

# **Syllabus 2020-2021**

## **Class IX**

### **English language**

1. Composition
2. Formal letter and informal letter
3. Notice & Email
4. Comprehension passage.
5. Grammar Part
  - Functional grammar
  - Structure and use of grammar.

## **Syllabus of Class IX**

### **English literature**

<b>First term</b>	<b>Second term</b>	<b>Third term</b>
<b>Poem:</b>	<b>Poem</b>	<b>Poem</b>
The Bangle Sellers	After Blenheim	Daffodils
The Cold Within	Television	
<b>Short Story:</b>	<b>Short Story:</b>	<b>Short Story:</b>
Old Man at the Bridge	Hearts and Hands	An Angel in Disguise
A Horse and two Goats	A Face in the Dark	
<b>Drama:</b>	<b>Drama:</b>	<b>Drama:</b>
Act 1, Scene 1 & 2	Act 1, Scene 3 Act 2, Scenes 1 to 7	Act 2, Scenes 8 & 9 Act 3, Scene 1

# **History and civics Syllabus**

<b>Term I</b>
<b>History</b>
1. The Harappan Civilization
2. The Vedic Period
3. Jainism and Buddhism
4. The Mauryan Empire
<b>Civics</b>
1. Our Constitution
2. The Salient Features of our constitution 1
<b>Term II</b>
<b>History</b>
1. The Sangam Age
2. The Age of the Guptas
3. Medieval India- The Cholas
4. Medieval India- The Delhi Sultanate
<b>Civics</b>
1. The Salient Features of our constitution2
2. Elections
<b>Term III</b>
<b>History</b>
1. Medieval India - Mughal Empire
2. The Modern Age in Europe-Renaissance
3. The Modern Age in Europe- Reformation
4. The Modern Age in Europe- Industrial Revolution
<b>Civics</b>
1. Local Self Government- Rural
2. Local Self Government- Urban

**SUBJECT : BIOLOGY**  
**PUBLISHER : SELINA PUBLICATION**

## **FIRST TERM :**

1 .**CELL THE UNIT OF LIFE** :protoplasm,cytoplasm,cell wall, cell membrane, nucleus, nucleolus, mitochondria, endoplasmic reticulum, ribosome, golgibodies,plastids, lysosomes,centrosome and vacuole.Basic difference between prokaryotic and eukaryotic cell,difference between an animal and a plant cell.

2.**TISSUE** : Types of plant and animal tissues. Location of tissues,basic structure and function with examples. Role of tissues in different physiological process in plants and animals.

3. **FLOWERING PLANTS** : Structure of a bisexual flower,functions of various parts, complete and incomplete flowers,essential and non-essential whole of a bisexual flower and their various parts and functions. Inflorescence and placentation.

4. **POLLINATION** : Self and cross pollination, advantages and disadvantages of self and cross pollination. Agents of pollination, characteristics of flowers pollinated by various agents. How nature favours cross pollination.

5.**FERTILIZATION** : Events taking place between pollination and fertilization leading to the formation of zygote in the embryo sac. Double fertilization and triple fusion. Fruit and seed definition and significance.

## **SECOND TERM**

1. **SEED STRUCTURE AND GERMINATION** : Structure of dicot and monocot seeds, germination of seeds,types, and conditions for seed germination. Structure and germination of Bean seed and maize grain.

Difference between monocot and dicot seeds, difference between hypogeal and epigeal germination.

Conditions for seed germination ( explained by the support of experiments.)

2. **Respiration in plants** : Process of gaseous exchange,glycolysis ,Kreb's cycle and their significance.

Aerobic and anaerobic respiration with the chemical equations each case.

Experiments on gaseous exchange and on heat production.

**3. ECONOMIC IMPORTANCE OF BACTERIA and FUNGI :** Useful role of bacteria in the field of medicine, agriculture industry. Harmful role of bacteria- spoilage of food, disease in plants and animals, bio-weapons.

**ECONOMIC IMPORTANCE OF FUNGI :** Useful role of fungi: Useful role of fungi in breweries, bakeries, cheese processing, and mushroom cultivation.

**4. NUTRITION :** Classes of food, balanced diet, malnutrition and deficiency diseases.

Functions of carbohydrates, fats, proteins, mineral salts, vitamins and water in proper functioning of the body. Source 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.

**5. THE STRUCTURE OF TOOTH :** Types of teeth, structure of tooth (drawing and labeling diagram ), functions of different types of teeth. Dental formula of an adult.

**6. DIGESTIVE SYSTEM:** Organs, digestive glands and their functions, 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. Process of peristalsis.

## **THIRD TERM**

**1. SKELETAL SYSTEM :** Movement and locomotion, functions of human skeleton, Axial and appendicular skeleton. Types of joints with their location.

**2. STRUCTURE AND FUNCTIONS OF SKIN :** various parts of the skin and their functions. Special derivatives of the skin with the reference to sweat glands, sebaceous gland, hair, nails and mammary gland. Heat regulation.

**3. RESPIRATORY SYSTEM:** Organs, mechanism of breathing , tissue respiration, heat production.

Structure of the respiratory system. Differences between anaerobic in plants and in human.

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. Respiratory volumes, Effect of altitude on breathing, asphyxiation and hypoxia.

## Subject-Chemistry

### **1<sup>st</sup> Term**

Chapters:

- 1) The language of chemistry.
- 2) Chemical changes and reaction.
- 3) Atomic structure and Chemical bonding.

### **2<sup>nd</sup> Term :**

Chapters:

- 1) Water :
  - A) Water as a universal solvent.
  - B) Hydrated and anhydrous substance.
  - C) Drying and dehydrating agents.
- 2) The Periodic Table:

### **3<sup>rd</sup> Term:**

- 1) Study of first Element – Hydrogen
- 2) Study of Gas Law's

# **COMPUTER APPLICATIONS**

## **First Term Examination**

1. Introduction to Object Oriented Programming Concepts.
2. Elementary Concept of Objects and classes.
3. Values and Data Types.
4. Operators and Expressions in Java.

## **Second Term Examination**

5. Input in java (Scanner Class).
6. Mathematical Library Methods.
7. Conditional Constructs in Java.
8. Iterative constructs in java.

## **Third Term Examination**

1. Introduction to Object Oriented Programming Concepts.
2. Elementary Concept of Objects and classes.
3. Values and Data Types.
4. Operators and Expressions in Java.
5. Input in java (Scanner Class).
6. Mathematical Library Methods.
7. Conditional Constructs in Java.
8. Iterative constructs in java.

# Subject: physics

## First term

Lesson No.	Name	topics included
1.	MEASUREMENTS AND EXPERIMENTS	<p>i) international system of units, other commonly used system of units –<b>fps</b> and <b>cgs</b></p> <p>ii) Simple pendulum: time period and frequency, graphs of <math>l</math> versus <math>T^2</math>, slope of the graph. Formula and expression for the time period of simple pendulum.</p>
2.	MOTION IN ONE DIMENSION	<p>i) scalar and vector quantities, rest and motion, distance and displacement, speed and velocity, acceleration and retardation (formula along with their SI units)</p> <p>ii) Equations of motion without derivation.</p>
3.	LAWS OF MOTION	<p>i) contact and non contact forces, Newton's all three laws of motion, mass and inertia, kinds of inertia</p> <p>ii) Gravitational force, acceleration due to gravity, relation between <math>G</math> and <math>g</math>, mass and weight and gravitational units of force.</p>

## Second term

4.	PRESSURE IN FLUIDS AND ATMOSPHERIC PRESSURE	<p>i) Thrust and pressure, pressure exerted by a liquid Column, consequences of liquid pressure, Pascal's law</p> <p>ii) Atmospheric pressure and its consequences, variation of atmospheric pressure with altitude, applications such as weather forecasting and altimeter.</p>
5.	FLUIDS	<p>i) buoyancy and upthrust, upthrust's properties, Archimedes' principle, and comparisons of solid's density with that of liquid.</p>

ii) Determination of relative density of a solid and liquid by archimedes' principle. Principle of floatation, relation between volume of submerged part of a floating body , the densities of liquid and the body. application of floatation.

6. HEAT AND ENERGY

i) concept of heat and temperature, anomalous expansion of water, hope's experiment and consequences of anomalous expansion of water.

ii) Greenhouse effect and global warming.

8. SOUND

i) nature of sound wave, and its propagation through a medium. Terms related to sound. Relationship between wavelength, wave velocity and frequency. Factors effecting sound.

ii) Infrasonic, sonic and ultrasonic frequencies, difference between ultrasonic and supersonic.

## THIRD TERM

7. REFLECTION OF LIGHT

i) laws of reflection, and its experimental verification. Image formed in a pairs of mirrors (when two are perpendicular and parallel)

ii) spherical mirrors, image formation by them and their uses.

9. CURRENT ELECTRICTY

i) source of D.C, cells, electric current. Symbols used in circuit diagrams. Circuit diagram, insulators and conductors, closed and open circuit, elementary idea about work done in transferring charge through a wire (potential difference).

10. MAGNETISM

Induced magnetism by a bar magnet, magnetic field lines and its properties, magnetic field of earth, and its plotting of uniform and non uniform field and, neutral points and Magnetic compass .

\* final term exam includes chapters of first and second term as well.



## Subject-Math

### **1<sup>st</sup> Term Portion:**

1. Expansion of powers of Binomials and Trinomials
2. Factorization
3. Linear Equations and changing the subject of a formula
4. Simultaneous Linear Equations
5. Indices/Exponents
6. Pythagoras' Theorem

### **2<sup>nd</sup> Term Portion**

1. Rational and Irrational Numbers
2. Compound Interest
3. Triangles
4. Midpoint Theorem
5. Circle
6. Statistics
7. Mensuration

### **3<sup>rd</sup> Term Portion**

1. Rectilinear Figures
2. Parallelogram
3. Trigonometry
4. Coordinate Geometry

<b>Final Exam Portion- All the chapters of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> terms</b>
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## SUBJECT-HINDI

### I TERM

साहित्य सागर

गद्य साहित्य

1-बातअठन्नीकी –सुदर्शन

2-काकी –सियाराम शरणगुप्त

पद्य साहित्य

1-साखी-कबीरदास

2-गिरिधर की कुंडलियां-गिरिधरकविराय

हिन्दीव्याकरण-संपूर्णपाठ्यक्रम

### II TERM

गद्य साहित्य

3-महायज्ञकापुरस्कार-यशपाल

4-नेताजी काचश्मा-स्वयंप्रकाश

पद्य साहित्य

3-स्वर्ग बनासकतेहै-रामधारी सिंह दिनकर

4-वह जन्मभूमिमेरी-सोहनलालद्विवेदी

हिन्दीव्याकरण-संपूर्णपाठ्यक्रम

### III TERM

गद्य साहित्य –

5-बड़े घर की बेटी-प्रेमचंद

6-भीड़ में खोयाआदमी-लीलाधर शर्मापर्वतीय

पद्य साहित्य –

5-मेघआए –सर्वेश्वरदयालसक्सेना

6-पद –सूरदास

हिन्दीव्याकरणसंपूर्णपाठ्यक्रम

## **Subject-Geography**

### **First Term Syllabus:**

1. Our World
  - a. Geographic grid, latitudes & longitudes
  - b. Rotation and revolutions
2. Structure of the earth
  - a. Earth's Structure
  - b. Rocks
  - c. Volcanoes
  - d. Earthquakes
3. Map Work(World Map)
  - a) The major natural regions of the world
  - b) The ocean, seas, gulfs and straits- all major oceans etc.

### **Second Term Syllabus:**

1. Weathering and denudation
2. Hydrosphere
3. Atmosphere
  - a) Composition and structure of the atmosphere
  - b) Insolation
  - c) Atmospheric pressure and winds
  - d) Humidity
4. Map Work(World Map)
  - a. Rivers of the world
  - b. Mountains of the world

### **Third Term Syllabus:**

1. Pollution
  - a. Types of pollution
  - b. Sources of pollutions
  - c. Effects of pollutions
  - d. Preventive measures of pollutions
2. Natural regions of the world
3. Map work (World Map)
  - a. Plateaus
  - b. Rivers