

**ENGLISH****CLASS 11**

As the regular teaching-learning in schools, during the session 2020-21, has widely been affected due to the COVID-19 pandemic, the subject experts committee, after due consideration, has recommended to reduce the syllabus by 30% in the following manner:-

**Text book****Prose-**

6. The Browning Version
7. The Adventure
8. Silk Road

**Poetry-**

5. Father to Son

**Supplementary Reader**

6. The Ghat of the only World
7. Birth
8. The Tale of Melon City

**In accordance with the above, the remaining 70 percent of the total syllabus is as follows:**

**Class - XI****Syllabus – English**

**There will be a single question paper of 100 marks.**

**Section A – Reading-****12 Marks**

1. One long passage followed by three short-answer questions and two vocabulary questions

**3x3=9(Short Questions)****1.5+1.5=3(vocabulary)****Section B – Writing-****20 Marks**

2. Report writing/Note making and summary 05
3. Essay/Article. 10
4. Letter to the Editor/Business letter/complaint letters 05

**Section C – Grammar-****28 Marks**

5. Ten very short answer type questions on Narration, Synthesis, Transformation, Syntax, Idioms and Phrases/Phrasal verbs, synonyms, Antonyms, one word substitution, Homophones.

**2x10=20**

6. Translation from Hindi to English. 08

**Section D – Literature - 40 Marks**

**Hornbill – Text Book 25 marks**

**Prose-**

7. One long answer type question. 07  
8. Two short answer type questions. 4+4=8

**Poetry-**

9. Three short answer type questions based on a given poetry extract. 2x3=6  
10. Central idea. 04

**Snapshots – Supplementary Reader - 15 marks**

11. One long answer type question. 07  
12. Two short answer type questions. 4+4=8

**PRESCRIBED CONTENT**

**HORNBILL (Text Book)**

**Prose-**

1. The Portrait of a Lady
2. We're Not Afraid to Die.....if We Can All Be Together
3. Discovering Tut: The Saga Continues
4. Landscape of the Soul
5. The Ailing Planet: The Green Movements's Role

**Poetry-**

1. A Photograph
2. The Laburnum Top
3. The Voice of the Rain
4. Childhood

**SNAPSHOTS (Supplementary Reader)**

1. The Summer of the Beautiful White Horse
2. The Address
3. Ranga's Marriage
4. Albert Einstein at school
5. Mother's Day

**NOTE** – No specific book has been recommended for grammar. Students can select any good book suggested by the subject teacher. Questions related to 'Figures of Speech' will be asked in the poetry section. Prescribed figures of speech are simile, metaphor, personification, oxymoron, hyperbole, apostrophe and onomatopoeia.

## Class : 11

### Subject : Mathematics

As the regular teaching – learning in schools, during the session 2020-21, has widely been affected due to the Covid – 19 pandemic, the subject experts committee, after due consideration, has recommended to reduce the syllabus by 30% in the following manner :

#### Almost 30% reduced syllabus :-

##### Unit-I Sets and functions

1. **Sets-** Difference of sets, complement of a set
2. **Relations and functions-** Cartesian product of the set of reals with itself ( $R \times R \times R$ ), Sum, Difference, Product and Quotients of functions.
3. **Trigonometric functions-** General solution of trigonometric equations of the type  
 $\sin y = \sin a$ ,  $\cos y = \cos a$  and  $\tan y = \tan a$  .

##### Unit-II Algebra

1. **Principle of Mathematical Induction-** Process of the proof by induction, motivating the application of the method by looking at natural numbers as the least inductive subset of real numbers. The Principle of mathematical induction and Simple applications.
2. **Complex Numbers and Quadratic Equations -**  
Polar representation of complex numbers.

##### 5. Binomial Theorem-

History, Statement and Proof of the binomial theorem for positive integral indices, Pascal's triangle, General and middle term in binomial expansion, simple applications.

6. **Sequence and Series-** Formulae for the following special sums

$$\sum_{k=1}^n k \qquad \sum_{k=1}^n k^2 \qquad \sum_{k=1}^n k^3$$

### **Unit-III Co-ordinate Geometry**

1. **Straight Lines**- Distance between two parallel lines.

### **Unit- V Mathematical Reasoning-**

1. **Mathematical Reasoning**- Mathematically acceptable statements connecting words/phrases- consolidating the understanding of “ if and only if (necessary and sufficient) condition”. “implies”, “and/or”, “implied by”, “ and”, “or”, “there exists” and their use through variety of examples related to real life and mathematics. Validating the statements involving the connecting words, difference among contradiction converse and contrapositive.

### **Unit- VI Statistics and Probability**

1. **Statistics**- Analysis of frequency distributions with equal means but different variances.

**Class : 11**

**Subject : Mathematics**

**Only Paper**

**Time : 3 hours**

**Marks : 100**

<b>Unit</b>	<b>Name of Unit</b>	<b>Marks</b>
<b>I</b>	<b>Sets and functions</b>	<b>29</b>
<b>II</b>	<b>Algebra</b>	<b>37</b>
<b>III</b>	<b>Co-ordinate Geometry</b>	<b>13</b>
<b>IV</b>	<b>Calculus</b>	<b>09</b>
<b>V</b>	<b>Statistics and Probability</b>	<b>12</b>
	<b>Total</b>	<b>100</b>

## Approximately -70% Syllabus

### Unit-I: Sets and Functions

**29 Marks**

#### *1. Sets*

Sets and their representations, Empty set, Finite and Infinite sets, Equal sets, Subsets, Subsets of a set of real numbers especially intervals (with notations), Power set, Universal set, Venn diagrams, Union and Intersection of sets.

#### *2. Relations & Functions*

Ordered pairs, Cartesian product of sets, Number of elements in the Cartesian product of two finite sets.

Cartesian product of the set of real numbers with itself (upto  $\mathbb{R} \times \mathbb{R}$  only), Definition of relation, pictorial diagrams, domain, co-domain and range of a relation.

Function as a special type of relation, Pictorial representation of a function, domain, co-domain and range of a function.

Real valued functions, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest integer functions, with their graphs.

#### *3. Trigonometric Functions*

Positive and negative angles, Measuring angles in radians and in degrees and conversion from one measure to another.

Definition of trigonometric functions with the help of unit circle. Truth of the identity  $\sin^2 x + \cos^2 x = 1$ , for all  $x$ . Signs of trigonometric functions. Domain and range of trigonometric functions and their graphs. Expressing  $\sin(x \pm y)$  and  $\cos(x \pm y)$  in terms of  $\sin x$ ,  $\sin y$ ,  $\cos x$  &  $\cos y$  and their simple applications.

Deducing identities like the following:

$$\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}, \quad \cot(x \pm y) = \frac{\cot x \cot y \mp 1}{\cot y \pm \cot x}$$

$$\sin \alpha \pm \sin \beta = 2 \sin \frac{1}{2}(\alpha \pm \beta) \cos \frac{1}{2}(\alpha \mp \beta)$$

$$\cos \alpha + \cos \beta = 2 \cos \frac{1}{2}(\alpha + \beta) \cos \frac{1}{2}(\alpha - \beta)$$

$$\cos \alpha - \cos \beta = -2 \sin \frac{1}{2}(\alpha + \beta) \sin \frac{1}{2}(\alpha - \beta)$$

Identities related to  $\sin 2x$ ,  $\cos 2x$ ,  $\tan 2x$ ,  $\sin 3x$ ,  $\cos 3x$  and  $\tan 3x$ .

## Unit-II: Algebra

37 Marks

**2. Complex Numbers and Quadratic Equations** Need for complex numbers, especially  $\sqrt{-1}$ , to be motivated by inability to solve some of the quadratic equations. Algebraic properties of complex numbers. Argand plane. Statement of Fundamental Theorem of Algebra, solution of quadratic equations (with real coefficients) in the complex number system.

### 3. Linear inequalities

Linear inequalities, algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Graphical method of finding a solution of system of linear inequalities in two variables.

### 4. Permutations and Combinations

Fundamental principle of counting. Factorial  $n$ .  $(n!)$  Permutations and combinations, derivation for Formulae for  ${}^n P_r$  and  ${}^n C_r$  and their connections, simple applications.

### 6. Sequence and Series

Sequence and Series. Arithmetic Progression (A. P.). Arithmetic Mean (A.M.) Geometric Progression (G.P.), general term of a G.P., sum of  $n$  terms of a G.P., infinite G.P. and its sum, geometric mean (G.M.), relation between A.M. and G.M.

## Unit-III: Coordinate Geometry

13 Marks

### 1. Straight Lines

Brief recall of two dimensional geometry from earlier classes. Shifting of origin. Slope of a line and angle between two lines. Various forms of equations of a line: parallel to axis, point -slope form, slope-intercept form, two-point form, intercept form and normal form. General equation of a line. Equation of family of lines passing through the point of intersection of two lines. Distance of a point from a line.

### 2. Conic Sections

Sections of a cone: circles, ellipse, parabola, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.

### ***3. Introduction to Three-dimensional Geometry***

Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points and section formula.

#### **Unit-IV: Calculus**

**09 Marks**

##### ***1. Limits and Derivatives***

Derivative introduced as rate of change both as that of distance function and geometrically. Intuitive idea of limit, Limits of polynomials and rational functions trigonometric, exponential and logarithmic functions. Definition of derivative relate it to slope of tangent of the curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.

#### **Unit-V: Statistics and Probability**

**12 Marks**

##### ***1. Statistics***

Measures of Dispersion: Range, Mean deviation, variance and standard deviation of ungrouped/grouped data.

##### ***2. Probability***

Random experiments; outcomes, sample spaces (set representation). Events; occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events, Axiomatic (set theoretic) probability, connections with other theories of earlier classes. Probability of an event, probability of 'not', 'and' and 'or' events.

# CHEMISTRY

## CLASS 11

As the regular teaching-learning in schools, during the session 2020-21, has widely been affected due to the COVID-19 pandemic, the subject experts committee, after due consideration, has recommended to reduce the syllabus by 30% in the following manner:-

### **UNIT 1 : Some Basic Concepts of Chemistry**

Nature of matter, laws of chemical combination, Dalton's atomic theory: concept of elements, atoms and molecules.

### **UNIT 2 : Structure of Atom**

Discovery of Electron, Proton and Neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and its limitations

### **UNIT 3 : Classification of Elements and Periodicity in Properties**

Significance of classification, brief history of the development of periodic table,

### **UNIT 5 : States of Matter: Gases and Liquids**

Liquefaction of gases, critical temperature, kinetic energy and molecular speeds (elementary idea), Liquid State- vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations)

### **UNIT 6 Chemical Thermodynamics**

Heat capacity and specific heat capacity, Criteria for equilibrium

### **UNIT 7 : Equilibrium**

Hydrolysis of salts (elementary idea), Henderson Equation

### **UNIT 8 : Redox Reactions**

Applications of redox reactions

### **UNIT 9 : Hydrogen**

Preparation, properties and uses of hydrogen, hydrogen peroxide - preparation, reactions and structure and use;

### **UNIT 10 : s -Block Elements**

Preparation and Properties of Some Important Compounds: Sodium Carbonate, Sodium Chloride, Sodium Hydroxide and Sodium Hydrogen carbonate, Biological importance of Sodium and Potassium.

Calcium Oxide and Calcium Carbonate and their industrial uses, biological importance of Magnesium and Calcium.

### **UNIT 11 : Some p -Block Elements**

Elements of group 13 - Some important compounds: Borax, Boric acid, Boron Hydrides, Aluminium: Reactions with acids and alkalies, uses.



Elements of group 14 - Carbon: uses of some important compounds: oxides. Important compounds of Silicon and a few uses: Silicon Tetrachloride, Silicones, Silicates and Zeolites, their uses.

### UNIT 12 Organic Chemistry: Some basic Principles and Techniques

Methods of purification, qualitative and quantitative analysis

### UNIT 13 : Hydrocarbons

Free radical mechanism of halogenation, combustion and pyrolysis.

### UNIT 14 : Environmental Chemistry

Environmental pollution – air, water and soil pollution, chemical reactions in atmosphere, smog, major atmospheric pollutants, acid rain, ozone and its reactions, effects of depletion of ozone layer, greenhouse effect and global warming – pollution due to industrial wastes, green chemistry as an alternative tool for reducing pollution, strategies for control of environment pollution.

#### List of Practicals deleted from syllabus :

1. Experiments based on pH

a) Any one of the following experiments:

- Determination of pH of some solutions obtained from fruit juices, solution of known and varied concentrations of acids, bases and salts using pH paper or universal indicator.
- Comparing the pH of solutions of strong and weak acids of same concentration.
- Study the pH change in the titration of a strong base using universal indicator.

b) Study the pH change by common-ion in case of weak acids and weak bases.

2. Chemical Equilibrium

One of the following experiments:

a) Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the concentration of either of the ions.

b) Study the shift in equilibrium between  $[\text{Co}(\text{H}_2\text{O})_6]^{3+}$  and chloride ions by changing the concentration of either of the ions.

**In accordance with the above, the remaining 70 percent of the total syllabus is as follows:**

Plan for making question papers:

1.	Multiple choice questions a,b,c,d,e,f	1×6	06
2.	a,b,c,d (each question 02 marks)	2×4	08
3.	a,b,c,d (each question 02 marks)	2×4	08
4.	a,b,c,d (each question 03 marks)	3×4	12
5.	a,b,c,d (each question 04 marks)	4×4	16

6.	a.b(each question 05 marks)	5×2	10
7.	a.b(each question 05 marks)	5×2	10

**NOTE –**

1. Question no. 6 and 7 will also contain optional question.
2. Atleast 08 marks numerical questions should be given.

**Time : 03 hours****Max Marks : 70**

Unit No.	Title	Marks
I	Some Basic Concepts of Chemistry	05
II	Structure of atom	06
III	Classification of elements and periodicity in properties	05
IV	Chemical bonding and molecular structure	05
V	States of matter : Gases and Liquids	05
VI	Chemical Thermodynamics	04
VII	Equilibrium	06
VIII	Redox reactions	05
IX	Hydrogen	03
X	s block elements	05
XI	p block elements	06
XII	Organic chemistry : Some basic principles and techniques	07
XIII	Hydrocarbons	08
	<b>TOTAL</b>	<b>70</b>

**Unit I: Some Basic Concepts of Chemistry****05 marks**

General Introduction: Importance and scope of Chemistry.

Atomic and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry.

**Unit II: Structure of Atom****06 marks**

Bohr's model and its limitations, concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p and d orbitals, rules for filling electrons in orbitals - Aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of atoms, stability of half-filled and completely filled orbitals.

**Unit III: Classification of Elements and Periodicity in Properties****05 marks**

Modern periodic law and the present form of periodic table, periodic trends in properties of elements -atomic radii, ionic radii, inert gas radii, Ionization enthalpy, electron gain enthalpy, electronegativity, valency. Nomenclature of elements with atomic number greater than 100.

**Unit IV: Chemical Bonding and Molecular Structure****05 marks**

Valence electrons, ionic bond, covalent bond, bond parameters, Lewis structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules(qualitative idea only), Hydrogen bond.

**Unit V: States of Matter: Gases and Liquids**

**05 marks**

Three states of matter, intermolecular interactions, types of bonding, melting and boiling points, role of gas laws in elucidating the concept of the molecule, Boyle's law, Charles law, Gay Lussac's law, Avogadro's law, ideal behaviour, empirical derivation of gas equation, Avogadro's number, ideal gas equation and deviation from ideal behavior.

**Unit VI: Chemical Thermodynamics**

**04 marks**

Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions.

First law of thermodynamics -internal energy and enthalpy, measurement of  $\Delta U$  and  $\Delta H$ , Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function, Gibb's energy change for spontaneous and non - spontaneous processes.

Third law of thermodynamics (brief introduction).

**Unit VII: Equilibrium**

**06 marks**

Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium - Le Chatelier's principle, ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, buffer solution, solubility product, common ion effect (with illustrative examples).

**Unit VIII: Redox Reactions**

**05 marks**

Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number.

**Unit IX: Hydrogen**

**03 marks**

Position of hydrogen in periodic table, occurrence, isotopes, hydrides-ionic covalent and interstitial; physical and chemical properties of water, heavy water, hydrogen as a fuel.

**Unit X : s-Block Elements Alkali and Alkaline Earth Metals**

**05 marks**

Group 1 and Group 2 Elements

General introduction, electronic configuration, occurrence, anomalous properties of the first element of each group, diagonal relationship, trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii), trends in chemical reactivity with oxygen, water, hydrogen and halogens, uses.

**Unit XI: Some p-Block Elements****06 marks**

General Introduction to p -Block Elements

Group 13 Elements: General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous properties of first element of the group, Boron - physical and chemical properties.

Group 14 Elements: General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous behaviour of first elements. Carbon-catenation, allotropic forms, physical and chemical properties.

**Unit XII: Organic Chemistry -Some Basic Principles and Techniques****07 marks**

General introduction, classification and IUPAC nomenclature of organic compound, electronic displacement in covalent bond : Inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond : free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.

**Unit XIII: Hydrocarbons****08 marks**

Classification of Hydrocarbons

**Aliphatic Hydrocarbons:**

Alkanes - Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions.

Alkenes - Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.

Alkynes - Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water.

**Aromatic Hydrocarbons:**

Introduction, IUPAC nomenclature, benzene: resonance, aromaticity, chemical properties: mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene. Carcinogenicity and toxicity.

**Practical syllabus:****Plan for evaluation of practical exams**

S.No.	Experiment	Marks
1.	Content based experiment	04
2.	Volumetric analysis	08
3.	(a) Salt analysis	06
	(b) Detection of elements in organic compounds.	02
4.	Project work and Class record	05
5.	Viva	05
	<b>TOTAL</b>	<b>30</b>

**A. Basic Laboratory Techniques**

1. Cutting glass tube and glassrod
2. Bending a glasstube
3. Drawing out a glassjet
4. Boring a cork

**B. Characterization and Purification of Chemical Substances**

1. Determination of melting point of an organic compound.
2. Determination of boiling point of an organic compound.
3. Crystallization of impure sample of any one of the following: Alum, Copper Sulphate, Benzoic Acid.

**C. Quantitative Estimation**

- i. Using a chemical balance.
- ii. Preparation of standard solution of Oxalic acid.
- iii. Determination of strength of a given solution of Sodium hydroxide by titrating it against standard solution of Oxalic acid.
- iv. Preparation of standard solution of Sodium carbonate.
- v. Determination of strength of a given solution of hydrochloric acid by titrating it against standard Sodium Carbonate solution.

**D. Qualitative Analysis**

- a) Determination of one anion and one cation in a given salt

Cations -  $\text{Pb}^{2+}$ ,  $\text{Cu}^{2+}$ ,  $\text{As}^{3+}$ ,  $\text{Al}^{3+}$ ,  $\text{Fe}^{3+}$ ,  $\text{Mn}^{2+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Co}^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{Sr}^{2+}$ ,  $\text{Ba}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{NH}_4^+$

Anions -  $(\text{CO}_3)^{2-}$ ,  $\text{S}^{2-}$ ,  $\text{NO}_2^-$ ,  $\text{SO}_3^{2-}$ ,  $\text{SO}_4^{2-}$ ,  $\text{NO}_3^-$ ,  $\text{Cl}^-$ ,  $\text{Br}^-$ ,  $\text{I}^-$ ,  $\text{PO}_4^{3-}$ ,  $\text{C}_2\text{O}_4^{2-}$ ,  $\text{CH}_3\text{COO}^-$

(Note: Insoluble salts excluded)

- b) Detection of - Nitrogen, Sulphur, Chlorine in organic compounds.

**PROJECTS** : Scientific investigations involving laboratory testing and collecting information from other sources.

A few suggested Projects :

- Checking the bacterial contamination in drinking water by testing sulphide ion
- Study of the methods of purification of water
- Testing the hardness, presence of Iron, Fluoride, Chloride, etc., depending upon the regional variation in drinking water and study of causes of presence of these ions above permissible limit (if any).

- Investigation of the foaming capacity of different washing soaps and the effect of addition of Sodium carbonate
- Study the acidity of different samples of tealeaves.
- Determination of the rate of evaporation of different liquids
- Study the effect of acids and bases on the tensile strength of fibers.
- Study of acidity of fruit and vegetable juices.

**Note:** Any other investigatory project, which involves about 10 periods of work, can be chosen with the approval of the teacher.

## BIOLOGY CLASS XI

Note – In this only one paper of 100 marks in which 70 marks for theory written and 30 marks for practical examinations.

S.No.	Unit	Marks
1.	Diversity in Living World	07
2.	Structural Organisation in Animals and Plants	12
3.	Cell: Structure and Function	15
4.	Plant Physiology	18
5.	Human Physiology	18
	Total	70

As the regular teaching-learning in schools, during the session 2020-21, has widely been affected due to the COVID-19 pandemic, the subject experts committee, after due consideration, has recommended to reduce the syllabus by 30% in the following manner:-

### Unit-I : Diversity of Living Organisms

#### Chapter-1: The Living World

Taxonomy and Systematics, tools for study of taxonomymuseums, zoological parks, herbaria, botanical gardens

#### Chapter 3 : Plant Kingdom

Angiospermae (three to five salient and distinguishing features and at least two examples of each category); Angiosperms - classification upto class, characteristic features and examples.

### Unit II : Structural Organisation in Animals and Plants

#### Chapter 5 : Morphology of Flowering Plants,

Morphology of different parts of flowering plants: root, stem, leaf, fruit and seed and work.

#### Chapter 6 - Anatomy of Flowering Plants

#### Chapter 7 – Structural organisation in animals

Morphology, anatomy and function of different system (digestive, circulatory, respiratory, nervous and reproductive) of an insect (cockroach)

### Unit III : Cell: Structure and Function

#### Chapter 8 - Cell-The Unit of Life

Nuclear membrane, chromatin, nucleolus

### Unit IV : Plant Physiology

#### Chapter 11 – Transport in plants

#### Chapter 12 – Mineral Nutrition

## **Chapter 15 - Plant - Growth and Development ,**

Seed germination; phases of plant growth and plant growth rate; conditions of growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell, seed dormancy; vernalisation; photoperiodism.

## **Unit V : Human Physiology**

### **Chapter 16 - Digestion and Absorption**

Alimentary canal and digestive glands, role of digestive enzymes and gastrointestinal hormones; Peristalsis, digestion, absorption and assimilation of proteins, carbohydrates and fats; calorific values of proteins, carbohydrates and fats; egestion; nutritional and digestive disorders - PEM, indigestion, constipation, vomiting, jaundice, diarrhoea.

### **Chapter 20 - Locomotion and Movement**

Types of movement - ciliary, flagellar, muscular; skeletal system and its functions; joints; disorders of muscular and skeletal system - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout

### **Chapter 21 - Neural Control and Coordination**

Sensory perception; sense organs; elementary structure and functions of eye and ear

## **Reduced practicals :**

### **A – List of Experiments**

1. Preparation and study of T.S. of dicot and monocot roots and stems .
2. To study types of root (Tap and adventitious); stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and compound).
3. Study of osmosis by potato osmometer.
4. Study of plasmolysis in epidermal peels (e.g. Rhoeo leaves).
5. Comparative study of the rates of transpiration in the upper and lower surface of leaves.
6. Test for the presence of sugar, starch, proteins and fats.
7. Test for presence of urea in urine.
8. Test for presence of bile pigment in urine.

### **B – Study / Observation of the following (spotting)**

1. Study of tissues and diversity in shapes and sizes of plant cell (palisade cells, guard cells, parenchyma, collenchyma, sclerenchyma, xylem, phloem)
2. Study of different modifications in roots, stems and leaves.
3. Study and identification of different types of inflorescence.
4. Study of imbibition in seeds/raisins.
5. Observation and comments on the experimental set up for showing:
  - a) Anaerobic respiration
  - b) Photoperiodism
  - c) Effect of apical bud removal
  - d) Suction due to transpiration
6. Study of human skeleton and different types of joints with the help of virtual images/models only.



**In accordance to the above, the remaining 70 percent of the total syllabus is as follows:**

**Unit-I : Diversity of Living Organisms**

**07 marks**

**Chapter 1 : The Living World**

What is living? Biodiversity; Need for classification; three domains of life; concept of species and taxonomical hierarchy; binomial nomenclature;

**Chapter-2: Biological Classification**

Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups: Lichens, Viruses and Viroids.

**Chapter-3: Plant Kingdom**

Salient features and classification of plants into major groups - Algae, Bryophyta, Pteridophyta, Gymnospermae

**Chapter-4: Animal Kingdom**

Salient features and classification of animals, non-chordates up to phyla level and chordates up to class level (three to five salient features and at least two examples of each category). (No live animals or specimen should be displayed.)

**Unit-II Structural Organization in Animals and Plants**

**12 marks**

**Chapter-5: Morphology of flowering plants**

Morphology of inflorescence and flower, description of 01 family, solanaceae or liliaceae.(to be dealt along with the relevant experiment of the Practical Syllabus).

**Chapter-7: Animal tissues**

**Unit-III Cell: Structure and Function**

**15 marks**

**Chapter-8: Cell-The Unit of Life**

Cell theory and cell as the basic unit of life: Structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles; mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function), nucleus.

**Chapter-9: Biomolecules**

Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, nucleic acids; Enzymes- types, properties, enzyme action.

**Chapter-10: Cell Cycle and Cell Division**

Cell cycle, mitosis, meiosis and their significance

**Unit-IV Plant Physiology**

**18 marks**

**Chapter-13: Photosynthesis in Higher Plants**

Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C<sub>3</sub> and C<sub>4</sub> pathways; factors affecting photosynthesis.

**Chapter-14: Respiration in Plants**

Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient.

**Chapter-15: Plant - Growth and Development**

Growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA;

**Unit-V Human Physiology****18 marks****Chapter-17: Breathing and Exchange of Gases**

Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory disorders.

**Chapter-18: Body Fluids and Circulation**

Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure.

**Chapter-19: Excretory Products and Their Elimination**

Modes of excretion - ammonotelism, ureotelism, uricotelism; human excretory system – structure and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion; disorders - uraemia, renal failure, renal calculi, nephritis; dialysis and artificial kidney.

**Chapter-20: Locomotion and Movement**

Skeleton muscle, contractile proteins and muscle contraction.

**Chapter-21: Neural Control and Coordination**

Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse; reflex action;

**Chapter-22: Chemical Coordination and Integration**

Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goiter, diabetes, Addison's disease.

**Practicals:**

**30 marks**

**A: List of Experiments**

1. Study and description of three locally available common flowering plants, one from each of the families Solanaceae, Fabaceae and 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).
2. Study of distribution of stomata in the upper and lower surface of leaves. .
3. Separation of plant pigments through paper chromatography.
4. Study of the rate of respiration in flower buds/leaf tissue and germinating seeds.
5. Test for presence of sugar in urine.
6. Test for presence of albumin in urine.

**B. Study/observation of the following (spotting)**

1. Study of the parts of a compound microscope.
2. Study of the specimens/slides/models and identification with reasons - Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
3. Study of virtual specimens/slides/models and identification with reasons - Amoeba, Hydra, liverfluke, Ascaris, leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.
4. Animal cells (, squamous epithelium, muscle fibers and mammalian blood smear) through temporary/permanent slides.
5. Study of mitosis in onion root tip cells and animals cells (grasshopper) from permanent slides.
6. Study of external morphology of cockroach through virtual images/models. Practical Examination for Visually Impaired Students

Note : Practice note book and project work will be compulsory to submit at the time of Practical U.P. Board examination.

For Private Students : Which college will be decided as examination centre, the teacher/Principal of that college will be as internal examiner and will provide 50% marks to private students as internal examiner and remaining 50% marks will be given by external examiner.

# HISTORY

## CLASS 11

As the regular teaching-learning in schools, during the session 2020-21, has widely been affected due to the COVID-19 pandemic, the subject experts committee, after due consideration, has recommended to reduce the syllabus by 30% in the following manner:-

Introduction to World History

### SECTION I : EARLY SOCIETIES-

#### Introduction

#### 1. From the Beginning of Time

Focus : Africa, Europe till 15000 BCE

- a. Views on the origin of human beings
- b. Early societies
- c. Historians' views on present day gathering hunting societies.

### SECTION II : EMPIRES

#### 5. Nomadic Empires

Focus : The Mongol, 13<sup>th</sup> to 14<sup>th</sup> century

- a. The nature of nomadism
- b. Formation of empires
- c. Conquests and relations with other states
- d. Historians' views on nomadic societies and state formation.

### SECTION III : CHANGING TRADITIONS

#### 8. Confrontation of Cultures

Focus on America, 15<sup>th</sup> to 18<sup>th</sup> century

- a. European voyages of exploration
- b. Search for gold; enslavement, raids, extermination.
- c. Indigenous people and cultures – the Arawaks, the Aztecs, the Incas
- d. The history of displacements
- e. Historians' viewpoints on the slave trade

**In accordance with the above, the remaining 70 percent of the total syllabus is as follows:**

### SECTION I : EARLY SOCIETIES

**10 marks**

#### 2. Writing and City Life

Focus : Iraq, 3<sup>rd</sup> millennium BCE

- a. Growth of towns
- b. Nature of early urban societies
- c. Historians' debate on uses of writing

### SECTION II : EMPIRES

**25 marks**

#### Introduction

#### 3. An Empire across three Continents

Focus : Roman empire, 27 BCE to 600 CE

- a. Political evolution
- b. Economic expansion
- c. Religion-culture foundation
- d. Late antiquity
- e. Historians' views on the institution of slavery

#### 4. Central Islamic Lands

Focus : 7<sup>th</sup> to 12<sup>th</sup> centuries

- a. Polity
- b. Economy
- c. Culture
- d. Historians' viewpoints on the nature of the crusades.

### SECTION III : CHANGING TRADITIONS

25 marks

#### Introduction

#### 6. Three orders

Focus : Western Europe, 13<sup>th</sup>-16<sup>th</sup> century

- a. Feudal society and economy
- b. Formation of states
- c. Church and Society
- d. Historians' views on decline of feudalism

#### 7. Changing Cultural Traditions

Focus on Europe, 14<sup>th</sup> to 17<sup>th</sup> century

- a. New ideas and new trends in literature and arts
- b. Relationship with earlier ideas
- c. The contribution of West Asia
- d. Historians' viewpoints on the validity of the notion 'European Renaissance'

### SECTION IV : TOWARDS MODERNIZATION

30 marks

#### Introduction

#### 9. The Industrial Revolution

Focus on England, 18<sup>th</sup> and 19<sup>th</sup> century

- a. Innovations and technological change
- b. Patterns of growth
- c. Emergence of a working class
- d. Historians' viewpoints, debate on 'Was there an Industrial Revolution'?

#### 10. Displacing Indigenous People

Focus on North America and Australia, 18<sup>th</sup> – 20<sup>th</sup> century

- a. European colonists in North America and Australia
- b. Formation of white settler societies
- c. Displacement and repression of local people
- d. Historians' viewpoints on the impact of European settlement on indigenous population.

#### 11. Paths to modernization

Focus on East Asia, late 19<sup>th</sup> and 20<sup>th</sup> century

- a. Militarization and economic growth in Japan
- b. China and the Communist alternative.
- c. Historians' debate on the meaning of modernization.

(NOTE : Keeping in view the importance of both the themes i.e. Japan and China, it is advised that both must be taught in the schools.)

**There will be a single question paper of 100 marks. Minimum marks required : 33**

<b>Type of question</b>	<b>No. of questions</b>	<b>Marks</b>	<b>Total</b>
Multiple choice questions	10	01	10
Very short answer questions	05	02	10
Short answer questions	06	05	30
Long answer questions	03	10	30
Map	05	02	10
Historical events	10	01	10
	<b>No. of questions - 39</b>		<b>Total - 100</b>

Knowledge based – 30%

Understanding based – 40%

Application based – 20%

Skill based – 10%

Easy – 30%

Average – 50%

Difficult – 20%

**Map Work : from existing units – 10 marks**

05 questions for 2 marks each. 01 mark for the correct answer and 01 mark for pointing correct location on map. For visually impaired candidates, in place of map work, 05 questions should be given for 02 marks each.

## Geography

### Class-XI (2020-21)

As the regular teaching-learning in schools, during the session 2020-21, has widely been affected due to the COVID-19 pandemic, the subject experts committee, after due consideration, has recommended to reduce the syllabus by 30% in the following manner:-

#### **Part-A: Fundamentals of Physical Geography**

##### Unit-2: The Earth

- Distribution of oceans and continents.

##### Unit-3: Landforms

- Landforms and their evolution.

##### Unit-4: Climate

- Pressure-pressure belts; winds-planetary, seasonal and local; air masses and fronts; tropical and extratropical cyclones.
- World climates-classification Koeppen, Differences in parameter between koeppen and Thornthwaite, Global warming and climatic changes.
- Climate and Global Concerns.

##### Unit-5: Water (Oceans)

- Basics of Oceanography.
- Oceans – distribution of temperature and salinity.
- Ocean resources and pollution.

#### **Part-B: India- Physical Environment**

##### Unit-8: Physiography

- Structure and Relief; Physiographic Divisions.

##### Unit-9: Climate, Vegetation and Soil

- Weather and climate – spatial and temporal distribution of temperature, pressure winds and rainfall, Indian monsoon: mechanism, onset and

withdrawal, variability of rainfalls: spatial and temporal; use of weather charts; Climatic types (Koeppen).

Unit-10: Hazards and Disasters: Causes, Consequences and Management

(complete unit)

**Part-C: Practical Work**

Unit-1: Fundamentals of Maps

- Map projection- Latitude, longitude and time, typology, construction and properties of projection: Conical with one standard parallel and Mercator's projection. (only two projections)



**Geography (029)****Class-XI (2020-21)**

Part A	Fundamentals of Physical Geography	35 Marks
	Unit-1: Geography as a discipline	30
	Unit-2: The Earth	
	Unit-3: Landforms	
	Unit-4: Climate	
	Unit-5: Water (Oceans)	
	Unit-6: Life on the Earth	
	Map and diagram	5
Part B	India- Physical Environment	35 Marks
	Unit-7: Introduction	30
	Unit-8: Physiography	
	Unit-9: Climate, vegetation and soil	
	Map and Diagram	5

Part C	Practical Work	30 Marks
	Unit-1: Fundamentals of Maps	10 Marks
	Unit-2: Topographic and Weather Maps	15 Marks
	Practical Record Book and Viva	5 Marks

**Part A: Fundamentals of Physical Geography****Unit-1: Geography as a Discipline**

- Geography as an integrating discipline, as a science of spatial attributes.
- Branches of Geography: Physical Geography.

**Unit-2: The Earth**

- Origin and evolution of the earth; interior of the earth.
- Wegener's continental drift theory and plate tectonics.
- Earthquakes and volcanoes: causes, types and effects.

**Unit-3: Landforms**

- Rocks: major types of rocks and their characteristics.
- Geomorphic processes: weathering; mass wasting; erosion and deposition; soil-formation.

#### Unit-4: Climate

- Atmosphere- composition and structure; elements of weather and climate.
- Insolation-angle of incidence and distribution; heat budget of the earth- heating and cooling of atmosphere (conduction, convection, terrestrial radiation and advection); temperature- factors controlling temperature; distribution of temperature-horizontal and vertical; inversion of temperature.
- Precipitation-evaporation; condensation-dew, frost, fog, mist and cloud; rainfall-types and world distribution.

#### Unit-5: Water (Oceans)

- Movements of ocean water-waves, tides and currents; submarine reliefs.

#### Unit-6: Life on the Earth

- Biosphere - importance of plants and other organisms; biodiversity and conservation; ecosystem and ecological balance.

**Map work on identification of features based on 1 to 6 units on the outline Physical/Political map of the world.**

### **Part- B: India- Physical Environment**

#### Unit-7: Introduction

- Location, space relations, India's place in the world.

#### Unit-8: Physiography

- Drainage systems: Concept of river basins, watershed; the Himalayan and the Peninsular rivers.

#### Unit-9: Climate, Vegetation and Soil

- Natural vegetation-forest types and distribution; wild life; conservation; biosphere reserves.
- Soils - major types (ICAR's classification) and their distribution, soil degradation and conservation.

**Map Work of features based on above units for locating and labelling on the outline Political/Physical map of India.**

## **Part-C: Practical Work**

### Unit-1: Fundamentals of Maps

- Geo spatial data, Concept of Geographical data matrix; Point, line, area data.
- Maps -types; scales-types; construction of simple linear scale, measuring distance; finding direction and use of symbols.

### Unit-2: Topographic and Weather Maps

- Study of topographic maps (1 : 50,000 or 1 : 25,000 Survey of India maps); contour cross section and identification of landforms-slopes, hills, valleys, waterfall, cliffs; distribution of settlements.
- Aerial Photographs: Types and Geometry-vertical aerial photographs; difference between maps and aerial photographs; photo scale determination. Identification of physical and cultural features.
- Satellite imageries, stages in remote sensing data-acquisition, platform and sensors and data products, (photographic and digital).
- Use of weather instruments: thermometer, wet and dry-bulb thermometer, barometer, wind vane, rain gauge.

### Practical Record Book and Viva Voce

Viva to be based on Practical Unit I and II only.

## **Class : 11**

### **Subject : Civics**

As the regular teaching – learning in schools, during the session 2020-21, has widely been affected due to the Covid – 19 pandemic, the subject experts committee, after due consideration, has recommended to reduce the syllabus by 30% in the following manner :

**Approximately 30% reduced syllabus :-**

#### **Part (A)**

##### **Unit II**

- 1- **Election and representation** – Elections and Democracy. Election system in India, Reservation of Constituencies, Free and fair Elections, Electoral Reforms.

##### **Unit IV**

- 1- **Local Governments** – Why do we need Local Governments ? Growth of Local Government in India, 73<sup>rd</sup> and 74<sup>th</sup> Amendments, implementation of 73<sup>rd</sup> and 74<sup>th</sup> Amendments.

#### **Part (B)**

##### **Unit VI**

- 1- **Political Theory : An introduction** –  
What is Politics ? What do we study in Political theory ? Putting Political theory to practice. Why should we study Political Theory ?

**Subject : Civics**  
**Class – 11 (2020-21)**

(Revised syllabus- Approximately 70%)

Total marks : 100

Only Paper

Time : 3 hrs.

**A. Theory****Part : A Indian Constitution at work**

Marks : 50

Unit I	1- Constitution : Why and How, Philosophy of the Constitution 2- Rights and duties in the Indian Constitution.	12
Unit II	1- The Executive	08
Unit III	1- The Legislature 2- The Judiciary	10
Unit VI	1 – Federalism	10
Unit V	1 – Constitution : A Living Document 2 – Political Philosophy of Constitution	10
<b>Part : B Political Theory</b>		Marks : 50
Unit VI	2 – Freedom	10
Unit VII	1 – Equality 2 – Social Justice	10
Unit VIII	1 – Rights 2 – Citizenship	10
Unit IX	1 – Nationalism 2 – Secularism	10
Unit X	1 – Peace 2 – Development	10
Grand Total		100

**Class : 11****1- Types of Questions :**

Sr.	Types of Questions	No. of Ques.	Marks	Total Marks
1-	Objective Questions	10	01	10
2-	Very Short Questions	10	02	20
3-	Short Questions – 1	06	05	30
4-	Short Questions – 2	04	06	24
5-	Long Questions	02	08	16
			Total	100

**2- Forms of Questions :**

Sr.	Forms of Questions	Marks	Percentage
1-	Knowledge	40	40%
2-	Understanding	40	40%
3-	Application	20	20%

Total : 100                      100%

**3- Difficulty Level of questions :**

Sr.	Difficulty Level of questions	Marks	Percentage
1-	Easy	30	30%
2-	Average	50	50%
3-	Difficult	20	20%

Total : 100                      100%

## Course Content

**Part A : Indian Constitution at work. 50 Marks**

**Unit -I 12 Marks**

**1 – Constitution Why and how and Philosophy of the Constitution :** Constitution : Why and how, The making of the Constitution, the Constituent Assembly, Procedural achievements and Philosophy of the Constitution.

**2 – Rights and Duties in the Indian Constitution :** The importance of Rights, Fundamental Rights in the Constitution, Directive principles of State Policy. Relationship between fundamental Rights and Directive principles.

**Unit – II 08 Marks**

**1 – Executive :** What is an Executive ? Different types of Executive. Parliamentary Executive in India- Prime minister and council of Ministers. Permanent Executive : Bureaucracy.

**Unit - III 10 Marks**

**1 – Legislature :** Why do we need a Parliament ? Two Houses of Parliament. Functions and Power of the Parliament, Legislative functions, Control over Executive. Parliamentary committees. Self-regulation.

**2 – Judiciary :** Why do we need an Independent Judiciary ? Structure of the Judiciary, Judicial – Activism. Judiciary and Rights, Judiciary and Parliament.

**Unit – IV 10 Marks**

**1 – Federalism :** What is Federalism ? Federalism in the Indian Constitution, Federalism with a strong Central Government, Conflicts in India's Federal system, special provisions.

**Unit – V****10 Marks**

**1 – Constitution as a living Document** – Are Constitutions static ? The Procedure to amend the Constitution, Why have there been so many amendments ? Basic structure and evolution of the Constitution. Constitution as living Document.

**2 – Political Philosophy of Constitution : Constitution** : A tool for Democratic change. What is the Political Philosophy of our Constitution ?

**Part B : Political Theory****50 Marks****Unit - VI****10 Marks**

**1 – Freedom** – The ideal of Freedom. What is Freedom ? Why do we need Constraints ? ‘Harm Principle’ Negative and Positive Liberty.

**Unit – VII****10 Marks**

**1 – Equality** : Significance of Equality. What is Equality ? Various dimensions of Equality. How can we promote Equality ?

**2 – Social Justice** : What is Justice ? Just Distribution. Justice as fairness. Pursuing Social Justice.

**Unit – VIII****10 Marks**

**1 – Rights** : What are Rights ? Where do Rights come from ? Legal Rights and the State. Kinds of Rights. Rights and responsibilities.

**2 – Citizenship** : What is citizenship ? Citizen and Nation, Universal Citizenship, Global Citizenship.

**Unit – IX****10 Marks**

**1 – Nationalism** : Nations and Nationalism. National Self-determination, Nationalism and Pluralism

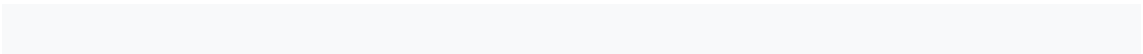
**2 – Secularism** : What is Secularism ? What is Secular State ? The Western and the Indian approaches to secularism. Criticisms and rationale of Indian Secularism.



**Unit – X****10 Marks**

**1 – Peace** : What is Peace ? Can violence ever promote peace ?  
Peace and the State. Different approaches to the pursuit of peace.  
Contemporary challenges to peace.

**2 – Development** – What is Development ? Dominant,  
Development model and alternative conceptions of development.



## **ECONOMICS**

### **Class - 11**

**Due to lack of timely reading in schools in the academic session 2020-21 due to the Covid-19 epidemic, the Committee of Subject Experts, with due consideration, has recommended reducing the following 30% syllabus**

#### **Topics Reduced:**

Part A- **Statistics for Economics**

Unit- 4 Correlation

Unit- 5 Index

Part B - **Indian Economic Development**

Unit-7 **Current challenges facing Indian economy**

- 1- Alternative farming-Organic Farming
- 2- Growth of Education Sector in India
- 3- Infrastructure-Energy and Health

**70% of the syllabus in respect of the above is given below**

**Part A-**

**Statistics : Statistics for Economics**

- 1- Introduction
- 2- Collection, Organisation and Presentation of data
- 3- Statistical Tools and Interpretation

**Part B-**

**Indian Economic Development**

- 1- Development experience (1947-90) and economic reforms since 1991
- 2- Current Challenges facing Indian economy
- 3- Development Experience of India-A comparison with neighbour countries

**Part –A - Statistics - Statistics for economics**

**Unit-1** (1) what is economics

(2) Meaning, Scope , function and importance of Statistics in Economics.

**Unit -2 collection , organisation and presentation of data**

- (1) **Collection of Data-** Sources of data, primary and secondary data, how basic data is collected, concept of Sampling, Sampling and non sampling errors, methods of collecting data, some important source of secondary data, Census of India and National Sample Survey organisation.

- (2) **Organisation of data** –meaning and types of variables, frequency distribution.
- (3) **Presentation of Data-** Tabular presentation and Diagrammatic presentation of data:  
 (1) Geometric forms (bar diagrams and Pie diagrams) (2) Frequency diagram (histogram, polygon and Ogive ) and (3) Arithmetic line graphs (time series graph)

### **Unit -3 Statistical tools and interpretation**

Measures of Central tendency-Arithmetic mean , median and mode.

## **PART - B**

### **Indian Economic Development**

#### **Unit -6 development experience (1947-90) and economic reforms since 1991:**

- 1- A brief introduction of the state of Indian economy on the eve of Independence . Common goals of five year plans.
- 2- Main features problems and policies of agriculture (institutional aspects and new agricultural strategy), industry (Indian licensing) and foreign trade.

#### **Economic reforms since 1991:**

Features and appraisals of liberalisation, globalisation, and privatisation.

#### **Unit -7 Current challenges facing Indian Economy**

- 1- **Poverty** : absolute and relative , main programmes for poverty alleviation- a critical assessment.

- 2- **Rural development** : key issues - credit and marketing- role of cooperatives ; agricultural diversification.
- 3- **Human capital formation**: how people become resource ; Role of human capital in economic development.
- 4- **Employment** : growth and change in workforce participation rate informal and informal sector; problems and policies.
- 5- **Infrastructure** : meaning and types ;case studies; problems and policies –A critical assessment.
- 6- **Sustainable economic development**:Meaning,Effects of Economic Development on Resources and Environment , including global warming.

### **Unit –8 Development Experience of India**

- 1- A comparison with neighbour countries
- 2- India and Pakistan
- 3- India and China

## **Sociology**

### **Class-XI (2020-21)**

As the regular teaching-learning in schools, during the session 2020-21, has widely been affected due to the COVID-19 pandemic, the subject experts committee, after due consideration, has recommended to reduce the syllabus by 30% in the following manner:-

Almost 30% reduced syllabus:-

#### **Part-A: Introduction of sociology**

Unit-5: Doing sociology: Research Methods-

- 1- Methods.
- 2- Tools & Techniques: observation, interview & Questionnaire.
- 3- The significance of Field work in sociology.

#### **Part-B: Understanding society**

Unit-1: Social structure, stratification & social processes in society:

- 1- Social structure.
- 2- Social stratification: Class, caste, Gender.
- 3- Social processes: cooperation, competition, conflict.

Unit-3: Environment & society:

- 1- Ecology & Society.
- 2- Environment crises & social responses.
- 3- Sustainable development.

**Sociology****Class-XI (2020-21)**

(Revised syllabus 70%)

Total Marks:100

Only paper

Time: 3hrs.

A weightage of the content

Unit	Content	Periods	Marks
A	Introducing of sociology		
	1- Sociology; society & its relationship with other social sciences.	20	12
		20	12
	2- Basic concept & their use in sociology.	22	12
	3- Understanding social institutions.	18	14
	4- Culture & socialization.		
		Total-120	50
B	Understanding society		
	7- Social change and social order in Rural and Urban Society.	22	18
	9- Introducing Western sociologists.	20	16
		20	16
	10- Indian sociologists.		
		Total-120	50
	Grand Total-	240	100

**Part-A: Inducing Sociology**

Unit-1: Sociology, society &amp; its Relationship with other

Social sciences.

- Introducing society: Individuals & collectivities Plural perspectives.
- Introducing sociology: Emergence, Nature & scope, Relationship to other disciplines.

Unit-2: Basic concept &amp; their use in sociology

- Social groups and society.
- Status & Role.

- Social stratification.
- Society & social control.

Unit-3: Understanding social institutions.

- Family marriage & kinship.
- Work & Economic life.
- Political Institutions.
- Religion as a social Institution.
- Education as a social Institution.

Unit-4: Culture and socialization

- Culture, Values and Norms: on the basis of shared, mixed and participated.
- Socialization, conformity, conflict and the shaping of personality.

### **Part-B: Understanding Society**

Unit-7: social change and social order in Rural and Urban society

- Social change: Types, causes and contestation.
- Social order, Domination, Authority and Law, crime and violence.
- Village, town and city, change in Rural and Urban society.

Unit-9: Introducing Western sociologists-

- Karl Marx on class conflict.
- Emile Durkheim: Division of Labour & social consequences
- Max Weber, Bureaucracy.

Unit-10: Indian sociologists

- G.S. Ghurye on Caste and Race.
- D.P. Mukherjee on Tradition and change.
- A.R. Desai on the state.
- M.N. Srinivas on the Village.