

**English Core**  
**Code No. 301**  
**Class XI (2021-22)**  
**Term Wise Syllabus**

SECTION	TERM I	WEIGHTAGE (IN MARKS)	TERM II	WEIGHTAGE (IN MARKS)
A	<b>Reading Comprehension:</b> <ul style="list-style-type: none"> <li>Unseen passage (factual, descriptive or literary/ discursive or persuasive)</li> <li>Case Based Unseen (Factual) Passage</li> </ul>	8 + 5 = 13	<b>Reading Comprehension:</b> <ul style="list-style-type: none"> <li>Unseen passage (factual, descriptive or literary /discursive or persuasive)</li> <li>Unseen passage for Note Making and Summarising</li> </ul>	8 + 5 = 13
B	<b>Creative Writing Skills and Grammar:</b> <p><b>Short Writing Tasks</b></p> <ul style="list-style-type: none"> <li>Notice Writing</li> </ul> <p><b>Long Writing Tasks</b></p> <ul style="list-style-type: none"> <li>Business or Official Letters( Making enquiries, registering complaints, asking for or giving information, placing orders and sending replies)</li> <li>Speech</li> </ul> <p><b>Grammar</b></p> <ul style="list-style-type: none"> <li>Determiners</li> <li>Tenses</li> <li>Re-ordering of Sentences</li> </ul> <p>{MCQs on Gap filling/ Transformation of Sentences}</p>	3 + 5 + 4 = 12	<b>Creative Writing Skills and Grammar:</b> <p><b>Short Writing Tasks</b></p> <ul style="list-style-type: none"> <li>Posters</li> </ul> <p><b>Long Writing Tasks</b></p> <ul style="list-style-type: none"> <li>Official Letters: e.g. to school/college authorities (regarding admissions, school issues, requirements / suitability of courses)</li> <li>Debate</li> </ul> <p><b>Grammar</b></p> <ul style="list-style-type: none"> <li>Determiners</li> <li>Tenses</li> <li>Re-ordering of Sentences</li> </ul> <p>{MCQs on Gap filling/ Transformation of Sentences }</p>	3 + 5 + 4 = 12
C	<b>Literature:</b> Literary-prose/poetry extracts ( seen- texts ) comprehension and appreciation. <b>(Two Extracts)</b> <b>Questions Based on Texts to assess</b> comprehension and appreciation, analysis, inference, extrapolation <p><b>Book-Hornbill:</b></p> <ul style="list-style-type: none"> <li>The Portrait of a Lady (<i>Prose</i>)</li> <li>A Photograph (<i>Poem</i>)</li> <li>“We’re Not Afraid to Die... if We Can All Be Together” (<i>Prose</i>)</li> <li>Discovering Tut: the Saga Continues</li> <li>The Laburnum Top (<i>Poem</i>)</li> <li>Landscape of the Soul (<i>Prose</i>)</li> </ul> <p><b>Book-Snapshots:</b></p> <ul style="list-style-type: none"> <li>The Summer of the Beautiful White Horse(<i>Prose</i>)</li> <li>The Address (<i>Prose</i>)</li> <li>Ranga’s Marriage (<i>Prose</i>)</li> </ul>	<b>9 Marks for Hornbill + 6 Marks for Snapshots = 15 Marks</b>	<b>Literature:</b> Questions based on extracts/texts to assess comprehension and appreciation, analysis, inference, extrapolation <p><b>Book-Hornbill:</b></p> <ul style="list-style-type: none"> <li>The Voice of the Rain (<i>Poem</i>)</li> <li>The Ailing Planet: The Green Movement’s Role (<i>Prose</i>)</li> <li>The Browning Version( <i>Play</i>)</li> <li>Childhood (<i>Poem</i>)</li> <li>Silk Road (<i>Prose</i>)</li> </ul> <p><b>Book-Snapshots:</b></p> <ul style="list-style-type: none"> <li>Albert Einstein at School (<i>Prose</i>)</li> <li>Mother’s Day (<i>Play</i>)</li> <li>Birth ( <i>Prose</i>)</li> </ul>	<b>9 Marks for Hornbill + 6 Marks for Snapshots = 15 Marks</b>
	<b>TOTAL</b>	<b>40</b>	<b>TOTAL</b>	<b>40</b>
	<b>ASL</b>	<b>10</b>	<b>ASL</b>	<b>10</b>
	<b>GRAND TOTAL</b>	<b>40 + 10 = 50 MARKS</b>	<b>GRAND TOTAL</b>	<b>40 + 10 = 50 MARKS</b>

**PHYSICAL EDUCATION (048)**  
**DISTRIBUTION OF SYLLABUS – CLASS XI – 2021-2022**  
**TERM - I AND TERM - II**

<b>TERM I – THEORY</b> <b>MCQ BASED - 35 MARKS</b>		<b>TERM II – THEORY</b> <b>SHORT/LONG ANSWER – 35 MARKS</b>	
<b>*Unit No.</b>	<b>Name</b>	<b>*Unit No.</b>	<b>Name</b>
1.	Changing Trends & Career in Physical Education <ul style="list-style-type: none"> <li>• Meaning &amp; definition of Physical Education</li> <li>• Aims &amp; Objectives of Physical Education</li> <li>• Career Options in Physical Education.</li> <li>• Khelo-India Program</li> </ul>	4.	Physical Education & Sports for CWSN (Children With Special Needs- Divyang) <ul style="list-style-type: none"> <li>• Aims &amp; objectives of Adaptive Physical Education</li> <li>• Organization promoting Adaptive Sports (Special Olympics Bharat; Paralympics; Deaflympics)</li> <li>• Role of various professionals for children with special needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist &amp; special Educator)</li> </ul>
2.	Olympic Value Education <ul style="list-style-type: none"> <li>• Olympics</li> <li>• Olympic Symbols, Ideals, Objectives &amp; Values of Olympism</li> <li>• International Olympic Committee</li> <li>• Indian Olympic Association</li> </ul>	5.	Yoga <ul style="list-style-type: none"> <li>• Meaning &amp; Importance of Yoga</li> <li>• Elements of Yoga</li> <li>• Introduction - Asanas, Pranayam, Meditation &amp; Yogic Kriyas</li> <li>• Yoga for concentration &amp; related Asanas (Sukhasana; Tadasana; Padmasana &amp; Shashankasana, Naukasana, Vrikshasana (Tree pose), Garudasana (Eagle pose)</li> </ul>
3.	Physical Fitness, Wellness & Lifestyle <ul style="list-style-type: none"> <li>• Meaning &amp; Importance of Physical Fitness, Wellness &amp; Lifestyle</li> <li>• Components of physical fitness and Wellness</li> <li>• Components of Health related fitness</li> </ul>	6.	Physical Activity & Leadership Training <ul style="list-style-type: none"> <li>• Leadership Qualities &amp; Role of a Leader</li> <li>• Meaning, objectives &amp; types of Adventure Sports (Rock Climbing, Tracking, River Rafting, Mountaineering, Surfing and Paragliding)</li> <li>• Safety measures to prevent sports injuries</li> </ul>
7	Test, Measurement & Evaluation <ul style="list-style-type: none"> <li>• Define Test, Measurement &amp; Evaluation</li> <li>• Importance of Test, Measurement &amp; Evaluation In Sports</li> <li>• Calculation of BMI &amp; Waist - Hip Ratio.</li> <li>• Measurement of health related fitness.</li> </ul>	9.	Psychology & Sports <ul style="list-style-type: none"> <li>• Definition &amp; Importance of Psychology in Phy. Edu. &amp; Sports</li> <li>• Define &amp; Differentiate Between Growth &amp; Development.</li> <li>• Adolescent Problems &amp; Their Management</li> </ul>
8	Fundamentals of Anatomy, Physiology & Kinesiology in Sports <ul style="list-style-type: none"> <li>• Definition and Importance of Anatomy, Physiology &amp; Kinesiology</li> <li>• Function of Skeleton System, Classification of Bones &amp; Types of Joints .</li> </ul>	10.	Training and Doping in Sports <ul style="list-style-type: none"> <li>• Meaning &amp; Concept of Sports Training</li> <li>• Principles of Sports Training</li> <li>• Concept &amp; classification of doping</li> <li>• Prohibited Substances &amp; their side effects</li> </ul>

	<ul style="list-style-type: none"><li>• Function &amp; Structure of Respiratory System and Circulatory System</li><li>• Equilibrium – Dynamic &amp; Static And Centre of Gravity and its application in sports</li></ul>		
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**\*For resource material refer Class XI Physical Education Handbook available at Board's Academic website:  
[www.cbseacademic.nic.in](http://www.cbseacademic.nic.in)**

ਪੰਜਾਬੀ—104  
XI (ਗਿਆਰਵੀਂ)

ਟਰਮ I ਪਰੀਖਿਆ ਲਈ ਪਾਠ-ਕ੍ਰਮ ਅਤੇ ਅੰਕ-ਵੰਡ (ਨਵੰਬਰ-ਦਸੰਬਰ 2021)

ਕੁੱਲ ਅੰਕ 40

ਭਾਸ਼ਾ

- (1) ਅਡਵਾਂਸ ਪੜ੍ਹਨ ਕੌਸ਼ਲ 05  
ਜਾਣਕਾਰੀ ਭਰਪੂਰ ਇੱਕ ਅਣਡਿੱਠਾ ਪੈਰਾ ਤੇ ਉਸ ਨਾਲ ਸੰਬੰਧਿਤ 5 ਪ੍ਰਸ਼ਨ (ਬਹੁ-ਵਿਕਲਪੀ) (1X5)=5
- (2) ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ ਵਿੱਚ ਅਨੁਵਾਦ :- 21  
(ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ 11 ਪਾਠ-ਪੁਸਤਕ ਵਿੱਚ ਦਰਜ ਸ਼ਬਦਾਂ/ਵਾਕਾਂ 'ਤੇ ਆਧਾਰਿਤ)
- I. ਦਫ਼ਤਰੀ ਸ਼ਬਦਾਵਲੀ (ਬਹੁ-ਵਿਕਲਪੀ ਪ੍ਰਸ਼ਨ) (ਚੋਣ ਆਧਾਰਿਤ) 1X5=5
- II. ਵੱਖ-ਵੱਖ ਵਿਸ਼ਿਆਂ ਨਾਲ ਸੰਬੰਧਿਤ ਸ਼ਬਦਾਵਲੀ (ਬਹੁ-ਵਿਕਲਪੀ ਪ੍ਰਸ਼ਨ) (ਚੋਣ ਆਧਾਰਿਤ) 1X5=5
- III. ਬੈਂਕ, ਰੇਲਵੇ, ਬੀਮਾ-ਸੇਵਾਵਾਂ ਤੇ ਕੰਪਿਊਟਰ ਨਾਲ ਸੰਬੰਧਿਤ ਵਾਕ  
(ਬਹੁ-ਵਿਕਲਪੀ ਪ੍ਰਸ਼ਨ) (ਚੋਣ ਆਧਾਰਿਤ) 1X8=8
- (3) ਮੁਹਾਵਰੇ ਉ ਤੋਂ ਖ ਤੱਕ ਪਹਿਲੇ 32 (ਬਹੁ-ਵਿਕਲਪੀ ਪ੍ਰਸ਼ਨ) (ਚੋਣ ਆਧਾਰਿਤ) 1X3=3  
(ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ 11 ਪਾਠ-ਪੁਸਤਕ ਵਿੱਚ ਦਰਜ ਮੁਹਾਵਰਿਆਂ 'ਤੇ ਆਧਾਰਿਤ)

- ਪੰਜਾਬੀ ਲੋਕ-ਸਾਹਿਤ (ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ 11 ਪਾਠ-ਪੁਸਤਕ 'ਤੇ ਆਧਾਰਿਤ) 14
- I. ਲੋਕ-ਗੀਤ (ਸੁਹਾਗ, ਘੋੜੀਆਂ) (ਬਹੁ-ਵਿਕਲਪੀ ਪ੍ਰਸ਼ਨ) (ਚੋਣ ਆਧਾਰਿਤ) 1X7=7
- II. ਲੋਕ-ਗੀਤ (ਬੋਲੀਆਂ, ਢੋਲਾ) (ਬਹੁ-ਵਿਕਲਪੀ ਪ੍ਰਸ਼ਨ) (ਚੋਣ ਆਧਾਰਿਤ) 1X7=7

ਨਿਰਧਾਰਿਤ ਪਾਠ-ਪੁਸਤਕ : ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ 11 (ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)

ਨੋਟ - ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ 11 ਪਾਠ-ਪੁਸਤਕ ਨੂੰ ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ, ਸਾਹਿਬਜ਼ਾਦਾ ਅਜੀਤ ਸਿੰਘ ਨਗਰ (ਮੋਹਾਲੀ) ਵੱਲੋਂ ਪ੍ਰਕਾਸ਼ਤ ਕੀਤਾ ਗਿਆ ਹੈ। ਇਹ ਪੁਸਤਕ ਬੋਰਡ ਦੀ ਵੈੱਬਸਾਈਟ : [www.pseb.ac.in](http://www.pseb.ac.in) 'ਤੇ ਵੀ ਉਪਲਬਧ ਹੈ।

### 3. Unit wise Syllabus

#### TERM 1:

#### Unit I: Computer Systems and Organisation

- Basic Computer Organisation: Introduction to computer system, hardware, software, input device, output device, CPU, memory (primary, cache and secondary), units of memory (Bit, Byte, KB, MB, GB, TB, PB)
- Types of software: system software (operating systems, system utilities, device drivers), programming tools and language translators (assembler, compiler & interpreter), application software
- Operating system (OS): functions of operating system, OS user interface
- Boolean logic: NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's laws and logic circuits
- Number system: Binary, Octal, Decimal and Hexadecimal number system; conversion between number systems.
- Encoding schemes: ASCII, ISCII and UNICODE (UTF8, UTF32)

#### Unit II: Computational Thinking and Programming – 1

- Introduction to problem solving: Steps for problem solving (analysing the problem, developing an algorithm, coding, testing and debugging). representation of algorithms using flow chart and pseudo code, decomposition
- Familiarization with the basics of Python programming: Introduction to Python, features of Python, executing a simple "hello world" program, execution modes: interactive mode and script mode, Python character set, Python tokens (keyword, identifier, literal, operator, punctuator), variables, concept of l-value and r-value, use of comments
- Knowledge of data types: number (integer, floating point, complex), boolean, sequence (string, list, tuple), none, mapping (dictionary), mutable and immutable data types
- Operators: arithmetic operators, relational operators, logical operators, assignment operator, augmented assignment operators, identity operators (is, is not), membership operators (in, not in)
- Expressions, statement, type conversion & input/output: precedence of operators, expression, evaluation of expression, python statement, type conversion (explicit & implicit conversion), accepting data as input from the console and displaying output
- Errors: syntax errors, logical errors, runtime errors
- Flow of control: introduction, use of indentation, sequential flow, conditional and iterative flow control
- Conditional statements: if, if-else, if-elif-else, flowcharts, simple programs: e.g.: absolute value, sort 3 numbers and divisibility of a number
- Iterative statements: for loop, range function, while loop, flowcharts, break and continue statements, nested loops, suggested programs: generating pattern, summation of series, finding the factorial of a positive number etc
- Strings: introduction, indexing, string operations (concatenation, repetition, membership & slicing), traversing a string using loops, built-in functions: len(), capitalize(), title(), lower(), upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha(), isdigit(), islower(), isupper(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), split()

**PHYSICS XI (Code No. 042) COURSE STRUCTURE**  
**Class XI (Theory) Term 1**

Time: one and half hours.

Max Marks: 35

		No. of Periods	Marks
<b>Unit-I</b>	<b>Physical World and Measurement</b>	<b>6</b>	<b>20</b>
	Chapter-1: Physical World		
	Chapter-2: Units and Measurements		
<b>Unit-II</b>	<b>Kinematics</b>	<b>16</b>	
	Chapter-3: Motion in a Straight Line		
	Chapter-4: Motion in a Plane		
<b>Unit-III</b>	<b>Laws of Motion</b>	<b>10</b>	
	Chapter-5: Laws of Motion		
<b>Unit-IV</b>	<b>Work, Energy and Power</b>	<b>12</b>	<b>15</b>
	Chapter-6: Work, Energy and Power		
<b>Unit-V</b>	<b>Motion of System of Particles and Rigid Body</b>	<b>16</b>	
	Chapter-7: System of Particles and Rotational Motion		
<b>Unit-VI</b>	<b>Gravitation</b>	<b>8</b>	
	Chapter-8: Gravitation		
<b>Total</b>		<b>68</b>	<b>35</b>

**Syllabus assigned for first term**

**Unit I: Physical World and Measurement**

**6 Periods**

**Chapter-1: Physical World**

Physics-scope and excitement; nature of physical laws; Physics, technology and society. (To be discussed as a part of Introduction and integrated with other topics)

**Chapter-2: Units and Measurements**

Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Length, mass and time measurements; accuracy and precision of measuring instruments; errors in measurement; significant figures.

Dimensions of physical quantities, dimensional analysis and its applications.

**Unit II: Kinematics**

**16 Periods**

**Chapter-3: Motion in a Straight Line**

Elementary concepts of differentiation and integration for describing motion, uniform and non-uniform motion, average speed and instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs.

Relations for uniformly accelerated motion (graphical treatment).

**Chapter-4: Motion in a Plane**

Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors,

relative velocity, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors.

Motion in a plane, cases of uniform velocity and uniform acceleration-projectile motion, uniform circular motion.

**Unit III: Laws of Motion**

**10 Periods**

**Chapter–5: Laws of Motion**

*Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. (Recapitulation only)*

Law of conservation of linear momentum and its applications.

Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication.

Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).

**Unit IV: Work, Energy and Power**

**12 Periods**

**Chapter–6: Work, Energy and Power**

Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power.

Notion of potential energy, potential energy of a spring, conservative forces: conservation of mechanical energy (kinetic and potential energies); non-conservative forces: motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.

**Unit V: Motion of System of Particles and Rigid Body**

**16 Periods**

**Chapter–7: System of Particles and Rotational Motion**

Centre of mass of a two-particle system, momentum conservation and centre of mass motion.

Centre of mass of a rigid body; centre of mass of a uniform rod.

Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications.

Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions.

Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).

**Unit VI: Gravitation**

**8 Periods**

**Chapter–8: Gravitation**

Universal law of gravitation. Acceleration due to gravity (recapitulation only) and its variation with altitude and depth.

Gravitational potential energy and gravitational potential, escape velocity, orbital velocity of a satellite, Geo-stationary satellites.

## CHEMISTRY (043)

### SYLLABUS FOR SESSION 2021-22 CLASS XI Term-I

S	UNIT	Periods	Marks
1	Some Basic Concepts of Chemistry	10	11
2	Structure of Atom	12	
3	Classification of Elements and Periodicity in Properties	6	4
4	Chemical Bonding and Molecular Structure	14	6
5	Redox Reactions	4	5
6	Hydrogen	4	
7	Organic Chemistry: Some basic Principles and Techniques	10	9
	TOTAL	60	35

**Some Basic Concepts of Chemistry:** 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.

**Structure of Atom:** 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

**Classification of Elements and Periodicity in Properties:** 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.

**Chemical Bonding and Molecular Structure:**

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.

**Redox Reactions:**

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.

**Hydrogen:** 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

**Organic Chemistry: Some basic Principles and Techniques:** General introduction, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a 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.



# **XI Theory Syllabus (2021-22)**

## **Biology (Term I)**

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

#### **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 and Gymnospermae. (salient and distinguishing features and a few examples of each category).

#### **Chapter-4: Animal Kingdom**

Salient features and classification of animals, non-chordates up to phyla level and chordates up to class level (salient features and distinguishing features of a few examples of each category). (No live animals or specimen should be displayed.)

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

#### **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 experiments of the Practical Syllabus).

#### **Chapter-7: Structural Organization in Animals**

Animal tissues.

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

#### **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.

**MATHEMATICS (XI)**  
**(Code No. 041)**  
**COURSE STRUCTURE**  
**CLASS XI (2021-22)**  
**TERM - I**

One Paper

**90 Minutes**

**Max Marks: 40**

No.	Units	Marks
I.	Sets and Functions	11
II.	Algebra	13
III.	Coordinate Geometry	6
IV.	Calculus	4
V.	Statistics and Probability	6
	Total	40
	Internal Assessment	10
	<b>Total</b>	<b>50</b>

\*No chapter-wise weightage. Care to be taken to cover all the chapters.

**Unit-I: Sets and Functions**

**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 reals with itself ( $R \times R$  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.

## **Unit-II: Algebra**

### **1. 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.

### **2. 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**

### **1. Straight Lines**

Brief recall of two dimensional geometry from earlier classes. 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. Distance of a point from a line.

## **Unit-IV: Calculus**

### **1. Limits**

Intuitive idea of limit. Limits of polynomials and rational functions trigonometric, exponential and logarithmic functions

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

### **1. Statistics**

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

**ECONOMICS (Code No. 030)**  
(2021-22)  
**CLASS XI - TERM-WISE CURRICULUM**

Units	TERM 1 - MCQ BASED QUESTION PAPER		Marks
	Theory: 40 Marks	Time: 90 minutes	
<b>Part A</b>	<b>Statistics for Economics</b>		
	Introduction		4
	Collection, Organisation and Presentation of Data		9
	Statistical Tools and Interpretation – Arithmetic Mean, Median and Mode		10
	<b>Sub Total</b>		<b>23</b>
<b>Part B</b>	<b>Introductory Microeconomics</b>		
	Introduction		4
	Consumer's Equilibrium and Demand		13
	<b>Sub Total</b>		<b>17</b>
	<b>Total</b>		<b>40 marks</b>
<b>Part C</b>	<b>Project Work (Part 1): 10 Marks</b>		

Students would prepare only ONE project in the entire academic session, which is divided into 2 terms i.e. Term I and Term II.

## TERM 1

### Part A: Statistics for Economics

#### Unit 1: Introduction

What is Economics?

Meaning, scope, functions and importance of statistics in Economics

#### Unit 2: Collection, Organisation and Presentation of data

**Collection of data** - sources of data - primary and secondary; how basic data is collected with concepts of Sampling; methods of collecting data; some important sources of secondary data: Census of India and National Sample Survey Organisation.

**Organisation of Data:** Meaning and types of variables; Frequency Distribution.

**Presentation of Data:** Tabular Presentation and Diagrammatic Presentation of Data:

(i) Geometric forms (bar diagrams and pie diagrams), (ii) Frequency diagrams (histogram, polygon and Ogive) and (iii) Arithmetic line graphs (time series graph).

#### Unit 3: Statistical Tools and Interpretation

**Measures of Central Tendency-** Arithmetic mean, median and mode

## **Part B: Introductory Microeconomics**

### **Unit 4: Introduction**

Meaning of microeconomics and macroeconomics; positive and normative economics

What is an economy? Central problems of an economy: what, how and for whom to produce; opportunity cost.

### **Unit 5: Consumer's Equilibrium and Demand**

Consumer's equilibrium - meaning of utility, marginal utility, law of diminishing marginal utility, conditions of consumer's equilibrium using marginal utility analysis.

Indifference curve analysis of consumer's equilibrium-the consumer's budget (budget set and budget line), preferences of the consumer (indifference curve, indifference map) and conditions of consumer's equilibrium.

Demand, market demand, determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve; price elasticity of demand - factors affecting price elasticity of demand; measurement of price elasticity of demand – percentage-change method.

### **Part C: Project in Economics - Guidelines as given in class XII curriculum**

**BUSINESS STUDIES (Code No. 054)  
CLASS–XI (2021-22) TERM WISE CURRICULUM**

<b>TERM 1- MCQ BASED QUESTION PAPER</b>			
<b>THEORY - 40 MARKS</b>		<b>DURATION:90 MINUTES</b>	
<b>Units</b>		<b>Periods</b>	<b>Marks</b>
<b>Part A</b>	<b>Foundations of Business</b>		
1	Evolution and Fundamentals of Business	18	16
2	Forms of Business Organisations	20	
3	Public, Private and Global Enterprises	10	14
4	Business Services	14	
5	Emerging Modes of Business	05	10
6	Social Responsibility of Business and Business Ethics	08	
	<b>Total</b>	<b>75</b>	<b>40</b>
	<b>PROJECT WORK ( Part-1)</b>		<b>10</b>

Students would prepare only ONE project in the entire academic session, which is divided into 2 terms i.e. Term I and Term II.

**TERM I**

**Part A: Foundation of Business**

Concept includes meaning and features

**Unit 1: Evolution and Fundamentals of Business**

<b>Content</b>	<b>After going through this unit, the student/ learner would be able to:</b>
History of Trade and Commerce in India: Indigenous Banking System, Rise of Intermediaries, Transport, Trading Communities: Merchant Corporations, Major Trade Centers, Major Imports and Exports, Position of Indian Sub-Continent in the World Economy.	<ul style="list-style-type: none"> <li>● To acquaint the History of Trade and Commerce in India</li> </ul>
Business – meaning and characteristics	<ul style="list-style-type: none"> <li>● Understand the meaning of business with special reference to economic and non-economic activities.</li> <li>● Discuss the characteristics of business.</li> </ul>

Business, profession and employment-Concept	<ul style="list-style-type: none"> <li>● Understand the concept of business, profession and employment.</li> <li>● Differentiate between business, profession and employment.</li> </ul>
Objectives of business	<ul style="list-style-type: none"> <li>● Appreciate the economic and social objectives of business.</li> <li>● Examine the role of profit in business.</li> </ul>
Classification of business activities - Industry and Commerce	<ul style="list-style-type: none"> <li>● Understand the broad categories of business activities- industry and commerce.</li> </ul>
Industry-types: primary, secondary, tertiary Meaning and subgroups	<ul style="list-style-type: none"> <li>● Describe the various types of industries.</li> </ul>
Commerce-trade: (types-internal, external; wholesale and retail) and auxiliaries to trade; (banking, insurance, transportation, warehousing, communication, and advertising) – meaning	<ul style="list-style-type: none"> <li>● Discuss the meaning of commerce, trade and auxiliaries to trade.</li> <li>● Discuss the meaning of different types of trade and auxiliaries to trade.</li> <li>● Examine the role of commerce- trade and auxiliaries to trade.</li> </ul>
Business risk-Concept	<ul style="list-style-type: none"> <li>● Understand the concept of risk as a special characteristic of business.</li> <li>● Examine the nature and causes of business risks.</li> </ul>

## Unit 2: Forms of Business organizations

Sole Proprietorship-Concept, merits and limitations.	<ul style="list-style-type: none"> <li>● List the different forms of business organizations and understand their meaning.</li> <li>● Identify and explain the concept, merits and limitations of Sole Proprietorship.</li> </ul>
Partnership-Concept, types, merits and limitation of partnership, registration of a partnership firm, partnership deed. Types of partners	<ul style="list-style-type: none"> <li>● Identify and explain the concept, merits and limitations of a Partnership firm.</li> <li>● Understand the types of partnership on the basis of duration and on the basis of liability.</li> <li>● State the need for registration of a partnership firm.</li> <li>● Discuss types of partners –active, sleeping, secret, nominal and partner by estoppel.</li> </ul>
Hindu Undivided Family Business: Concept	<ul style="list-style-type: none"> <li>● Understand the concept of Hindu Undivided Family Business.</li> </ul>
Cooperative Societies-Concept, types, merits, and limitations.	<ul style="list-style-type: none"> <li>● Identify and explain the concept, merits and limitations of Cooperative Societies.</li> <li>● Understand the concept of consumers, producers, marketing, farmers, credit and housing co-operatives.</li> </ul>
Company - Concept, merits and limitations; Types: Private, Public and One Person Company – Concept	<ul style="list-style-type: none"> <li>● Identify and explain the concept, merits and limitations.</li> <li>● Understand the concept of private and public companies and one person company.</li> <li>● Understand the meaning of one person company.</li> <li>● Distinguish between a private company and a public company.</li> </ul>

Formation of company - stages, important documents to be used in the formation of a company	<ul style="list-style-type: none"> <li>● Highlight the stages in the formation of a company.</li> <li>● Discuss the important documents used in the various stages in the formation of a company.</li> </ul>
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### Unit 3: Public, Private and Global Enterprises

Public sector and private sector enterprises – Concept	<ul style="list-style-type: none"> <li>● Develop an understanding of Public sector and private sector enterprises</li> </ul>
Forms of public sector enterprises: Departmental Undertakings, Statutory Corporations and Government Company.	<ul style="list-style-type: none"> <li>● Identify and explain the features, merits and limitations of different forms of public sector enterprises</li> </ul>

### Unit 4: Business Services

Business services – meaning and types. Banking: Types of bank accounts - savings, current, recurring, fixed deposit and multiple option deposit account	<ul style="list-style-type: none"> <li>● Understand the meaning and types of business services.</li> <li>● Develop an understanding of different types of bank accounts.</li> </ul>
Banking services with particular reference to Bank Draft, Bank Overdraft, Cash credit. E-Banking meaning, Types of digital payments	<ul style="list-style-type: none"> <li>● Develop an understanding of the different services provided by banks</li> </ul>
Insurance – Principles. Types – life, health, fire and marine insurance– concept	<ul style="list-style-type: none"> <li>● Understand Utmost Good Faith, Insurable Interest, Indemnity, Contribution, Doctrine of Subrogation and Causa Proxima as principles of insurance</li> <li>● Discuss different types of insurance-life, health, fire, marine insurance</li> </ul>

### Unit 5: Emerging Modes of Business

E - business: concept, scope and benefits	<ul style="list-style-type: none"> <li>● Give the meaning of e-business.</li> <li>● Discuss the scope of e-business.</li> <li>● Appreciate the benefits of e-business</li> <li>● Distinguish e-business from traditional business.</li> </ul>
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### Unit 6: Social Responsibility of Business and Business Ethics

Concept of social responsibility	<ul style="list-style-type: none"> <li>● State the concept of social responsibility.</li> </ul>
Case for social responsibility	<ul style="list-style-type: none"> <li>● Examine the case for social responsibility.</li> </ul>
Responsibility towards owners, investors, consumers, employees, government and community.	<ul style="list-style-type: none"> <li>● Identify social responsibilities towards different interest groups.</li> </ul>
Role of business in environment protection	<ul style="list-style-type: none"> <li>● Appreciate the role of business in environment protection.</li> </ul>

**PROJECT WORK IN BUSINESS STUDIES (ONLY ONE PROJECT): GUIDELINES AS GIVEN IN CLASS XII CURRICULUM**



## Accountancy (Code No.055)

### Course Structure

Class-XI (2021-22)

<b>TERM – 1 (MCQ BASED QUESTION PAPER)</b>		<b>MARKS</b>
<b>THEORY :40 MARKS</b>		<b>TIME: 90 minutes</b>
<b>Part A: FINANCIAL ACCOUNTING-I</b>		
<b><u>UNIT 1</u></b>		
<b><u>THEORETICAL FRAMEWORK:</u></b>		12
1	INTRODUCTION TO ACCOUNTING	
2	THEORY BASE OF ACCOUNTING	
<b><u>UNIT 2</u></b>		
<b><u>ACCOUNTING PROCESS:</u></b>		28
RECORDING OF BUSINESS TRANSACTIONS, BANK RECONCILIATION STATEMENT, DEPRECIATION, PROVISIONS AND RESERVES		
<b>TOTAL</b>		<b>40</b>
<b>Project Work (Part -1): 10 Marks</b>		