

## LABORATORY ASSISTANT/FIELDSMAN/GAS PLANT OPERATOR/METEOROLOGICAL ASSISTANT

### PAPER- II

MARKS – 100

**Unit I:** Routinely used equipments, techniques and methodologies in the laboratories of the concerned departments (20 marks)

**Unit II: Chemistry (20 marks)**  
Classification of elements and periodicity in properties; Chemical bonding and molecular structure, Equilibrium; Hydrogen; Functional groups in organic chemistry; Environmental Chemistry; Solutions; Bimolecular; Polymers; Chemistry in everyday life.

**Unit III: Biology (20 marks)**  
Biological Classification; Plant Kingdom; Animal Kingdom; Anatomy of flowering plants; Structural organization in Animals; Respiration in Plants; Breathing and exchange of Gases; Reproduction in Organism, Molecular basis of inheritance; Human health and diseases, Biotechnology and its applications; Environmental Issues.

**Unit IV: Physics (20 marks)**  
Physical World and Measurements; Laws of Motion; Work, Energy and Power; Mechanics of Solids and Fluids; Current Electricity; Atomic Structure.

**Unit V: Mathematics (20 marks)**  
Algebra: (a) Binomial theorem, (b) Sequence and Series; Coordinate Geometry: introduction to 3 dimensional geometry; Mathematical Reasoning; Statistics and Probability; Relations and Functions; Matrices and determinants; Vectors and 3 dimensional geometry in vectors.

