

### **Academic Session 2023-24**

#### CLASS XI SCIENCE STREAM



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#### **CORE ENGLISH (301) SYLLABUS**

#### PRE MID TERM

- **SECTION A (Reading)** [26 Marks]:
  - I. One unseen passage to assess comprehension, interpretation inference and vocabulary. The passage may be factual, descriptive or literary.
- II. One unseen case-based passage with verbal/visual inputs like statistical data, charts etc.
  Note: The combined word limit for both the passages will be 600-750.
  Multiple Choice Questions / Objective Type Questions will be asked. (10+8 =18 Marks)
- III. Note Making and Summarization based on a passage of approximately 200-250 words.
  - i. Note waking and Summarization based on a passage of approximately 200-250 words
  - i. Note Making:

5 Marks

- o Title: [1]
- o Numbering and indenting: [1]
- o Key/glossary: [1]
- o Notes: [2]
- ii. Summary (upto50words):

3 Marks

Content: [2] Expression: [1]

#### • <u>SECTION B (Writing & Grammar)</u> [23 Marks]:

The writing formats and grammar items listed below have been covered in previous classes. However, the examination syllabus will include items taught during the term.

- o Writing:
- 1. One Short answer Question:

Poster, Advertisement (Commercial & Classified)

3 Marks

2. One Very Long Answer Question:

Composition in the form of Debate, Speech

5 Marks

#### o Grammar:

Tenses, Clauses

These grammar areas will be tested through objective type questions in grammar including:

- 1. Gap Filling, Error Correction, editing tasks
- 2. Dialogue Completion,
- 3. Sentence Re-Ordering, Sentence Transformation

7 Marks

#### • <u>SECTION C (Literature) [31 Marks]</u>:

- I. Reference to the Context
  - A. One Poetry extract out of two from the book **Hornbill** to assess comprehension, interpretation, analysis and appreciation. (3x1=3 Marks)
  - B. One Prose extract out of two from the book **Hornbill** to assess comprehension, interpretation, analysis and appreciation. (3x1=3 Marks)



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  - C. One prose extract out of two from the book **Snapshots** to assess comprehension, interpretation and analysis. (4x1=4 Marks)
- II. Two Short answer type question (one from Prose and one from Poetry from the book **Hornbill**), out of four, to be answered in 40-50 words. Questions should elicit inferential responses through critical thinking. (3x2=6 Marks)
- II. One Short answer type question, from the book Snapshots, to be answered in 40-50 words. Questions should elicit inferential responses through critical thinking. Any 1 out of 2 questions to be done. (3x1=3 Marks)
- III. One Long answer type question, from **Prose/Poetry Hornbill**, to be answered in 120-150 words. Questions can be based on incident / theme / passage / extract / event as reference points to assess extrapolation beyond and across the text. The question will elicit analytical and evaluative response from student. Any 1 out of 2 questions to be done. (**1x6=6 Marks**) IV. One Long answer type question, based on the chapters from the book **Snapshots** to be answered in 120-150 words to assess global comprehension and extrapolation beyond the text. Questions to provide evaluative and analytical responses using incidents, events, themes as reference points. Any 1 out of 2 questions to be done. (**1x6=6 Marks**)
  - o Hornbill:
    - Prose: The Portrait of a Lady, We're Not Afraid to Die..if We Can All Be Together, Discovering Tut: the Saga Continues,
    - Ø **Poetry:** A Photograph, The Laburnum Top
  - o **Snapshots:** The Summer of the Beautiful White Horse, The Address

#### • Assessment of Speaking and Listening (ASL) [20 Marks]:

- o Listening: Lectures & Talks, News Bulletins on current national and international affairs, sports, business etc., Travelling Announcements
- o Speaking: Formal Public Speaking, Responding to enquiries
- o Assessment Parameters
  - i. Response (accuracy & relevance)
  - ii. Interactive competence (Initiation & turn taking, relevance to the topic).
  - iii. Fluency (cohesion, coherence and speed of delivery).
  - iv. Pronunciation
  - v. Language (accuracy and vocabulary)

#### **MID TERM** (In addition to previous term syllabus):

#### • SECTION A (Reading):

Same as question type and marking pattern as in previous term.

#### • SECTION B (Writing & Grammar):





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Same question type and marking pattern as in previous term. The examination syllabus will include items taught during this and in previous term.

#### **SECTION C (Literature):**

Same question type and marking pattern as in previous term with addition of the following pieces:

#### o Hornbill:

Ø Prose: The Adventure, Silk Road Ø **Poetry:** The Voice of the Rain

o Snapshots: Mother's Day, Birth

#### **Assessment of Speaking and Listening (ASL):**

Same question type and marking pattern as in previous term.

#### **POST-MID TERM (In addition to previous term syllabus):**

#### **SECTION A (Reading):**

Same question type and marking pattern as in previous term.

#### **SECTION B (Writing & Grammar):**

Same question type and marking pattern as in previous term. The examination syllabus will include items taught during this and in previous terms.

#### **SECTION C (Literature):**

Same question type and marking pattern as in previous term with addition of the following pieces:

#### o Hornbill:

Ø **Prose:** The Adventure, Silk Road (Prose)

ø Poetry: Childhood o **Snapshots:** Mother's Day

#### Assessment of Speaking and Listening (ASL):

Same question type and marking pattern as in previous term.

#### **FINAL TERM** (In addition to previous term syllabus):

#### **SECTION A (Reading):**

Same question type and marking pattern as in previous term.

#### **SECTION B (Writing & Grammar):**

Same question type and marking pattern as in previous term. The examination syllabus will include items taught during this and in previous terms.





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#### • <u>SECTION C (Literature)</u>:

Same question type and marking pattern as in previous term with addition of the following pieces:

o Hornbill

Prose: Silk RoadPoetry: Father to Son

o **Snapshots:** The Tale of Melon City

#### **Assessment of Speaking and Listening (ASL):**

Same question type and marking pattern as in previous term.



### CLASSION 2023-2



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#### **MATHEMATICS (041) SYLLABUS**

#### PRE MID TERM

- UNITS: Sets, Relations and Functions, Trigonometric Functions, Complex Numbers and Quadratic Equations
- Math Lab Activity
  - a. To find the number of subsets of a given set and verify that if a set has n number of elements, then the total number of subsets is  $2^n$ .
  - b. To identify a relation and a function.
  - c. To distinguish between a Relation and a Function.

#### **MID TERM** (In addition to previous term syllabus)

- UNITS: Linear Inequalities, Permutations and Combinations, Binomial Theorem, Sequences and Series
- Math Lab Activity
  - a. To verify the relation between the degree measure and the radian measure of an angle.
  - b. To construct a Pascal's Triangle and to write binomial expansion for a given positive integral exponent.
  - c. To obtain formula for the sum of squares of first n natural numbers or alternate method for the same.
  - d. To prove that AM > GM.

#### **POST-MID TERM (In addition to previous term syllabus)**

- UNITS: Straight Lines, Conic Sections, Introduction to 3D-geometry, Statistics
- Math Lab Activity
  - a. To establish the formula for the sum of the cubes of the first n natural numbers.
  - b. To construct different types of conic sections.

#### FINAL TERM (In addition to previous term syllabus)

- UNITS: Limits and Derivatives, Probability
- Math Lab Activity
  - a. Verification of geometrical significance of derivative.
  - b. To obtain truth values of compound statements of the type p v q and p ^ q by using switch connections in parallel and in series respectively.



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#### **PHYSICS (042) SYLLABUS**

#### **PRE MID TERM**

• UNITS: Physical World, Units and Measurements, Motion in a Straight Line, Motion in a Plane, Laws of Motion

#### EXPERIMENT

- To measure the diameter of a small spherical/cylindrical body using vernier callipers.
- To measure the internal diameter and depth of a given beaker/calorimeter using vernier callipers and hence find its volume.
- To measure the diameter of a given wire using a screw gauge.
- To measure the thickness of a given sheet using a screw gauge.
- To measure the volume of an irregular lamina using a screw gauge.
- To determine radius of curvature of a given spherical surface by a spherometer.

#### ACITVITY

- To make a paper scale of the given least count, e.g. 0.2 cm, 0.5 cm.
- To determine the mass of a given body using a metre scale by the principle of moments.
- To plot a graph for a given set of data, with proper choice of scales and error bars.

#### **MID TERM** (In addition to previous syllabus)

• UNITS: Work, Energy and Power, System of Particles and Rotational Motion

#### EXPERIMENT

- To determine the mass of two different objects using a beam balance.
- To find the weight of a given body using the parallelogram law of vectors.
- Using a simple pendulum, plot L-T and L-T<sub>2</sub> graphs. Hence find the effective length of a second's pendulum using an appropriate graph.
- To study the relationship between the force of limiting friction and normal reaction and to find the coefficient of friction between a block and a horizontal surface.
- To find the downward force, along an inclined plane, acting on a roller due to gravitational pull of the earth and study its relationship with the angle of inclination (θ) by plotting graph between force and sin θ.

#### ACITVITY

- To measure the force of limiting friction for rolling of a roller on a horizontal plane.
- To study the variation in the range of a jet of water with the angle of projection.
- To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane).
- To study the dissipation of energy of a simple pendulum by plotting a graph between the square of amplitude and time.

#### **POST MID TERM (In addition to previous syllabus)**

• UNITS: Gravitation, Mechanical Properties of Solids, Mechanical Properties of Fluids,



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Thermal Properties of Matter, Thermodynamics

#### EXPERIMENT

- To determine Young's modulus of elasticity of the material of a given wire.
- To find the force constant of a helical spring by plotting a graph between load and extension.
- To study the variation in volume with pressure for a sample of air at constant temperature by plotting graphs between P and V, and between P and 1/V.
- To determine the surface tension of water by capillary rise method.
- To determine the coefficient of viscosity of a given viscous liquid by measuring the terminal velocity of a given spherical body.

#### ACITVITY

- To observe the change of state and plot a cooling curve for molten wax.
- To observe and explain the effect of heating on a bi-metallic strip.
- To note the change in the level of liquid in a container on heating and interpret the observations.

#### **FINAL TERM** (In addition to previous syllabus)

• UNITS: Kinetic Theory, Oscillations, Waves

#### EXPERIMENT

- To study the relationship between the temperature of a hot body and time by plotting a cooling curve.
- To determine the specific heat capacity of a given (i) solid (ii) liquid, by the method of mixtures.
- (i) To study the relation between frequency and length of a given wire under constant tension using a sonometer.
- (ii) To study the relation between the length of a given wire and tension for constant frequency using a sonometer.
- To find the speed of sound in air at room temperature using a resonance tube by two resonance positions.

#### ACITVITY

- To study the effect of detergent on the surface tension of water by observing capillary rise.
- To study the factors affecting the rate of loss of heat of a liquid.
- To study the effect of load on the depression of a suitably clamped meter scale loaded at (i) at its end (ii) in the middle.

**Project:** As per CBSE.



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#### **CHEMISTRY (043) SYLLABUS**

#### PRE MID TERM

- UNITS: Some Basic Concepts of Chemistry, Structure of Atom, Classification of Elements and Periodicity in Properties.
- PRACTICALS:

#### A. Basic Laboratory Techniques

- 1. Cutting glass tube and glass rod
- 2. Bending a glass tube
- 3. Drawing out a glass jet
- 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.

#### **MID TERM EXAM (In addition to previous syllabus)**

- UNITS: Chemical Bonding and Molecular Structure, Thermodynamics, Equilibrium.
- PRACTICALS:

#### C. Experiments based on pH

- 1. 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.
  - O 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.
- 2. Study the pH change by common-ion in case of weak acids and weak bases.

#### D. Chemical Equilibrium

- 1. One of the following experiments:
  - O Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the concentration of either of the ions.
  - Study the shift in equilibrium between  $[Co(H_2O)_6]^{2+}$  and chloride ions by changing the concentration of either of the ions.

#### POST MID TERM EXAM (In addition to previous syllabus)

- UNITS: Redox Reactions, Organic Chemistry -Some Basic Principles and Techniques
- PRACTICALS:

#### E. Quantitative Estimation

- 1. Using a mechanical balance/electronic balance.
- 2. Preparation of standard solution of Oxalic acid.
- 3. Determination of strength of a given solution of Sodium hydroxide by titrating it





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against standard solution of Oxalic acid.

- 4. Preparation of standard solution of Sodium carbonate.
- 5. Determination of strength of a given solution of hydrochloric acid by titrating it against standard Sodium Carbonate solution.

#### FINAL TERM EXAM (In addition to previous syllabus)

- UNITS: Hydrocarbons: Classification of Hydrocarbons- Aliphatic & Aromatic Hydrocarbons.
- PRACTICALS:
  - F. Qualitative Analysis
  - 1. Determination of one anion and one cation in a given salt
  - o Cation: Pb<sup>2+,</sup> Cu<sup>2+</sup> As<sup>3+</sup>, Al<sup>3+</sup>, Fe<sup>3+</sup>, Mn<sup>2+</sup>, Zn<sup>2+</sup>, Ni<sup>2+</sup>, Ca<sup>2+</sup>, Sr<sup>2+</sup>, Ba<sup>2+</sup>, Mg<sup>2+</sup>, NH<sup>4+</sup>
- $\circ$  Anions:  $(CO_3)^2$ -,  $S^2$ -,  $(SO_3)^2$ -,  $(NO_2)$ -,  $(SO_4)^2$ -,  $C\ell$ -, Br-, I-,  $(PO_4)^3$ -,  $(C_2O_4)^2$ -,  $CH_3COO$ -,  $NO_3$  (Note: Insoluble salts excluded)
  - 2. Detection of -Nitrogen, Sulphur, Chlorine in organic compounds.



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#### **BIOLOGY (044) SYLLABUS**

#### **PRE MID TERM**

- UNITS: The Living World, Biological Classification, Plant Kingdom, Animal Kingdom, Morphology of Flowering Plants, Anatomy of Flowering Plants, Structural Organisation in Animals
- PRACTICALS:
- To study parts of a compound microscope
- To identify and study the morphology of representative types of bacteria, fungi and different plant groups
- To study some selected animals on the basis of their external features
- To study modifications of root, stem and leaf
- To study and identify different types of inflorescences
- Study and describe flowering plants of families Solanaceae, Fabaceae and Liliaceae
- To study anatomy of stem and root of monocots and dicots
- Preparation of herbarium sheets of flowering plants
- Study of external morphology of animals through models

#### **MID TERM** (In addition to previous syllabus)

- UNITS: Cell: The Unit of Life, Biomolecules, Cell Cycle and Cell Division, Photosynthesis in Higher Plants
- PRACTICALS:
- Study of tissues and diversity in shapes and sizes of plant cells
- Preparation of temporary slide of animal tissues and their study
- Study of mitosis
- Separation of plant pigments by paper chromatography

#### **POST MID TERM** (In addition to previous syllabus)

- UNITS: Respiration in Plants, Plant Growth and Development, Breathing and Exchange of gases, Body Fluids and Circulation, Excretory Products and their Elimination
- PRACTICALS:
- To study the rate of respiration in flower buds / germinating seeds
- Observation and Comment on the Setup
- To study the Enzymatic action of Salivary Amylase on starch
- To study the effect of temperature on the activity of salivary amylase
- To study the effect of pH on the action of salivary amylase
- To detect the presence of urea, sugar, albumin and bile salts in the given sample of urine.





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#### **FINAL TERM** (In addition to previous syllabus)

- UNITS: Locomotion and Movement, Neural Control and Coordination, Chemical Coordination and Integration
- PRACTICALS:
- To study the human skeleton
- To study different types of joints in human skeleton



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#### PHYSICAL EDUCATION (048) SYLLABUS

#### **PRE MID TERM**

- UNITS: I Changing Trends & Career in Physical Education [1]
  - Meaning & definition of Physical Education.
  - Aims & Objective of Physical Education.
  - Career Options in Physical Education.
  - Competitions in various sports at national and international level.
  - Khelo-India Program.

#### • UNITS: II Olympic Value Education

- Olympics, Paralympics and Special Olympics.
- Olympics Symbols, Ideals, Objectives & Values of Olympism.
- International Olympic Committee.
- Indian Olympic Association.

#### • UNITS: III Physical Fitness, Wellness & Lifestylesep

- Meaning & Importance of Physical Fitness, Wellness & Lifestyle.
- Components of physical fitness and Wellness.
- Components of Health related fitness.
- UNITS: IV Physical Education & Sports for CWSN (children with special needs-Divyang)
  - Aims & Objective of Adaptive Physical Education.
  - Organization promoting Adaptive Sports (Special Olympics Bharat; Paralympics; Deaflympics)
  - Concept of Inclusion, its need and Implementation.
  - Role of various professionals for children with special need
    (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher,
    Speech Therapist & special educator)

#### MID TERM (In addition to previous syllabus)

- UNITS: V Yoga
  - Meaning & Importance of yoga.
  - Elements of yoga.
  - Introduction- Asanas, Pranayam, Meditation & Yogic Kriyas.
  - Yoga of concentration & related Asanas (Sukhasana; Tadasana; Padmasana & Shashankasana, Naukasana, Vrikshasana (tree pose), Garudasana (eagle pose)
  - Relaxation techniques for improving concentration-Yog-nidra



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#### • UNITS: VI Physical Activity & Leadership Training

- Leadership Qualities & Role of a leader.
- Creating leaders through Physical Education.
- Meaning, objectives & types of Adventure sports(Rock Climbing, Tracking, River Rafting, Mountaineering, Surfing and Para Gliding).
- Safety measures to prevent sports injuries

#### • UNITS: VII Test, Measurement & Evaluation

- Define Test, Measurement & Evaluation.
- Importance of Test, Measurement & Evaluation in Sports.
- Calculation of BMI & Waist Hip Ratio.
- Somato Types (Endomorphy, Mesomorphy & Ectomorphy)
- Measurement of health related fitness.

#### **POST MID TERM** (In addition to previous syllabus)

#### • UNITS: VIII Fundamentals of Anatomy, Physiology & Kinesiology in Sports

- Definition and Importance of Anatomy, Physiology & Kinesiology.
- Function of Skeleton System, Classification of Bones & Types of Joints.
- Properties and Function of Muscles.
- Function & Structure of Respiratory System and Circulatory System.
- Equilibrium- dynamic & static and centre of gravity and its application in sports.

#### UNITS: IX Psychology & Sports

- Definition and Importance of Psychology in Physical Education & Sports.
- Define & Differentiate between Growth & Development.
- Adolescent Problem & Their Management.
- Development Characteristics at Different Stages of Development.
- Adolescent Problem & Their Management.

#### • UNITS: X Training and Doping in Sports

- Meaning & Concept of Sports Training.
- Principle of Sports Training.
- Warming up & limbering down.
- Skill, Technique & Style.
- Concept & Classification of doping.
- Prohibited Substances & their side effects.
- Dealing with alcohol and substance abuse





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**FINAL TERM** (In addition to previous syllabus)

• UNITS: REVISION

• LAB WORK: REVISION



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#### **INFORMATION TECHNOLOGY (802) SYLLABUS**

#### **PRE MID TERM**

- Part A
  - o I. Employability Skills

Unit 1: Communication Skills-III

Unit 2: Self-Management Skills-III

#### Part B

o II. Subject-Specific Skills

Unit 1: Computer Organization

Unit 2: Networking And Internet

**PRACTICALS:** Office Automation Tools

#### MID TERM (In addition to previous syllabus)

- Part A
  - o I. Employability Skills

Unit 3: ICT Skills-III

- Part B
  - o II. Subject-Specific Skill

Unit 3: Office Automation Tools

Unit 4: RDBMS

**PRACTICALS:** Office Automation Tools & MYSQL Commands

#### **POST MID TERM** (In addition to previous syllabus)

- Part A
  - o I. Employability Skills

Unit 4: Entrepreneurial Skills-III

- Part B
  - o II. Subject-Specific Skills

Unit 4: RDBMS





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Unit 5: Fundamentals Of Java

**PRACTICALS:** MYSQL Commands and Java Programs

#### FINAL TERM (In addition to previous syllabus)

• Part A

o I. Employability Skills

Unit - 5: Green Skills-III

Part B

o II. Subject-Specific Skills

Unit - 5: Fundamentals Of Java

PRACTICALS: Java Programs & Project

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