

ST. XAVIER'S SCHOOL, DORANDA

SYLLABUS - 2022-23

CLASS X

ENGLISH LITERATURE

| MONTH | CHAPTERS |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APRIL | <ul style="list-style-type: none">➤ The Little Match Girl(Prose)➤ I Know Why the Caged bird Sings (Poem)➤ MOV – Act 3 Sc ii |
| MAY | <ul style="list-style-type: none">➤ The Blue Bead (Prose)➤ Abou Ben Adhem (Poem)➤ MOV – Act 3 Sc ii (Cont) |
| JULY | <ul style="list-style-type: none">● MOV – Act 3 Sc iii, iv & v● REVISION➤ 1ST SELECTION |
| AUGUST | <ul style="list-style-type: none">➤ The Patriot (Poem)➤ My Greatest Olympic Prize (Prose)➤ MOV – Act 4 Sc i |
| SEPTEMBER | <ul style="list-style-type: none">➤ All Summer in a Day (Prose)➤ MOV – Act 4 Sc i |
| OCTOBER | <ul style="list-style-type: none">➤ MOV –Act 4 Sc i & ii➤ All Summer in a Day (Prose) |
| NOVEMBER | <ul style="list-style-type: none">➤ Nine Gold Medals (Poem)➤ MOV – Act 5 |
| DECEMBER | <ul style="list-style-type: none">➤ MOV – Act 5➤ REVISION➤ 1ST SELECTION |
| JANUARY | <ul style="list-style-type: none">➤ 1ST SELECTION |

➤ **Project Work (English Literature) -**

‘The conflict between Shylock the Jewish money lender and Antonio the Christian merchant is both religious and economic. Dwell on their enmity; explore the ways in which Shakespeare portrays the two characters to show their differences and similarities.’

➤ **Portion for 1st Selection (July)** – Complete portion taught in std 9 and all that is covered in std 10 first term

➤ **Portion for 2nd Selection (Dec)** – Complete ICSE Board syllabus.

➤ **Project work (English Language) –**

Use these Correlative Conjunctions - Either... or, neither ... nor, though... yet, not only... but also, no sooner... than, scarcely/Hardly/Barely...when, rather... than, such...that, such... as, so....that, the same...as - in sentences (8 of each)

Date of Submission of Project – 8th July 2022

ENGLISH (01) Aims: 1. To develop and integrate the use of the four language skills i.e. listening, speaking, reading and writing for the purpose of effective communication. 2. To develop a functional understanding of the grammar, structure and idiom of the language. 3. To develop the capacity to read efficiently and access information effectively. 4. To develop an appreciation of good literature. 5. To experience, through literature, the thoughts and feelings of the peoples of the world. There will be two papers: Paper 1: English Language; Paper 2: Literature in English. Each of these papers will be of two hours duration. Paper 1: English Language (80 Marks) Internal Assessment (20 Marks) Paper 2: Literature in English (80 Marks) Internal Assessment (20 Marks) PAPER 1 - ENGLISH LANGUAGE (Two hours) - 80 Marks Five questions will be set, all of which will be compulsory. Question 1: Candidates will be required to write a composition of about 300– 350 words from a choice of subjects which will test their ability to: organise, describe, narrate, report, explain, persuade or argue, present ideas coherently with accuracy and precision, compare and contrast ideas and arrive at conclusions, present relevant arguments and use correct style and format. The subjects will be varied and may be suggested by language or by other stimuli such as pictures. The subjects will be so chosen so as to allow the candidates to draw on first-hand experience or to stimulate their imagination. With one subject, a number of suggestions about the content of the composition will be given, but the use of the suggestions will be optional and a candidate will be free to treat the subject in any way that he/she chooses. The organisation of subject matter, syntax, punctuation, correctness of grammatical constructions and spelling will be expected to be appropriate to the mode of treatment required by the subject. Question 2: Candidates will have to write a letter from a choice of two subjects requiring either a formal or an informal mode of treatment. Suggestions regarding the content of the letter may be given. The layout of the letter with address, introduction, conclusion, etc., will form part of the assessment. Special attention must be paid to the format of the letter with emphasis on vocabulary appropriate to the context. Question 3: Candidates will be given a specific situation and will be required to: (a) Write the text for a notice based on given directions. (b) Write an e-mail on the same content as the notice. Question 4: An unseen prose passage of about 450 words will be given. Uncommon items of vocabulary, or structure will be avoided. One question will be set to test vocabulary. Candidates will be required to show an understanding of the words/phrases in the context in which they have been used. A number of questions requiring short answers will also be asked on the passage. These questions will test the candidates' ability to comprehend the explicit content and organisation of the passage and to infer information, intention and attitude from it. The last question will consist of a summary that will test the

candidates' ability to distinguish main ideas from supporting details and to extract salient points to re-write them in the form of a summary. Candidates will be given clear indications of what they are to summarise and of the length of the summary. Question 5: There will be a number of short answer questions to test the candidates' knowledge of functional grammar, structure and use of the language. All the items in this question will be compulsory. They will consist of correct use of prepositions, verbs and transformation of sentences.

GEOGRAPHY

APRIL + MAY

1. The Climate of India – Distribution of Temperature, rainfall, winds in summer and winter and Factors affecting the climate of the area.
Monsoon and its mechanism.
Seasons – Summer, Monsoon, Retreating and Winter.
2. Soils of India
Types of soil – Alluvial, Black, Red and Laterite
Distribution, Composition and Characteristics such as colour, texture, minerals and crops associated.
Soil Erosion- causes, prevention and conservation.

JULY

3. Natural Vegetation of India
Importance of Forests
Types of vegetation – tropical evergreen, tropical deciduous, tropical desert, littoral and mountain.
Distribution and correlation with their environment
Forest conservation.

AUGUST

4. Water Resources
Sources – Surface and ground water
Need for conservation and conservation practices – Rain water harvesting and its importance.
Irrigation- importance and methods.

AUGUST +SEPTEMBER

5. Map Study: Interpretation of Topographical Maps

OCTOBER

6. Minerals and Energy Resources
Iron ore, manganese, copper, bauxite – Uses and their distribution
Conventional Sources: Coal, Petroleum, Natural gas (distribution, advantages and disadvantages)
Hydel power: Bhakra Nangal and Hirakud Dam.
Non- Conventional Sources: Solar, wind, tidal, geo-thermal, nuclear and bio- gas (generation and advantages).
7. Mineral based industries
Iron and Steel (TISCO, Bhilai, Rourkela, Vishakhapatnam), Petro Chemical and Electronics.

NOVEMBER

8. Agriculture in India
Indian Agriculture- Importance, problems and reforms.
Types of farming in India – subsistence and commercial: shifting, intensive, extensive, plantation and mixed.
Agricultural seasons – rabi, kharif, zayad
Climatic conditions, soil requirements, methods of cultivation, processing and distribution of:
Rice, wheat, millets and pulses
Sugarcane, oilseeds (groundnut, mustard, soyabean)
Cotton, jute, tea and coffee
9. Agro based industries
Importance and classification
Sugar, Textile (Cotton and Silk)

DECEMBER

10. Transport
Importance and Modes – roadways, railways, airways and waterways – Advantages and Disadvantages
11. Waste Management
Impact of waste accumulation – spoilage of landscape, pollution, health hazards, effect on terrestrial, aquatic (fresh and marine) life.
Need for waste management
Methods of safe disposal- segregation, dumping and composting.
Need and methods of reducing, reusing and recycling waste.
12. Map Work:
Location and Relief features of India
Climate
Soil
Distribution of Minerals,
Cities and Population

PROJECT: Types of Industries in Jharkhand

HISTORY & CIVICS

| | |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------|
| APRIL | <ul style="list-style-type: none">➤ The Foundation of Delhi Sultanate➤ The Constitution of India |
| MAY | <ul style="list-style-type: none">➤ The Tughlaqs, Sayyids and Lodis➤ UNIT TEST |
| JULY | <ul style="list-style-type: none">➤ India under Delhi Sultanate |
| AUGUST | <ul style="list-style-type: none">➤ Beginning of Mughal Rule in India➤ Fundamental Rights & Duties |
| SEPTEMBER | <ul style="list-style-type: none">➤ Revision➤ FIRST TERM EXAM |
| OCTOBER | <ul style="list-style-type: none">➤ Akbar the Great: A case study |
| NOVEMBER | <ul style="list-style-type: none">➤ The Later Mughals➤ Directive principles of State Policy |
| DECEMBER | <ul style="list-style-type: none">➤ Making of Composite Culture – Bhakti and Sufi Movement➤ UNIT TEST |
| JANUARY | <ul style="list-style-type: none">➤ Revision |
| FEBRUARY | <ul style="list-style-type: none">➤ FINAL EXAM |

Project Work –

“Policies of Akbar”

- Friendship with Rajputs
- Mansabdari System
- Revenue System
- Religious Policy

Portion for 1st Unit Test - The foundation of Delhi Sultanate, The Constitution of India

Portion for 1st Term Exam – All the chapters taught in the First Term

Portion for 2nd Unit Test - Akbar the Great: A case study

Portion for Final Exam - The Tughlaqs, Sayyids and Lodis, The Constitution of India and all the chapters taught in the Final Term.

Date of Submission of Project – 8th July 2022.

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MATHEMATICS

1st Unit Test

1. Braking
2. Linear Inequation
3. Quadratic equation - i) Factor Method ii) Formula Method
4. Quadratic equation word Problem
5. Remainder and Factor theorem.

1st Selection Test:

1. Banking
2. Linear inequation
3. Quadratic equation – i) Factor method ii) Formula method
4. Quadratic equation Word Problem.
5. Remainder and Factor thermo
6. GST [Goods and service tax]
7. Share and Dividend
8. Ratio and Proportion
9. Matrices
10. A.P. [Arithmetic Progression]

2nd Unit Test:

1. Co-ordinate Geometry [Complete – including Refection]
2. G.P.
3. Trigonometry - i) Identity ii) Height and Distance
4. Circle [Geometry]

2nd Selection:

1. Section and Mid – Point [Revision of distance formula]
2. Equation of Line
3. Reflection
4. G.P.
5. Trigonometry [Complete]
6. Circle [Complete]
7. Similarity
8. Locus
9. Construction [Circles]
10. Satiation - i) Mean ii) Median iii) Mode.
11. Probability
12. Mensuration – Cylinder, cone and Sphere.

13. All the topics of 1st Selection is also included in the second selection.

APRIL - i) Banking ii) Linear Inequation iii) Quadratic equation including word problem.

May - i) Remainder and factor theorem. ii) G.S.T. iii) Shares & dividend
iv) Ratio and Proportion.

June - i) Matrices ii) A.P.

July - i) Co-ordinate Geometry

August - i) G.P. ii) Trigonometry

September - i) Circle ii) Similarity iii) Locus iv) Construction.

October - i) Mean, Median , Mode ii) Probability

November - i) Mensuration and Revision

December - Revision and Practice Test papers

Topic for Project work: Shares and Dividend

BIOLOGY

| 1ST SELECTION | 2ND SELECTION |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. CELL-THE STRUCTURAL AND FUNCTIONAL UNIT OF LIFE 2. STRUCTURE OF CHROMOSOMES, CELL CYCLE AND CELL DIVISION 3. GENETICS – SOME BASIC FUNDAMENTALS 4. ABSORPTION BY ROOTS | 1. CELL 2. STRUCTURE OF CHROMOSOME, CELL CYCLE AND CELL DIVISION 3. GENETICS 4. ABSORPTION BY PLANTS 5. TRANSPIRATION 6. PHOTOSYNTHESIS 7. CHEMICAL COORDINATION BY PLANTS 8. THE CIRCULATORY SYSTEM 9. THE EXCRETORY SYSTEM 10. NERVOUS SYSTEM 11. SENSE ORGANS 12. THE ENDOCRINE SYSTEM 13. THE REPRODUCTIVE SYSTEM 14. HUMAN EVOLUTION 15. POPULATION- THE INCREASING NUMBERS AND RISING PROBLEMS 16. POLLUTION |

1ST SELECTION PORTION

APRIL – MAY

1. CELL-THE STRUCTURAL AND FUNCTIONAL UNIT OF LIFE (Revision)

2. STRUCTURE OF CHROMOSOMES, CELL CYCLE AND CELL DIVISION

- What are Chromosomes
- Molecular Structure of DNA
- Structure of Chromosomes
- What are Genes
- Need for New Cells
- Cell Cycle
- Cell Division
- Mitosis (Karyokinesis and Cytokinesis)
- Differences in Mitosis in Plant and Animal Cells
- Significance of Mitosis
- Meiosis
- Significance of Meiosis

3 .GENETICS – SOME BASIC FUNDAMENTALS

- Heredity and Variations
- Chromosomes- The Carriers of Heredity
- The two Main Categories of Chromosomes- Autosomes and Sex Chromosomes
- Sex Determination- Son or Daughter
- Chromosomes- Carriers of Genes
- Genes and their Alleles - Dominant and Recessive Alleles
- Genotype and Phenotype
- Sex Linked Inheritance- X linked Inheritance
- Mendel's Experiments on Inheritance
- Mendel's Laws of Inheritance
 - Law of Dominance
 - Law of Segregation
 - Law of Independent Assortment
- Mutation

4 . ABSORPTION BY ROOTS

- Absorption by the Roots
- Need of water and Minerals for Plants
- Characteristics of Roots for Absorbing Water
- Absorption and conduction of Water and Minerals
 - Imbibition, Diffusion, Osmosis and Osmotic Pressure
 - Active Transport
 - Turgidity and Flaccidity
- Uses of Turgidity to Plants
- Root Pressure
- Importance of Root Hair and the Upward Movement of Absorbed Water and Minerals
- Some Experiments on Absorption and Conduction of Water in Plants
- Forces Contributing to Ascent of Sap

1ST SELECTION (4TH JULY 2022)

1. CELL-THE STRUCTURAL AND FUNCTIONAL UNIT OF LIFE
2. STRUCTURE OF CHROMOSOMES, CELL CYCLE AND CELL DIVISION
3. GENETICS – SOME BASIC FUNDAMENTALS
- 4 . ABSORPTION BY ROOTS

2ND SELECTION PORTION

JULY - AUGUST

5. Transpiration

- Transpiration
- Demonstration of Transpiration
- Measurement of Transpiration
- Kinds of Transpiration Stomatal, Cuticular, Lenticular Transpiration
- Mechanism of Stomatal Transpiration
- • Factors that Affect Transpiration- External and Internal Factors
- Adaptations in Plants to Reduce Excessive Transpiration
- Significance of Transpiration
- Guttation and Bleeding

6. Photosynthesis

- What is Photosynthesis?
- Chlorophyll- The Vital Plant Pigment
- Regulation of Stomatal Opening for Letting in Carbon Dioxide
- Opening and Closing of Stomata
- Potassium ion Concentration Theory
- Sugar Concentration Theory
- Process of Photosynthesis
- Two Main Phases of Photosynthesis - Light Dependent Phase and Light Independent Phase
- Adaptations in Leaf To Perform Photosynthesis
- End Result of the Products of Photosynthesis
- Factors Affecting Photosynthesis- External and Internal Factors
- Experiments on Photosynthesis
- Carbon Cycle

7. Chemical Coordination in Plants

- What are Plant Hormones?
- Auxins, Gibberellins, Cytokinins, Ethylene and Abscisic Acid
- Tropic Movements in Plants
- Phototropism, Geotropism, Hydrotropism, Thigmotropism, Chemotropism

SEPTEMBER

8. The Circulatory System

- Need for transport inside the body
- Fluids in our body
- Properties and Composition of Blood
- Blood transfusions and Blood groups (ABO and Rh systems)
- Structure of the Heart – Chambers, Blood vessels entering and leaving the heart, Valves

- Circulation of blood in the heart
- Heart beat and Heart sounds
- Pacemaker
- The Blood Vessels- Arteries, Veins and Capillaries (structure and function)
- Hepatic Portal System
- The Pulse
 - Blood Pressure
 - Lymph and Lymphatic System
 - The Spleen- Functions of the Spleen

OCTOBER

9. The Excretory System

- Substances to be eliminated
- The Excretory Organs
- Internal structure of the kidney
- Structure of a kidney tubule
- Blood supply to the kidney tubules
- Urine formation – Ultra-filtration, Selective Re-absorption, Tubular Secretion
- Properties of urine
 - Regulation of Urine output
 - Osmo-regulation
 - Artificial Kidney

10. Nervous System

- Need of nervous system
- Structure of neuron
- Transmission of nerve impulse
- Synapse
- Types of neurons
- Nerves
- Two major divisions of nervous system
- The brain
- The spinal cord
- Peripheral nervous system
- Reflexes
- Types of reflexes
- Reflex arc

11. Sense Organs

- **The Eyes**

- Structure of the Eyeball
- Image formation, Accommodation, light and dark adaptation
- Common defects of the eye
- Myopia, Hyperopia, Astigmatism, Presbyopia, Cataract, Night Blindness, Colour Blindness, Corneal opacities
- Stereoscopic Vision and after images

➤ **The Ear**

- Structure of the ear
- Functions of the Ear – Hearing and Balancing

NOVEMBER

12. The Endocrine System

- Need for The Regulation of Body Activities
- General Properties of Hormones
- Endocrine Glands
- Adrenal Glands (Conditions due to Hyposecretion and Hypersecretion of the hormones from Adrenal Cortex and Adrenal Medulla)
- Pancreas (Conditions due to Hyposecretion and Hypersecretion of Insulin)
- Thyroid (Conditions due to Hyposecretion and Hypersecretion of the Thyroxin)
- Pituitary Gland (Conditions due to Hyposecretion and Hypersecretion of hormones)
- Control of hormonal secretions/ Feedback mechanism

13.The Reproductive System

- Reproduction in Humans
- Male Reproductive System – Structure and function of each part
- Female Reproductive System – Structure and function of each part
- Role of Hormones in Reproduction
- Menstrual Cycle
- Fertilisation
- Implantation and Pregnancy
- Amnion and Amniotic Fluid
- Placenta and its function
- Parturition
- Twins- Fraternal and Identical

14. Human Evolution

- What is Evolution?
- Theories of Evolution
- Lamarck's theory of inheritance of acquired characters
- Vestigial organs

- Darwin's Theory of Natural Selection
- Human Evolution
- Human ancestors
- *Homo sapiens sapiens*

DECEMBER

15. Population- The Increasing Numbers and Rising Problems

- Rising Population- A Global Threat
- Population Explosion- A Serious Global Concern
- Factors Responsible For Population Explosion in India
- A few Statistical Terms
- Need for adopting Control Measures
- Population Education and Population Control

16. Pollution

- Types of wastes

Air pollution (causes and control)

Water pollution (causes and control)

Soil pollution (causes and control)

Radiation (causes and control)

Noise pollution (causes and control)

Plastic pollution (causes and control)

Effect of various types of pollution

Control of pollution

Swachh Bharat Abhiyan

2ND SELECTION (15TH DECEMBER 2022)

1. CELL
2. STRUCTURE OF CHROMOSOME, CELL CYCLE AND CELL DIVISION
3. GENETICS
4. ABSORPTION BY PLANTS
5. TRANSPIRATION
6. PHOTOSYNTHESIS
7. CHEMICAL COORDINATION BY PLANTS
8. THE CIRCULATORY SYSTEM
9. THE EXCRETORY SYSTEM
10. NERVOUS SYSTEM
11. SENSE ORGANS
12. THE ENDOCRINE SYSTEM
13. THE REPRODUCTIVE SYSTEM
14. HUMAN EVOLUTION
15. POPULATION- THE INCREASING NUMBERS AND RISING PROBLEMS
16. POLLUTION

PHYSICS

First selection

1. Force:- Moment of force and equilibrium, centre of gravity, uniform circular motion
2. Work, Power and energy:-work, power and energy, its measurement, units and relations, Different forms of energy, Conservation of Energy and Numericals
3. Machine:-Technical terms and lever, Pulley
4. Refraction of light at plane surfaces:- Refraction, laws of refraction and refractive index, Refraction of light through a prism, simple application of refraction of light, critical angle and total internal reflection
5. Refraction through a Lens:- lens and refraction of light through a lens, formation of image by a lens, sign convention and lens formula. magnifying glass and application of lenses
6. Spectrum:-deviation, dispersion and spectrum, Electromagnetic and its broad classification, scattering light and its application.

First unit test

1. Force:- Moment of force and equilibrium, centre of gravity, uniform circular motion
2. Work, Power and energy:-work, power and energy, its measurement, units and relations, Different forms of energy, Conservation of Energy and Numericals
3. Machine:-Technical terms and lever, Pulley

Second selection

7. Calorimetry:-Heat capacity, Specific heat capacity and its measurement, change of phase (state) and latent heat, Numericals
8. Current Electricity:-concept of charge, current potential, potential difference and resistance; OHM'S law, Electro-motive force, Terminal voltage and internal resistance of a cell; combination of resistors, Electrical energy and power
9. House hold Circuit:-Transmission of power and house wiring, some essential components of house wiring system.
10. Electromagnetism:-Magnetic effect of electric current, force on a current carrying conductor in a magnetic field and its application in D.C. motor, electroimagnetic induction and its applications to A.C. generator and transformer.
11. Radioactivity:-Atomic structure and Radioactivity, Nuclear fission and fusion
12. Sound:-Reflection of sound waves and Echoes, Natural, Damped and forced vibrations; Resonance Characteristics of sound .

Second unit test:-

1. Calorimetry:-Heat capacity,Specific heat capacity and its measurement, change of phase (state) and latent heat,Numericals
- 2.Current Electricity:-concept of charge, current potential, potential difference and resistance; OHM'S law,Electro-motive force,Terminal voltage and internal resistance of a cell; combination of resistors,Electrical energy and power
- 3.House hold Circuit:-Transmission of power and house wiring, some essential components of house wiring system.

All the portion of first term and second term.

Monthwise breakup

April

- 1.Force:- Moment of force and equilibrium, centre of gravity, uniform circular motion
2. Work, Power and energy:-work, power and energy, its measurement, units and relations, Different forms of energy,Conservation of Energy and Numericals

May +June

- 3.Machine:-Technical terms and lever, Pulley
- 4.Refraction of light at plane surfaces:- Refraction ,laws of refraction and refractive index, Refraction of light through a prism, simple application of refraction o light, critical angle and total internal reflection
5. Refraction through a Lens:- lens and refraction of light through a lens ,formation of image by a lens,sign convention and lens formula. magnifying glass and application of lenses
- 6.Spectrum:-deviation ,dispersion and spectrum, Electromagnetic and its broad classification, scattering light and its application

July

7. Calorimetry:-Heat capacity, Specific heat capacity and its measurement,change of phase (state) and latent heat, Numericals

August

- 8.Current Electricity:-concept of charge, current potential, potential difference and resistance; OHM'S law, Electro-motive force, Terminal voltage and internal resistance of a cell; combination of resistors, Electrical energy and power
- 9.House hold Circuit:-Transmission of power and house wiring, some essential components of house wiring system.

September

9. House hold Circuit:-Transmission of power and house wiring,some essential components of house wiring system.

October

10. Electromagnetism:-Magnetic effect of electric current, force on a current carrying conductor in a magnetic field and its application in D.C.motor, electromagnetic induction and its applications to A.C.generator and transformer.

November

11. Radioactivity:-Atomic structure and Radioactivity, Nuclear fission and fusion

12. Sound:-Reflection of sound waves and Echoes, Natural, Damped and forced vibrations; Resonance Characteristics of sound

December

Revision

January

Revision

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CHEMISTRY

FIRST SELECTION: Periodic properties and variations of properties

Chemical bonding

Study of acids, bases and salts

Analytical chemistry

Mole concept and stoichiometry

Unit test 1: **Periodic properties and variations of properties**

Chemical bonding

SECOND SELECTION: All chapters done in class 10

MONTH-WISE BREAKUP:

April: Study of acids, bases and salts

May: Analytical chemistry

Mole concept

July: Stoichiometry

August: Electrolysis

Metallurgy

September: Study of Compounds-Hydrogen chloride

Ammonia

October: Study of compounds-Nitric acid

Sulphuric acid

November: Organic chemistry

December: Study of the first element-Hydrogen

January: Atomic structure and chemical bonding

Revision

Computer Applications

Syllabus for Class X(2022 - 2023)

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|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APRIL-MAY | 1. Revision of Topics taught in class IX (i) Introduction to Object Oriented Programming concepts, (ii) Elementary Concept of Objects and Classes, (iii) Values and Data types, (iv) Operators in Java, (v) Input in Java, (vi) Mathematical Library Methods, (vii) Conditional constructs in Java, (viii) Iterative constructs in Java, (ix) Nested for loops. |
| MAY-JUNE | 2.Functions Need of functions. Types of functions (pure and impure). Function declaration and definition, ways of calling functions (call by value and call by reference)Returning information/messages from the functionsand use of multiple functions and more than one function with the same name (function overloading).. |
| JULY- AUGUST | 3. Using Library Classes Simple input/output. String, packages and import statements.libraries and illustrating their use. The following functions have to be covered String library functions: Char charAt(unti),intcompareTo(String1, String2)String concat(String str) booleanendsWith(String str)boolean equals(String str)booleanequalsIgnoreCase(String str)intindexOf(char ch)intlastIndexOf(char ch)int length()String replace (char oldChar,charnewChar)booleanstartsWith(String str)String substring(intbeginIndex, intendIndex)String toLowerCase()String toUpperCase()String trim()String valueOf(all types), toString()Mathematical Library Functions:pow(x,y), log(x), sqrt(x), ceil(x), floor(x), rint(x),abs(a), max(a, b), min(a,b), random(), sin(x), cos(x),tan(x), asin(), acos(), atan(). |
| SEPTEMBER | 4. Class as the Basis of all Computation Objects and ClassesObjects encapsulate state and behaviour æ numerousexamples; member variables; attributes or features.Variables define state; member functions; Operations/methods/ messages/ functions define behaviour.Classes as abstractions for sets of objects; class as anobject factory; concept of type, primitive data types,composite data types. Variable declarations for both types; difference between the two types. Objects as instances of a class. |
| OCTOBER | 5. Class as a User Defined Type Class as a composite type, distinction between primitive type and composite or class types. Class may be considered as a new data type created by the user, that has its own functionality. (The distinction between primitive and composite types should be discussed through examples. Show how classes allow user defined types in programs. All primitive types have corresponding class wrappers. The following methods are to be covered: intparseInt(String s), intValueOf(String s),long parseLong(String s), long valueOf(String s),float parseFloat(String s), float valueOf(String s),double parseDouble(String s), double valueOf(String s), booleanisDigit(char ch),booleanisLetter(char ch),booleanisLetterOrDigit(char ch),booleanisLowerCase(char ch),booleanisUpperCase(char ch),booleanisWhitespace(char ch),char to LowerCase(char ch) to UpperCase(char ch) |

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|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOVEMBER | 6. Constructors Constructor and its types.Default constructor, parameterized constructor, constructor with default parameter and constructor overloading |
| | 7. Encapsulation Access specifiers and scope and visibility Access specifiers æ private and public. Visibility rules for private, package and public access specifiers. Scope of variables, instance variables, argument variables, local variables |
| DECEMBER | 8.Arrays Arrays storing, retrieving and arranging data, Arrays and their uses, sorting algorithms - selectionsort and bubble sort; Search algorithms æ linear search and binary search Example of a compositetype. Array creation. Sorting and searching algorithms should be discussed |
| January onwards | Revision Model Test papers |

Class - 10

HINDI

First Term

First Selection Test

Section A (40 Marks)

भाषा -संस्कृत हिंदी व्याकरण

1. प्रस्तावना
2. चित्र लेखन
3. पत्र लेखन - क) औपचारिक ख) अनौपचारिक
4. भाव ग्रहण
5. व्यावहारिक व्याकरण:-

Section B (40 Marks)

साहित्य

गद्य

1. बात अठनी की
2. काकी
3. महायज्ञ का पुरस्कार
4. नेताजी का चश्मा
5. अपना-अपना भाग्य
6. संदेह

पद्य

1. साखी
2. गिरिधर की कुण्डलियाँ
3. स्वर्ग बना सकते हैं
4. वह जन्मभूमि मेरी
5. भिक्षुक
6. मातृमंदिर की ओर

1st Unit Test – 1 बात अठनी की 2)काकी 3) व्यावहारिक व्याकरण

Project Work – स्वामी विवेकानन्द अथवा महर्षि अरविंद के व्यक्तित्व एवं कार्य

2nd Selection Term

Section A (40 Marks)

भाषा - सरस हिंदी व्याकरण

1. प्रस्तावना
2. चित्र लेखन
3. पत्र लेखन - क) औपचारिक ख) अनौपचारिक
4. भाव - ग्रहण
5. व्यावहारिक व्याकरण:-

Section B (40 Marks)

साहित्य

गद्य

1. बड़े घर की बेंटी
2. भीड़ में खोया आदमी
3. भेड़ें और भेड़िए
4. दो कलाकार

पद्य

1. मेघ आए
2. सूर
3. विनय
4. चलना हमारा काम

(गद्य एवं पद्य का सम्पूर्ण पाठ परीक्षा हेतु)

2nd Unit Test – 1) भीड़ में खोया आदमी 2) दो कलाकार 3) व्यावहारिक व्याकरण
