Revision of Syllabus & Text Book

As per NCF, 2023:

"A syllabus should provide just enough content for a student to achieve the required learning outcomes, without overwhelming them. It must strike a balance between breadth and depth, enabling students to understand and engage with the material meaningfully, rather than simply memorizing information."

Rationale of Reform:

- The current syllabus for the two-year Intermediate courses has not undergone a revision over the past several years, with updates last made as follows:
  - **Sciences:** First year in 2012-13; Second year in 2013-14
  - **Arts Subjects:** First year in 2014-15; Second year in 2015-16
  - **Languages:** First year in 2018-19; Second year in 2019-20
- School Education Department has introduced NCERT Books at 10th class in 2024-25 so there is an imminent need to introduce NCERT books in Inter 1st year from Academic Year 2025-26 to ensure seamless transition.
- To ensure alignment with the syllabus being followed for Competitive Examinations (JEE, NEET).
- More than 15 states have adopted NCERT Books for their Intermediate Curriculum.

Proposed Syllabus Revision Plan:

A Subject Committee for each of the 14 subjects was constituted on 1st October 2024, comprising University Professors, Degree College Lecturers, and Junior Lecturers. As per the subject Committee report, following changes are proposed:

- **Science (Mathematics, Physics, Chemistry, Botany, Zoology):**
  - 1st Year: Revised textbooks as per NCERT from AY 2025-26.
  - 2nd Year: Reduced the syllabus for AY 2025-26 as per NCERT Syllabus; full NCERT-based revision by AY 2026-27.
- **Arts & Humanities (Civics, Economics, History, Commerce):**
  - 1st Year: Revised textbooks as per BIE syllabus from AY 2025-26.
  - 2nd Year: No changes for AY 2025-26; Revised textbooks by AY 2026-27.
- **Languages (English, Telugu, Hindi Sanskrit, Urdu):**
  - 1st Year: New textbooks from AY 2025-26.
  - 2nd Year: No changes for AY 2025-26; revised textbooks by AY 2026-27.

Subject wise revised syllabus is shown below:

Proposed syllabus for First year Intermediate
(to be implemented from 2025-26 Academic Year)

1. Mathematics (Ist Year)

1. Sets
1.1 Introduction
1.2 Sets and their Representations
1.3 The Empty Set
1.4 Finite and Infinite Sets
1.5 Equal Sets
1.6 Subsets
1.7 Universal Set
1.8 Venn Diagrams
1.9 Operations on Sets
1.10 Complement of a Set

2. Relations and functions
2.1 Introduction
2.2 Cartesian Product of Sets
2.3 Relations
2.4 Functions

3. Trigonometric functions
3.1 Introduction
3.2 Angles
3.3 Trigonometric Functions
3.4 Trigonometric Functions of Sum and Difference of Two Angles

4. Complex number and quadratic equations
4.1 Introduction
4.2 Complex Numbers
4.3 Algebra of Complex Numbers
4.4 The Modulus and the Conjugate of a Complex Number
4.5 Argand Plane and Polar Representation

5. Linear inequalities
5.1 Introduction
5.2 Inequalities
5.3 Algebraic Solutions of Linear Inequalities in One Variable
and their Graphical Representation

6. Permutations and combinations
6.1 Introduction
6.2 Fundamental Principle of Counting

13.5 Variance and Standard Deviation

14. Probability
14.1 Event
14.2 Axiomatic Approach to Probability

2. Physics (Ist Year)

1. UNITS AND MEASUREMENTS

1.1 Introduction
1.2 The International system of units
1.3 Significant figures
1.4 Dimensions of Physical Quantities
1.5 Dimensional formulae and dimensional equations
1.6 Dimensional analysis and its applications

2. MOTION IN A STRAIGHT LINE

2.1 Introduction
2.2 Instantaneous velocity and speed
2.3 Acceleration
2.4 Kinematic equations for uniformly accelerated motion

3. MOTION IN A PLANE

3.1 Introduction
3.2 Scalars and vectors
3.3 Multiplication of vectors by real members
3.4 Addition and subtraction of vectors - graphical Method
3.5 Resolution of vectors
3.6 Vector addition - Analytical method
3.7 Motion in a plane
3.8 Motion in a plane with constant acceleration
3.9 Projectile motion
3.10 Uniform circular motion

4. LAWS OF MOTION

4.1 Introduction
4.2 Aristotle's fallacy
4.3 The law of inertia
4.4 Newton's first law of motion
4.5 Newton's second law of motion
4.6 Newton's third law of motion
4.7 Conservation of momentum
4.8 Equilibrium of a particle
4.9 Common forces in mechanics, friction
4.10 Circular motion
4.11 Solving problems in mechanics.

5. WORK,ENERGY AND POWER

5.1 Introduction
5.2 Notions of work and kinetic energy: The work-energy theorem.
5.3 Work
5.4 Kinetic Energy
5.5 Work done by a variable force
5.6 The work – energy theorem for a variable force
5.7 The concept of Potential energy
5.8 The conservation of mechanical energy
5.9 The Potential energy of a spring
5.10 Power
5.11 Collisions

6. SYSTEM OF PARTICLES AND ROTATIONAL MOTION

6.1 Introduction
6.2 Centre of mass
6.3 Motion of Centre of mass
6.4 Linear momentum of a system of particles
6.5 Vector product of two vectors
6.6 Angular velocity and its relation with linear velocity
6.7 Torque and angular momentum
6.8 Equilibrium of a rigid body and centre of gravity
6.9 Moment of inertia
6.10 Kinematics of rotational motion about a fixed axis
6.11 Dynamics of rotational motion about a fixed axis.
6.12 Angular momentum in case of rotations about a fixed axis.

7. GRAVITATION

7.1 Introduction
7.2 Kepler's laws
7.3 Universal law of gravitation
7.4 The gravitational constant
7.5 Acceleration due to gravity of the earth
7.6 Acceleration due to gravity below and above the surface of earth.
7.7 Gravitational potential energy
7.8 Escape speed
7.9 Earth Satellites
7.10 Energy of an orbiting satellite

8. MECHANICAL PROPERTIES OF SOLIDS

8.1 Introduction
8.2 Stress and strain
8.3 Hooke's law

3.Chemistry (Ist Year)

Unit 1 Some Basic Concepts of Chemistry

1.1 Importance of Chemistry
1.2 Nature of Matter
1.3 Properties of Matter and their Measurement
1.4 Uncertainty in Measurement
1.5 Laws of Chemical Combinations
1.6 Dalton's Atomic Theory
1.7 Atomic and Molecular Masses
1.8 Mole Concept and Molar Masses
1.9 Percentage Composition
1.10 Stoichiometry and Stoichiometric Calculations

Unit 2 Structure of Atom

2.1 Discovery of Sub-atomic Particles
2.2 Atomic Models
2.3 Developments Leading to the Bohr's Model of Atom
2.4 Bohr's Model for Hydrogen Atom
2.5 Towards Quantum Mechanical Model of the Atom
2.6 Quantum Mechanical Model of Atom

Unit 3 Classification of Elements and Periodicity in Properties

3.1 Why do we Need to Classify Elements ?
3.2 Genesis of Periodic Classification
3.3 Modern Periodic Law and the Present Form of the Periodic Table
3.4 Nomenclature of Elements with Atomic Numbers > 100
3.5 Electronic Configurations of Elements and the Periodic Table
3.6 Electronic Configurations and Types of Elements: 82 s-, p-, d-, f- Blocks
3.7 Periodic Trends in Properties of Elements

Unit 4 Chemical Bonding and Molecular Structure

4.1 Kössel-Lewis Approach to Chemical Bonding
4.2 Ionic or Electrovalent Bond 106 4.3 Bond Parameters
4.4 The Valence Shell Electron Pair Repulsion (VSEPR) Theory
4.5 Valence Bond Theory
4.6 Hybridisation
4.7 Molecular Orbital Theory
4.8 Bonding in Some Homonuclear Diatomic Molecules
4.9 Hydrogen Bonding

Unit 5 Thermodynamics

5.1 Thermodynamic Terms
5.2 Applications
5.3 Measurement of ΔU and ΔH: Calorimetry
5.4 Enthalpy Change, $\Delta_r H$ of a Reaction – Reaction Enthalpy
5.5 Enthalpies for Different Types of Reactions
5.6 Spontaneity
5.7 Gibbs Energy Change and Equilibrium

Unit 6 Equilibrium

6.1 Equilibrium in Physical Processes
6.2 Equilibrium in Chemical Processes – Dynamic Equilibrium
6.3 Law of Chemical Equilibrium and Equilibrium Constant
6.4 Homogeneous Equilibria
6.5 Heterogeneous Equilibria
6.6 Applications of Equilibrium Constants
6.7 Relationship between Equilibrium Constant K,
Reaction Quotient Q and Gibbs Energy G
6.8 Factors Affecting Equilibria
6.9 Ionic Equilibrium in Solution
6.10 Acids, Bases and Salts
6.11 Ionization of Acids and Bases
6.12 Buffer Solutions
6.13 Solubility Equilibria of Sparingly Soluble Salts

Unit 7 Redox Reactions

7.1 Classical Idea of Redox Reactions-Oxidation and Reduction Reactions
7.2 Redox Reactions in Terms of Electron Transfer Reactions
7.3 Oxidation Number
7.4 Redox Reactions and Electrode Processes

Unit 8 Organic Chemistry – Some Basic Principles and Techniques

8.1 General Introduction
8.2 Tetravalence of Carbon: Shapes of Organic Compounds
8.3 Structural Representations of Organic Compounds
8.4 Classification of Organic Compounds
8.5 Nomenclature of Organic Compounds
8.6 Isomerism
8.7 Fundamental Concepts in Organic Reaction Mechanism
8.8 Methods of Purification of Organic Compounds
8.9 Qualitative Analysis of Organic Compounds
8.10 Quantitative Analysis

Unit 9 Hydrocarbons

9.1 Classification
9.2 Alkanes
9.3 Alkenes
9.4 Alkynes
9.5 Aromatic Hydrocarbon
9.6 Carcinogenicity and Toxicity

4. Biology (Ist Year)

A - BOTANY

UNIT I – DIVERSITY IN THE LIVING WORLD

Chapter 1 BIOLOGICAL CLASSIFICATION

1.1 Kingdom monera
1.2 Kingdom Protista
1.3 Kingdom Fungi
1.4 Kingdom Plantae
1.5 Kingdom Animalia
1.6 Viruses, viroid and Lichens

Chapter 2 PLANT KINGDOM

2.1 Algae
2.2 Bryophytes
2.3 Pteridophytes
2.4 Gymnosperms
2.5 Angiosperms

UNIT II STRUCTURAL ORGANISATION IN PLANTS

Chapter 3 MORPHOLOGY OF FLOWERING PLANTS

3.1 The root
3.2 The stem
3.3 The leaf
3.4 The inflorescence
3.5 The flower
3.6 The fruit
3.7 The seed
3.8 Semi technical description of a typical flowering plant
3.9 Solanaceae

Chapter 4 ANATOMY OF FLOWERING PLANTS

4.1 The tissue system
4.2 Anatomy of Dicotyledonous and Monocotyledonous plants

UNIT III CELL : THE STRUCTURE AND FUNCTIONS

Chapter 5 CELL – THE UNIT OF LIFE

5.1 What is a cell?
5.2 Cell theory
5.3 An overview of cell
5.4 Prokaryotic cells
5.5 Eukaryotic cells

Chapter 6 BIOMOLECULES

6.1 How to analyse chemical compositon?

B-ZOOLOGY

UNIT I : DIVERSITY IN THE LIVING WORLD

Chapter-1: The Living World

1.1. Diversity in the living world
1.2. Taxonomic categories

Chapter-2 : Animal Kingdom

2.1. Basis of classification

2.2. Classification of animals

UNIT II : STRUCTURAL ORGANISATION

Chapter -3 Structural Organization in Animals

3.1 Organ and Organ Systems

3.2 Frog

UNIT III: HUMAN PHYSIOLOGY

Chapter-4: Breathing and Exchange of Gases

4.1 Respiratory Organs

4.2 Mechanism of Breathing

4.3 Exchange of Gases

4.4 Transport of Gases

4.5 Regulation of Respiration

4.6 Disorders of Respiratory System

Chapter-5: Body Fluids and Circulation

5.1 Blood

5.2 Lymph (Tissue Fluid)

5.3 Circulatory Pathways

5.4 Double Circulation

5.5 Regulation of Cardiac Activity

5.6 Disorders of Circulatory System

Chapter 6: Excretory Products and their Elimination

6.1 Human Excretory System

6.2 Urine Formation

6.3 Function of the Tubules

6.4 Mechanism of Concentration of the Filtrate

6.5 Regulation of Kidney Function

6.6 Micturition

6.7 Role of other Organs in Excretion

6.8 Disorders of the Excretory System

Chapter 7: Locomotion and Movement

7.1 Types of Movement

7.2 Muscle

7.3 Skeletal System

7.4 Joints

7.5 Disorders of Muscular and Skeletal System

Chapter-8: Neural Control and Coordination

8.1 Neural System

8.2 Human Neural System

8.3 Neuron as Structural and Functional Unit of Neural System

8.4 Central Neural System

Chapter-9: Chemical Coordination and Integration

9.1 Endocrine Glands and Hormones

9.2 Human Endocrine System

9.3 Hormones of Heart, Kidney and Gastrointestinal Tract

9.4 Mechanism of Hormone Action

5.Commerce (Ist Year)

UNIT I : Fundamental Aspects of Business

Chapter 1: Concept of Business

1.1 Introduction to Business
1.2 Classification of Economic Activities
1.3 Meaning, Definition and Characteristics of Business
1.4 Objectives of Business

Chapter 2: Business Activities

2.1 Industry
2.2 Commerce
2.3 Hindrances involved in Commerce
2.4 Branches of Commerce

UNIT II: Forms of Business Organisations

Chapter 3 : Forms of Business Organisations

3.1 Concept of Business Organisations
3.2 Forms of Business Organisations
Sole Proprietorship

Chapter 4 : Joint Hindu Family Business & Co-operative Society

4.1 Joint Hindu Family Form of Business Organisation
4.2 Co-operative Society

Chapter 5 : Partnership

5.1 Partnership – Meaning &Definition
5.2 Features
5.3 Types of Partners
5.4 Advantages & Disadvantages
5.5 Registration of Partnership
5.6 Partnership Deed

UNIT III : Joint Stock Company

Chapter 6 : Fundamental aspects of Joint Stock Company

6.1 Joint Stock Company
6.2 Features,
6.3 Classification of Companies,
6.4 Distinction between Private & Public Company.
6.5 Advantages & Disadvantages of Company

Chapter 7 : Formation of Joint Stock Company

7.1 Steps in Formation of Company

7.2 Promotion
7.3 Types of Promoters
7.4 Incorporation of a Company or Registration
7.5 Capital Subscription
7.6 Commencement of Business.
7.7 Memorandum of Association (MOA)
7.8 Articles of Association (AOA)
7.9 Prospectus
7.10 Minimum Subscription
7.11 Certificate of Commencement of Business.

UNIT IV : Sources of Business Finance

Chapter 8 : Basics of Business Finance

8.1 Meaning of Business Finance.
8.2 Nature of Business Finance
8.3 Need and Significance of Business Finance
8.4 Classification of Sources of Funds
8.5 Factors determining the choice of Sources of Business Finance

UNIT V : Emerging Trends in Business

Chapter 9 : Emerging Trends in Business

9.1 Meaning and Definition of e-business.
9.2 Scope of e-business
9.3 Benefits of e-business.
9.4 Online Transactions
9.5 Security & Safety in online transactions

6.Accountancy (Ist Year)

UNIT I

Chapter 1 : Book keeping and accounting

1.1 Introduction.
1.2 Book Keeping
1.3 Accounting
1.4 Basic accounting terms

Chapter 2: Accounting Principles

2.1 Accounting principles
2.2 Accounting concepts
2.3 Accounting conventions
2.4 Accounting Standards

Chapter 3: Double entry Book Keeping System

3.1 Introduction
3.2 Meaning
3.3 Advantages
3.4 Account
3.5 Classification of accounts

UNIT –II

Chapter 4: Journal

4.1 Meaning
4.2 Proforma
4.3 Illustrations

Chapter 5: Ledger

5.1 Meaning
5.2 Advantages
5.3 Posting

Chapter 6: Subsidiary Books

6.1 Meaning
6.2 The need/ advantages
6.3 Types of subsidiary books
6.4 Preparation of Subsidiary books

UNIT –III

Chapter 7: Journal Proper

7.1 Meaning
7.2 Advantages
7.2.1 Opening entries
7.2.2 Purchase of assets on credit
7.2.3 Sale of asset on credit
7.2.4 Rectification entries
7.2.5 Adjustment entries
7.2.6 Closing entries
7.2.7 Transfer entries
7.2.8 Other entries

Chapter 8: Cash Book

8.1 Meaning
8.2 Characteristics and advantages
8.3 Importance
8.4 Various kinds of cash book and their preparation

UNIT IV

Chapter 9: Bank Reconciliation Statement

9.1 Introduction
9.2 Nature of the cash book and bank pass book
9.3 Meaning and advantages of BRS
9.4 Procedure for preparation of BRS
9.5 Reasons for difference
9.6 Preparation of BRS

Chapter 10: Trial Balance

10.1 Meaning
10.2 Features / Characteristics
10.3 Merits
10.4 Limitations
10.5 Types of Preparation
10.6 Proforma
10.7 Key points

UNIT:V

Chapter 11: Final Accounts

11.1 Meaning
11.2 Objectives
11.3 Advantages and Limitations
11.4 Capital and Revenue items
11.5 Preparation of Trading Account
11.6 Preparation of Profit&Loss account
11.7 Balance Sheet

Chapter 12: Final Accounts with adjustments

12.1 Meaning
12.2 Types of Adjustments
12.3 Summary of Adjustments
12.4 Accounting Treatment to the adjustments given in Trial Balance

7. ECONOMICS (Ist Year)

UNIT-I : INTRODUCTION

UNIT-II : THEORY OF CONSUMER'S BEHAVIOUR

2.0 Introduction

2.1 What is Utility?

2.2 Marginal utility Analysis

2.2.1 Law of Diminishing Marginal Utility

2.2.2 Law of Equi-Marginal Utility

2.3 Indifference Curve Analysis

2.3.1 Indifference Map

2.3.2 properties of indifference curves

2.3.3 Budget Line / Price Line

2.4 Consumer's Equilibrium

2.5 Summary

2.6 Model Questions

2.7 Glossary

2.8 References

UNIT-III : THEORY OF DEMAND

3.0 Introduction

3.1 Meaning of Demand

3.2 Demand Function

3.3 Factors that Determine Demand

3.4 Types of Demand

3.4.1 Price Demand – Law of Demand

3.4.4.1 Exceptions to the Law of Demand

3.4.4.2 Reasons for the Downward (or) Negative Slope of Demand Curve

3.4.4.3 Change in Quantity Demanded and Change in Demand

3.4.2 Income Demand

3.4.3 Cross Demand

3.5 Meaning of Elasticity of Demand

3.6 Types of Elasticity of Demand

3.6.1 Price Elasticity of Demand

3.6.1.1 Types of Price Elasticity of Demand

3.6.1.2 Methods of Measurement of Price Elasticity of Demand

3.6.1.3 Determinants of Price Elasticity of Demand

3.6.1.4 Importance of Price Elasticity Demand

3.7 Income Elasticity of Demand

8. Civics (Ist Year)

Chapter 1: Scope and Significance of Political Science

1.0 Introduction
1.1. Origin of Political Science
1.1.1 Definitions of Political Science
1.1.2 Traditional definitions of Political Science
1.1.3 Modern definitions of Political Science:
1.2 Scope of Political Science
1.3 Significance of Political Science

Chapter 2: State

2.0 Introduction
2.1 Definitions of State
2.2. Theories of Origin of the State.
2.3 Essential elements of State
2.4 Other elements of State
2.5 State Vs Society, Association and Government
2.5.1 State and Society
2.5.2 State and Association
2.5.3 State and Government

Chapter 3: Nationalism

3.0 Introduction
3.1 Nation
3.1.1 Meaning
3.1.2 Definitions
3.1.3 Differences between Nation and State.
3.2 Nationality
3.2.1 Connotations of Nationality
3.2.2 Essential elements of Nationality
3.2.3 Importance of Nation and Nationality
3.2.4 Differences between Nation and Nationality.

3.3 Nationalism
3.3.1 Importance of Nationalism
3.4 National Self-Determination.
3.4.1 Demand for National Self-Determination

Chapter 4: Law

4.0 Introduction
4.1 Meaning of Law
4.1.1 Definitions
4.2 Features of Law
4.3 Sources of Law
4.4 Classification of Law
4.5 Law and Morality
4.5.1 Differences between Law and Morality
4.6 Law and Liberty
4.6.1 Law and Liberty are antithetical
4.6.2 Law and Liberty are complimentary
4.7 Rule of Law

Chapter 5: Liberty and Equality

5.0 Introduction
5.1 Meaning of Liberty
5.2 Definitions of Liberty
5.3 Characteristics of Liberty
5.4 Types of Liberty
5.5 Safeguards of Liberty
5.6 Elements threatening individuals Liberty
5.7 Introduction of Equality
5.8 Meaning of Equality
5.9 Essential features of Equality
5.10 Types of Equality
5.11 Obstacles to Equality
5.12 Measures to promote Equality

Chapter 6: Rights and Responsibilities

6.0 Introduction
6.1 Meaning of Rights
6.2 Definitions of Rights
6.3 Theories of Rights
6.4 Features of Rights
6.5 Classification of Rights
6.6 Important Civil Rights
6.7 Important Political Rights
6.8 Important Economic Rights
6.9 Fundamental Rights
6.10 Safeguards of Rights
6.11 Human rights

6.11.1 Origin of the Human Rights
6.11.2 Objectives of Human Rights
6.11.3 Features of Human Rights
6.11.4 Classification of Human Rights
6.12 Responsibilities
6.12.1 Types of Responsibilities
6.12.2 Important Responsibilities of a Citizen
6.13 Relationship between Rights and Responsibilities.

Chapter 7: Justice

7.0 Introduction
7.1 Definitions
7.2 Major concepts of Justice
7.3 Connotations of Justice
7.4 Aspects of Justice
7.5 Sources of Justice
7.6 Types of Justice
7.7 Social Justice
7.8 Achievement of Social Justice

Chapter 8: Citizenship

8.0 Introduction
8.1 Definitions
8.2 Aliens
8.3 Methods of acquiring Citizenship
8.4 Loss of Citizenship
8.5 Qualities of a Good Citizen
8.6 Hindrances to Good Citizenship
8.7 Ways for overcoming the Hindrances to Good Citizenship
8.8 Types of Citizenship
8.9 Citizenship in India
8.10 Significance of Citizenship

Chapter 9: Democracy

9.0 Introduction
9.1 Origin
9.2 Definitions
9.3 Evolution and Growth of Democracy
9.4 Features of Democracy
9.5 Types of Democracy
9.6 Merits of Democracy
9.7 Demerits of Democracy

Chapter 10: Secularism

Chapter 11: Constitution

Chapter 12: Government

12.2 Classification of Governments
12.2.1 Traditional Classification
12.2.2 Modern Classification
12.3 Unitary Government
12.3.1 Definitions of Unitary Government
12.3.2 Features of Unitary Government
12.3.3 Merits of Unitary Government
12.3.4 Demerits of Unitary Government
12.4 Federal Government
12.4.1 Definitions of Federal Government
12.4.2 Features of Federal Government
12.4.3 Merits of Federal Government
12.4.4 Demerits of Federal Government
12.5 Distinction between Unitary and Federal Governments
12.6 Parliamentary Government
12.6.1 Features of Parliamentary Government
12.6.2 Merits of Parliamentary Government
12.6.3 Demerits of Parliamentary Government
12.7 Presidential Government
12.7.1 Features of the Presidential Government
12.7.2 Merits of Presidential Government
12.7.3 Demerits of Presidential Government
12.8 Differences between Parliamentary and Presidential Governments
12.9 Theory of Separation of Powers
12.10 Organs of Government
12.11 Legislature
12.12 Executive
12.13 udiciary

9.History (Ist Year)

Chapter 1 INTRODUCTION OF HISTORY AND GEOGRAPHICAL INFLUENCE ON INDIAN HISTORY

1.0 Introduction
1.1 Definition of History
1.2 Scope of History
1.3 Relation with other disciplines
1.4 Sources of History
1.5 Geographical influence on Indian History
1.6 India – A Land of Unity in Diversity
1.7 Summary

Chapter 2 ANCIENT CIVILIZATIONS AND CULTURES: THE HARAPPAN AND VEDIC PERIOD

2.0 Introduction
2.1 Pre Harappan-Cultures
2.2 Harappan Civilization
2.3 The Harappan Script
2.4 Town Planning
2.5 Political Organization
2.6 Society and Economy
2.7 Art-crafts-industries
2.8 Religious Beliefs and Practices
2.9 Decline of the Harappan Civilization
2.10 Vedic Age, Polity, Society, Economy and Culture
2.11 Vedic Literature
2.12 The Early Vedic Period or Rig Vedic Period 1500BCE - l000BCE
2.13 Post Vedic Period
2.14 Summary

Chapter 3 Early States, Empires and Economy

3.0 Introduction
3.1 Early States
3.2 Sixteen Mahajanapadas
3.3 Rise and growth of Magadha.
3.4 Rural Life and Economy
3.5 Urbanization and Trade
3.6 Summary

Chapter 4 Early Societies and Religious Movements

4.1 Early Societies
4.2 Kinship and Marriages
4.3 Social Differences
4.3.1 Jati and Social mobility
4.3.2 Women in society
4.4 Religious Movements
4.5 Ajivikas
4.6 Lokayats or Charvakas
4.7 Jainism
4.8 Buddhism
4.9 Summary

Chapter-5 Maurya to Harsha

5.0 Introduction
5.1 The Mauryan Empire
5.2 The Kushans
5.3 The Gupta Empire
5.4 The Harshavardhana
5.5 Summary

Chapter 6 Deccan and South India upto 10th Century CE

6.0 Introduction
6.1 Sources
6.2 The Sangam Age
6.3 The Satavahanas
6.4 The Ikshvakus
6.5 The Vishnukundins
6.6 The Pallavas of Kanchipuram
6.7 The Chalukyas
6.8 The Rastrakutas
6.9 The Cholas of Tanjore
6.10 Summary

Chapter 7 Muslim Invasions and Delhi Sultanate

7.0 Introduction
7.1 Sources
7.2 Arab Invasion on Sind
7.3 Turkish invasions
7.4 Delhi Sultanate Dynasties
7.5 Important Sultans and Their Achievements
7.6 Downfall of Delhi Sultanate

10. English (Ist Year)

Prose:

1. The Malady of Overthinking – Jerome K. Jerome
2. Chief Seattle – Chief Seattle
3. You've got to Find What You Love – Steve Jobs
4. Reasons to Stay Alive – Matt Haig

Poetry:

1. Invictus – William Earnest Henley
2. The Lamb and the Tyger – William Blake
3. Stares – Jaya Prabha
4. Refugees – Brian Bilston

Extensive Reading:

1. Julius Caeser – William Shakespeare
2. The Blind Dog – R.K. Narayan
3. The Sound of Thunder – Ray Bradbury
4. A Retrieved Reformation – O. Henry

Grammar:

a. Reading and Writing

1. Comprehension passages
2. Text to Diagram
3. Creative Writing

b. Fundamental grammar:

1. Parts of Speech
2. Articles
3. Prepositions
4. Tenses
5. Voice
6. Reported speech
7. Degrees of Comparison
8. Synthesis of Sentences
9. Question Tags
10. Correction of Sentences
11. Word Power

c**. Communication skills:**

1. Phonetic Transcription
2. Odd Sounds
3. Dialogue Writing

11. Sanskrit (Ist Year)

पद्यभागः

१. हनुमदुपदेशः - वाल्मीकिमहर्षिः
२. रघोः शौर्यम् - कालिदासमहाकविः
३. नीतिश्लोकाः - विविधकवयः
४. जनादरः - श्री पि. पट्टाभिरामारावु
५. प्रतिश्रुतिः - डा. डि.यन्. दीक्षितः

गद्यभागः

१. अज्ञातस्य वासो न देयः - नारायणपण्डितः
२. शूद्रक - वीरवरकथा - जम्भालदत्तः
३. मूर्खपण्डितकथा - विष्णुशर्मा
४. दयावान् राक्षसः - आचार्य हर्षदेवमाधवः
५. जीर्णच्छत्रम् - म.म.पुल्लेल श्रीरामचन्द्रुडु

उपवाचकम्

१. विनयः विधेयता च - श्री जनार्दन हेगडे
२. मित्ररत्नम् - डा. पूजा उपाध्याया
३. पापस्य फलम् - डा. सञ्जीवः
४. दानशूरः शिबिः - डा. उदयन हेगडे
५. मैत्री - सुगन्धः

व्याकरणम्

१. शब्दाः
२. धातुरूपाणि
३. सन्धयः
४. पत्रलेखनम्
५. अनुवादाभ्यासः

अनुबन्धः

सङ्ख्याः
सरलवाक्यानि
नैव क्लिष्टा न च कठिना
समयः

12.Hindi (Ist Year)

पद्यभाग

1 कबीर के दोहे	-	महात्मा कबीरदास
2 रैदास के दोहे	-	महात्मा रैदास
3 मुरझाया फूल	-	श्रीमती महादेवी वर्मा
4 वह देश कौन सा है ?	-	श्री रामनरेश त्रिपाठी
5 समय	-	श्री सियाराम शरण गुप्त

गद्यभाग

1. परीक्षा	-	मुंशी प्रेमचंद
2. हार की जीत	-	श्री सुदर्शन
3. मित्रता	-	आचार्य रामचंद्र शुक्ल
4. काबुलीवाला	-	रवीन्द्रनाथ ठाकुर
5. इतिहास बदलता है	-	देवेन्द्र सत्यार्थी

एकांकी

1. बहु की विदा	-	विनोद रस्तोगी
2. सच्चा धर्म	-	सेठ गोविंद दास
3. विष कन्या	-	श्री गोविंद वल्लभ पंत

व्याकरण

1. शब्द विचार
2. लिंग
3. वचन
4. पर्यायवाची शब्द
5. विलोम शब्द
6. शुद्ध वर्तनी
7. अनुवाद
8. पत्र लेखन

13.Urdu (Ist Year)

سلسلہ نمبر	صنف	مضمون/نظم	مصنف / شاعر
I		حصّہ شاعری	
1	غزل		از خلیل الر حمٰن اعظمی
2	نظم	مفلسی	از نظیر اکبر آبادی
3	مثنوی	گلزارِ نسیم	از دیا سنکر نسیم
4	مرثیہ	میر انیس" جب کربلہ میں داخلۂ شاہ دین ہوا"	از میر ببر علی انیس
5	رباعیاتِ امجد		از امجد حیدر آبادی
II		حصّہ نثر	
1	داستان	" باغ و بہار"(سیر تیسرے درویش کی)	از میر امن دہلوی
2	ناول	" مرأة العروس "	از ڈپٹی نزیر احمد
3	افسانہ	" بد نصیب ماں"	از منشی پریم چند
4	انشائیہ	" لمپ "	از خواجہ حسن نظامی
5	خاکہ	" عبدالحق"	از رشید احمد صدیقی
III		حصّہ قواعد	
1	صرف کی تعریف		
2	اسم اور اس کی قسمیں		
3	ضمیر اور اس کی قسمیں		
4	صفت اور اس کی قسمیں		
5	فعل اور اس کی قسمیں	(1) لازم (2) متعدی (3) ناقص	
	ضمن ترجمہ	(انگریزی الفاظ کا اردو ترجمہ)	
IV		حصّہ سرسری مطالعہ	
1	مضمون	" عزّت"	از سرسید احمد خاں
2	مضمون	" زندگی اور وجود "	از مولانا ابوالکلام آزاد

3	مضمون	" تعلیم"	از	ڈاکٹر ذاکر حسین
4	مضمون	"اپنی یادیں "	از	کنہالال کپور
5	مضمون	"امیر علی خاں یسیر"	از	وحید کوثر

14.Telugu (Ist Year)

బోర్డ్ ఆఫ్ ఇంటర్మీడియట్ ఎడ్యుకేషన్
తెలుగు-ప్రథమ సంవత్సరం
ప్రతిపాదిత పాఠ్యాంశ ప్రణాళిక

పద్యభాగం

1.భీమసేనుడి గర్వభంగం-నన్నయ

2.రుద్ర పశుపతి కథ- పాల్కురికి సోమనాథుడు

3. నీతి పద్య రత్నాలు-వివిధ కవులు

4.ఆంధ్రుడను-జాషువా

5.బాటసారి- శ్రీశ్రీ

గద్యభాగం

1.జాయపసేనాని-రాళ్లపల్లి అనంత కృష్ణ శర్మ

2.మహాత్మా జ్యోతిబాపూలే- డాక్టర్.బి. విజయభారతి

3.లోకోక్తులు ప్రయోగాలు-తాపీ ధర్మారావు

4. సిపి బ్రౌన్-జానుమద్ది హనుమచ్ఛాస్త్రి

5.జానపద కళలు-మిక్కిలినేని రాధాకృష్ణ మూర్తి

ఉపవాచకం

1. రతన్ టాటా -సంపాదకమండలి

2. గాలి వాన-అడవి బాపిరాజు

3. ఉరి-విశ్వనాథ సత్యనారాయణ

4. గౌరవ స్థానం-కనుపర్తి వరలక్ష్మమ్మ

5. వాన కురిస్తే- కేతు విశ్వనాథరెడ్డి

వ్యాకరణం

1. సంధులు

2. సమాసాలు

3. పద దోషాలు

4. లేఖలు

5. స్థూల అవగాహన

6. అనువాదాలు

Revised syllabus for Second year Intermediate (for the Academic Year 2025-26 as per NCERT)

1.Mathematics IIA (2nd Year)

1.Complex Numbers

Introduction

1.1. Complex number as an ordered pair of real numbers Fundamental operations

1.2 Representation of complex number in the form a + ib

1.3 Modulus and Amplitude of a complex number-Illustrations

1.4. Geometrical and Polar representation of complex number in Argand plane - Argand diagram

2. Quadratic Expressions

Introduction

2.1 Quadratic Expressions, Equations in one Variable

2.2 Sign of quadratic expressions - Change in signs and Maximum and Minimum values

3. Permutations and Combinations

Introduction

3.1 Fundamental Principle of Counting - Linear and Circular permutations

3.2 Permutations of n dissimilar things taken r at a time

3.3 Permutations when repetitions are allowed

3.4 Circular Permutations

3.5 Permutations with Constraint repetitions

3.6 Combinations - Definitions and Certain Theorems

4. Binomial Theorem

Introduction

4.1 Binomial Theorem for positive integral index

5. Partial Fractions

Introduction

5.0 Rational Fractions

5.1 Partial Fractions of f(x)/g(x), when g(x) contains non-repeated linear factors

5.2 Partial Fractions of f(x)/g(x), when g(x) contains repeated and I or non-repeated linear factors

5.3 Partial Fractions of f(x)/g(x), when g(x) contains irreducible factors

6. Measure of Dispersion

Introduction

6.1 Range

6.2 Mean Deviation

6.3 Variance and Standard Deviation of ungrouped/grouped data

6.4 Coefficient of Variation and analysis of frequency distributions with equal means but different variances

7. Probability

Introduction

7.1 Random Experiments and Events

7.2 Classical definition of probability, Axiomatic approach and addition theorem of probability

7.3 Independent and Dependent events, Conditional Probability. Multiplication Theorem and Baye's Theorem

2.Mathematics IIB (2nd Year)

1. Circle

Introduction

1.1 Equation of a circle, standard form, centre and radius

1.2 Position of a point in the plane of a circle - Definition of a tangent

1.3 Position of a straight line in the plane of a circle

Condition for a line to be tangent

1.4 Chord of contact and polar

2. Parabola

Introduction

2.1 Conic Sections

3. Ellipse

Introduction

3.1 Equation of ellipse in standard form, Parametric equations

4. Hyperbola

Introduction

4.1 Equation of hyperbola in standard form- Parametric equations

5. Integration

Introduction

5.1 Integration as the inverse process of differentiation, standard forms and properties of integrals

5.2 Method of substitution - Integration of algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions - Integration by parts.

5.3 Integration - Partial fractions method

6. Definite Integrals

Introduction

6.1 The Fundamental Theorem of Integral Calculus

6.2 Properties

6.3 Applications of definite integral to areas

7. Differential Equations

Introduction

7.1 Formation of differential equations - Degree and order of an ordinary differential equation

7.2 Solving Differential Equations

7.2(a) Variables separable method

7.2(b) Homogeneous Differential Equation

7.2(c) Linear Differential Equations

Chemistry (2nd Year)

Unit I: Solutions

1.1 Types of solutions

1.2 Expression of concentration of solutions of solids in liquids,

1.3 Solubility of gases in liquids, solid solutions

1.4 Raoult's law

1.5 Colligative properties - relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties

1.6 Abnormal molecular mass, Van't Hoff factor.

Unit II: Electrochemistry

2.1 Redox reactions,

2.2 EMF of a cell

2.3 Standard electrode potential

2.4 Nernst equation and its application to chemical cells

2.5 Relation between Gibbs energy change and EMF of a cell,

2.6 Conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration

2.7 Kohlrausch's Law,

2.8 electrolysis and law of electrolysis (elementary idea),

2.9 Drycell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion.

Unit III: Chemical Kinetics

3.1 Rate of a reaction (Average and instantaneous),

3.2 factors affecting rate of reaction: concentration, temperature, catalyst;

3.3 order and molecularity of a reaction,

3.4 rate law and specific rate constant,

3.5 integrated rate equations and half-life (only for zero and first order

reactions),

3.6 concept of collision theory (elementary idea, no mathematical treatment),

3.7 activation energy,

3.8 Arrhenius equation.

Unit IV: d and f BlockElements

4.1 General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals–metallic character,ionizationenthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$and $KMnO_4$.

4.2 Lanthanoids - Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences.

4.3 Actinoids- Electronic configuration , oxidation states and comparison with lanthanoids.

Unit V:Coordination Compounds

5.1 Coordination compounds - Introduction,

5.2 ligands, coordination number, colour, magnetic properties and shapes,

5.3 IUPAC nomenclature of mononuclear coordination compounds.

5.4 Bonding, Werner's theory, VBT, and CFT;

5.5 structure and stereoisomerism,

5.6 importance of coordination compounds (in qualitative analysis, extraction of metals and biological system).

Unit VI: Haloalkanes and Haloarenes.

6.1 Haloalkanes: Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions.

6.2 Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only).

6.3 Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

Unit VII: Alcohols, Phenols and Ethers

7.1 Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol.

7.2 Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols.

7.3 Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.

Unit VIII: Aldehydes, Ketones and Carboxylic Acids

8.1 Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses.

8.2 Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

Unit IX:Amines

9.1 Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

9.2 Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.

Unit X:Biomolecules

10.1 Carbohydrates - Classification (aldoses and ketoses), monosaccahrides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates.

10.2 Proteins-Elementary idea of- aminoacids, peptide bond, polypeptides, proteins, structure of proteins
-primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes. Hormones - Elementary idea excluding structure.

10.3 Vitamins-Classification and functions.

10.4 Nucleic Acids: DNA and RNA.

4.Physics (2nd Year)

1. WAVES

1.1 Introduction
1.2 Transverse and longitudinal waves
1.3 Displacement relation in a progressive wave
1.4 The speed of a travelling wave
1.5 The principle of superposition of waves
1.6 Reflection of waves
1.7 Beats

2. RAY OPTICS AND OPTICAL INSTRUMENTS

2.1 Introduction
2.2 Reflection of Light by Spherical Mirrors
2.3 Refraction
2.4 Total Internal Reflection
2.5 Refraction at Spherical Surfaces and by Lenses
2.6 Refraction through a Prism
2.7 Optical Instruments

3. WAVE OPTICS

3.1 Introduction
3.2 Huygens Principle
3.3 Refraction and Reflection of Plane Waves using Huygens Principle
3.4 Coherent and Incoherent Addition of Waves
3.5 Interference of Light Waves and Young's Experiment
3.6 Diffraction
3.7 Polarisation

4. ELECTRIC CHARGES AND FIELDS

4.1 Introduction
4.2 Electric Charge
4.3 Conductors and Insulators
4.4 Basic Properties of Electric Charge
4.5 Coulomb's Law
4.6 Forces between Multiple Charges
4.7 Electric Field
4.8 Electric Field Lines
4.9 Electric Flux
4.10 Electric Dipole
4.11 Dipole in a Uniform External Field
4.12 Continuous Charge Distribution
4.13 Gauss's Law
4.14 Applications of Gauss's Law

5. ELECTROSTATIC POTENTIAL AND CAPACITANCE

8.2 The Bar Magnet
8.3 Magnetism and Gauss's Law
8.4 Magnetization and Magnetic Intensity
8.5 Magnetic Properties of Materials

9. **ELECTROMAGNETIC INDUCTION**

9.1 Introduction
9.2 The Experiments of Faraday and Henry
9.3 Magnetic Flux
9.4 Faraday's Law of Induction
9.5 Lenz's Law and Conservation of Energy
9.6 Motional Electromotive Force
9.7 Inductance
9.8 AC Generator

10. ALTERNATING CURRENT

10.1 Introduction
10.2 AC Voltage Applied to a Resistor
10.3 Representation of AC Current and Voltage byRotating Vectors — Phasors
10.4 AC Voltage Applied to an Inductor
10.5 AC Voltage Applied to a Capacitor
10.6 AC Voltage Applied to a Series LCR Circuit
10.7 Power in AC Circuit: The Power Factor
10.8 Transformers

11. ELECTROMAGNETIC WAVES

11.1 Introduction
11.2 Displacement Current
11.3 Electromagnetic Waves
11.4 Electromagnetic Spectrum

12. DUAL NATURE OF RADIATION AND MATTER

12.1 Introduction
12.2 Electron Emission
12.3 Photoelectric Effect
12.4 Experimental Study of Photoelectric Effect
12.5 Photoelectric Effect and Wave Theory of Light
12.6 Einstein's Photoelectric Equation: Energy Quantum of Radiation
12.7 Particle Nature of Light: The Photon
12.8 Wave Nature of Matter

13. ATOMS

13.1 Introduction
13.2 Alpha-particle Scattering and Rutherford's Nuclear Model of Atom
13.3 Atomic Spectra
13.4 Bohr Model of the Hydrogen Atom

5.Botany (2nd Year)

Unit-I Plant physiology

Chapter-1 Enzymes
Chapter-2 Photosynthesis in higher plants
Chapter- 3 Respiration in plants
Chapter- 4 Plant growth and development

Unit- II Genetics

Chapter - 5 Principles of Inheritance and variation

Unit- III Molecular Biology

Chapter - 6 Molecular Basis of Inheritance

Unit- IV Biotechnology

Chapter- 7 Biotechnology: Principles and Processes
Chapter- 8 Biotechnology and it's applications

Unit-V Plants, Microbes and Human welfare

Chapter- 9 Strategies for Enhancement in Food Production
Chapter- 10 Microbes in Human Welfare

6.Zoology (2nd Year)

D

Unit I: Human Anatomy and Physiology-I
Unit I B: Breathing and Respiration

Respiratory organs in animals; Respiratory system in humans; Mechanism of breathing and its regulation in humans - Exchange of gases, transport of gases and regulation of respiration; Respiratory volumes: Respiratory disorders: Asthma, Emphysema. Occupational respiratory disorders - Asbestosis, Silicosis, Siderosis, Black Lung Disease in coal miners.

Unit II: Human Anatomy and

Physiology-II Unit IIA Body Fluids and

Circulation

Lymphatic system, composition of lymph and functions: Clotting of blood; Human circulatory system-structure of human heart and blood vessels; Cardiac cycle, cardiac output, double circulation; regulation of cardiac activity; Disorders of circulatory system: Hypertension, coronary artery disease, angina pectoris, heart failure.

Unit IIB: Excretory products and their elimination

Modes of excretion - Ammonotelism. Ureotelism, Uricotelism; Human excretory system - structure of kidney and nephron: Urine formation, osmoregulation; Regulation of kidney function -Renin-Angiotensin - Aldosterone system. Atrial Natriuretic Factor, ADH and diabetes insipidus: Role of other organs in excretion; Disorders: Uraemia, renal failure. renal calculi, nephritis, dialysis using artificial kidney.

Unit III: Human Anatomy and Physiology-III

Unit IIIA: Muscular and Skeletal system

Skeletal muscle - ultra structure; Contractile proteins & muscle contraction; Skeletal system and its functions; Joints. (to be dealt with relevance to practical syllabus); Disorders of the muscular and skeletal system: myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout, rigor mortis.

Unit III B: Neural control and coordination.
Nervous system in human beings - Central nervous system, Peripheral nervous system

and Visceral nervous system; Generation and conduction of nerve impulse.

Unit IV: Human Anatomy and Physiology-IV

Unit IVA: Endocrine system and chemical co-ordination

Endocrine glands and hormones; Human endocrine system - Hypothalamus, Pituitary, Pineal, Thyroid, Parathyroid, Adrenal, Pancreas, Gonads; Mechanism of hormone action (Elementary idea only); Role of hormones as messengers and regulators; Hypo and Hyper activity and related disorders: Common disorders -Dwarfism, acromegaly, cretinism, goiter, exophthalmic goiter, diabetes, Addison's disease, Cushing syndrome (Diseases & disorders to be dealt in brief).

Unit IVB: Immune system

Basic concepts of Immunology - Types of Immunity - Innate Immunity, Acquired Immunity. Active and Passive Immunity, Interferon. HIV and AIDS.

Unit V: Human Reproduction

Unit VA: Human Reproductive System

Male and female reproductive systems; Microscopic anatomy of testis & ovary: Gametogenesis "Spermatogenesis & Oogenesis; Menstrual cycle; Fertilization, Embryo development up to blastocyst formation, Implantation; Pregnancy, placenta formation. Parturition, Lactation (elementary idea).

Unit VB: Reproductive Health

Need for reproductive health and prevention of sexually transmitted diseases (STD); Birth control - Need and methods, contraception and medical termination of pregnancy (MTP): Amniocentesis; infertility and assisted reproductive technologies - IVF-ET, ZIFT, GIFT (elementary idea for general awareness).

Unit VI: Genetics

Pleiotropy; Multiple alleles: Inheritance of blood groups and Rh-factor; Co-dominance (Blood groups as example); Elementary idea of polygenic inheritance; Skin colour in humans (refer Sinnott. Dunn and Dobzhansky); Sex determination - in humans, birds, Fumea moth, Honey bees; Sex linked inheritance - Haemophilia, Colour blindness; Mendelian disorders in humans: Alkaptoneuria, Thalassemia, Haemophilia, Sickle cell

anemia, cystic fibrosis PKU,: Chromosomal disorders
-Down's syndrome, Turner's syndrome and Klinefelter syndrome; Genome, Human Genome Project and DNA Fingerprinting.

Unit VII: Organic Evolution

Origin of Life, Biological evolution and Evidences for biological evolution (palaeontological, comparative anatomical, embryological and molecular evidences); Theories of evolution: Lamarckism (in brief), Darwin's theory of Evolution -Natural Selection with example (Kettlewell's experiments on Biston bitularia), Mutation Theory of Hugo De Vries; Modern synthetic theory of Evolution Hardy-Weinberg law; Types of Natural Selection; Gene flow and genetic drift: Variations (mutations and genetic recombination); Adaptive radiation viz., Darwin's finches and adaptive radiation in marsupials; Human evolution; Speciation - Allopatric, sympatric; Reproductive isolation.

Unit VIII: Applied Biology

Bio-medical Technology: Diagnostic Imaging (X-ray, CT scan, MRI), ECG, Application of Biotechnology in health: Human insulin and vaccine production; Gene Therapy; Transgenic animals; ELISA; Vaccines, MABs, Cancer biology, Stem cells.

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Proposal of New Subjects Combination

The current curriculum of BIEAP mandates a total of six compulsory subjects for the Science stream and five compulsory subjects for the Commerce and Arts & Humanities streams, as detailed in the table below:

Subject		**Name of Subject**
Compulsory	Subject 1 (1st language)	English
	Subject 2 (Second language)	**Any one of the Following is Compulsory**: Telugu, Urdu, Hindi , Arabic, Tamil , Kannada , Oriya, Sanskrit, Persian, French
	Subject 3--- Subject 4 | | Humanities Subject 5--- Subject 6------ Science	**Any Combination From Group A or Group B:** - Group- A (Science): MPC & BiPC - Group-B (Humanities): MEC, CEC, HEC, ECH,ECG, HCML (TEL), HCML(U), HCML(E), ECO LO CO, ECO CO PUB, LO HIS CIV, HIS GEO PUB
Subjects of Internal Assessment	Subject 7 & 8 (to be taken by all regular candidates)	- Ethics & Human Values - Environmental education

Rationality of Reform:

- With current combinations, students sometimes face challenges in securing admissions, as certain universities require a single language subject and four core subjects, making a total of five subjects.
- There is demand for MBiPC course from science students
- There is demand from Humanities students to give them more options in terms of combinations which can be adopted.

Proposal for new Subject Combinations:

To address above mentioned issues and also to align with the NEP's emphasis on flexibility in subject selection, BIEAP plans to introduce new subject combinations which include followings:

1. **Consolidation of Papers**: Mathematics (Math A + Math B) and Biology (Botany + Zoology) will be merged into single unified papers, streamlining the curriculum.

2. **Compulsory Subjects**: Regardless of the chosen stream, students will be required to study a total of five compulsory subjects.

3. **Elective Subject:** Allowing students to choose their second subject from a list of elective subjects provided in Annexure-I. (not chosen as subject 3,4 or 5)

4. **3rd, 4th and 5th Subject: Core Subjects: Science/Humanities:**
   Science Combinations: MPC, BiPC
   Humanities combinations : CEC, HEC, MEC etc. (14 combinations)

5. **Introduction of an Additional Subject:** A sixth subject is proposed to add to expand learning opportunities and enhance the curriculum.

   This will offer an added advantage— If a student has taken 6th subject, and if he/she fails in any one of first five subjects, the same will be replaced by the 6th subject provided the candidate satisfies the scheme of studies i.e., after replacement English should remains as one of the main five subjects.

   Additional subject can be chosen from language or academic, 23 options available in the annexure -I (not chosen as core or elective subjects)

The proposed subject combinations are presented below for reference.

Subject		**Name of Subject**
Compulsory	Subject 1 (1st language)	English
Elective	Subject 2	Student can choose from 10 Languages and 13 subject options
Core	Subject 3 Subject 4 and Subject 5	Any Combination From Group A or Group B: Group- A (Science): MPC & BiPC Group-B (Humanities): MEC, CEC, HEC, ECH,ECG, HCML (TEL), HCML(U), HCML(E), ECO LO CO, ECO CO PUB, LO HIS CIV, HIS GEO PUB
Additional Subject (Optional)	Subject 6	Any one elective or Language from any subject not selected as Compulsory
Qualifying Subjects	Subject 7 & 8 (to be taken by all regular candidates)	Ethics & Human Values Environmental education

Annexure-I: Proposed List of Elective Subjects or Additional Subjects

Sl. No.	Subject
1.	TELUGU
2.	URDU
3.	HINDI
4.	SANSKRIT
5.	TAMIL
6.	KANNADA
7.	ORIYA
8.	PERSIAN
9.	ARABIC
10.	FRENCH
11.	PHYSICS
12.	CHEMISTRY
13.	BIOLOGY
14.	MATHEMATICS
15.	ECONOMICS
16.	COMMERCE
17.	HISTORY
18.	CIVICS
19.	LOGIC
20.	GEOGRAPHY
21.	SOCIOLOGY
22.	PUBLIC ADMINISTRATON
23.	FINE ARTS, MUSIC

Proposed Changes in Examination Marks Pattern

The current marking pattern of Board Exams of BIEAP is detailed in the table below:

Subjects	1st Year			
	Science Theory		Subjects	Humanities (CEC)
	MPC	BiPC		
English	100	100	English	100
2nd Language	100	100	2nd Language	100
Maths –A/Botany	75	60	Commerce	100
Maths –B/Zoology	75	60	Eco	100
Physics	60	60	Civics	100
Chemistry	60	60	--	--
Total	470	440	Total	500

Subjects	2nd Year				
	Science Theory		Practical	Subjects	Humanities (CEC)
	MPC	BiPC			
English	100	100	--	English	100
2nd Language	100	100	--	2nd Language	100
Maths –A/ Botany	75	60	30 (BiPC)	Commerce	100
Maths –B/ Zoology	75	60	30 (BiPC)	Eco	100
Physics	60	60	30	Civics	100
Chemistry	60	60	30	--	--
Total	470	440	60/120	--	500

As per above, total marks for 1st year + 2nd year is 1000.

- MPC: 470 (1st year)+[470+60] (2nd year)=1000;
- BiPC: 440 (1st year)+[440+120] (2nd year)=1000;
- Humanities: 500 (1st year)+500 (2nd year)=1000

It is proposed to realign the subject wise total marks and weightage between theory exams and internal/practical exams as per the CBSE pattern.

Rationality of Reform:

- As per the CBSE marking pattern, marking pattern for the BIE Board exams is proposed to be revised to ensure a balanced distribution of marks between theory and internal/practical assessments.
- This will help in developing critical thinking and research ability in the students.
- The proposal is in line with the NEP 2020 guidelines, which advocates for assessment of higher-order thinking skills such as analysis, critical thinking, and problem-solving, alongside descriptive elements for a deeper understanding,

Proposed Change in Examination Marks Pattern:

- For languages and for core subjects in the Humanities stream, such as Civics, Commerce, History, and Economics, the division will be 80 marks for theory and 20 marks for internal assessments (Project Work/Research Activity)

- In total, each stream will have 500 marks: the Humanities group will be allocated 400 marks for theory and 100 marks for internal assessments. MPC group will have 380 marks for theory and 120 marks for internal/practical assessments and BiPC group will have 370 marks for theory and 130 marks for internal/practical assessments. Details shown below:

Subjects	**Board Exam**						
	MPC		**BiPC**		**Subjects**	**Humanities**	
	Theory	**Internal/ Practical**	**Theory**	**Internal/ Practical**		**Theory**	**Internal/ Practical**
English	80	20	80	20	English	80	20
Elective Subject	80	20	80	20	Elective Subject	80/70	20/30
Maths /Biology	80	20	70	30	Core Sub.1	80	20
Physics	70	30	70	30	Core Sub. 2	80	20
Chemistry	70	30	70	30	Core Sub.3	80	20
Additional Subjects (Optional)	-	-	-	-	Additional Subjects (Optional)	-	-
Total (500)	380	120	370	130	Total (500)	400	100

- Further, in line with the NEP 2020 guidelines, which advocate for exams that assess higher-order thinking skills such as analysis, critical thinking, and problem-solving, alongside descriptive elements for a deeper understanding, BIEAP has proposed the following changes:
  - Introduction of 1-mark questions in the form of multiple-choice questions (MCQs), fill-in-the-blanks, and one-word answers.
  - Revision of essay-type questions, reducing the marks allocated from 8 to 5/6 marks.