MOUNT CARMEL PU COLLEGE
I PUC – SCIENCE
PORTIONS FOR MIDTERM EXAMINATION OCTOBER 2024 - 2025

PHYSICS [33]
1. Units and measurements
2. Motion in a straight line
3. Motion in a plane
4. Laws of motion
5. Work, Energy and power.
6. System of particles and Rotational motion
7. Gravitation

CHEMISTRY [34]
1. Some Basic Concepts of Chemistry
2. Structure of Atom
3. Classification of Elements and Periodic Properties
4. Chemical bonding and Molecular structure
5. Thermo Dynamics
8. Some basic principles and techniques

MATHEMATICS [35]
1. Sets
2. Relations and Functions
3. Trigonometric Functions
4. Complex numbers and Quadratic Equations
5. Linear Inequalities
6. Straight Lines
7. Conic Section

BIOLOGY [36]
Unit I
1. The Living World
2. Biological Classification
3. Plant Kingdom
4. Animal Kingdom
Unit II
5. Morphology of Flowering plants
6. Anatomy of Flowering Plants
7. Structural Organization in Animals
Unit III
8. Cell: The Unit of Life
9. Biomolecules
10. Cell cycle and Cell Division

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ELECTRONICS [40]

1. Chapter - 1 - Introduction to Electronics
2. Chapter - 2 - Principles of Electronics
3. Chapter - 3 - Passive Components - Resistor, Capacitor
4. Chapter - 6 – Semiconductor upto Rectifiers till page 220

COMPUTER SCIENCE [41]

Chapter 1: Computer System - Introduction to computer and computing, Computer Memory, Microprocessor, Software, Operating System (OS)

Chapter 2: Encoding Schemes and Number System Encoding schemes, Number System

Chapter 3: Emerging Trends - Brief understanding of emerging trends: Artificial Intelligence, Machine learning, Natural Language Processing, Immersive experience, Robotics, Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); Grid Computing, Block chain technology.

Chapter 4: Problem Solving - Introduction to Problem Solving Algorithms flowchart and pseudo-code Programming, Programming Constructs Comparison and Analysis of Algorithms through simulations. Decomposition

Chapter 5: Getting started with Python - Basics of Python programming, working with Python interpreter in interactive mode and script mode, structure of a program, debugging errors and exceptions, identifiers, keywords.

STATISTICS [31]

1. Introduction to Statistics and some basic concepts.
2. Organization of data.
3. Classification and tabulation of data.
4. Diagrammatic and graphical representation of data.
5. Analysis of Univariate data

HOME SCIENCE [67]

1. Chapter – 1 – Introduction - HEFS: Evolution of the Discipline and its Relevance to Quality of Life.
   Unit 1 - Understanding Oneself: Adolescence
2. Chapter – 2 – Understanding Oneself: Adolescence
   A] What makes me 'I'
   B] Development and Characteristics of the self
   C] Influences on Identity
   How do we develop a sense of self?
3. Chapter – 3 – Food, Nutrition, Health and Fitness
4. Chapter – 4 – Management of Resources
5. Chapter – 5 – Fabrics around Us
6. Chapter – 6 – Media and Communication Technology
   Unit 2 - Understanding Family, Community and Society
7. Chapter – 7- Concerns and Needs in diverse Contexts
   A] Nutrition, Health and Hygiene
   B] Resource Availability and Management
   C] Textile Traditions in India