a dictionary to store names of states and their capitals. 16. Create a dictionary of students to store names and marks obtained in 5 subjects. 17. To print the highest and lowest values in the dictionary. |
| September | Revision |
| October | 1. To create a database 2. To create a student table with the student id, class, section, gender, name, dob, and marks as attributes where the student id is the primary key. 3. To insert the details of at least 10 students in the above table. 4. To delete the details of a particular student in the above table. 5. To increase marks by 5% for those students who have Rno more than 20. 6. To display the entire content of the table. 7. To display Rno, Name and Marks of those students who are scoring marks more than 50. 8. To find the average of marks from the student table. 9. To find the number of students, who are from section 'A'. 10. To add a new column email in the above table with appropriate data type. 11. To add the email ids of each student in the previously created email column. 12. To display the information of all the students, whose name starts with 'AN' (Examples: ANAND, ANGAD,..) 13. To display Rno, Name, DOB of those students who are born between '2005- 01-01' and '2005-12-31'. 14. To display Rno, Name, DOB, Marks, Email of those male students in ascending order of their names. 15. To display Rno, Gender, Name, DOB, Marks, Email in descending order of their marks. 16. To display the unique section available in the table. |
| November | Revision |
| December | Revision |
| January | Revision |