

Biology 12 Mid-term

Time: 75 minutes

Marks: 100 points

Breakdown

30 marks Organic Molecules
30 marks Cells and Membranes
30 marks DNA and Protein Synthesis
10 marks Enzymes

Multiple Choice: 65 marks

Written Questions: 35 marks

Organic Molecules

Identify- Fats (fatty acids, saturated vs. unsaturated, steroids, neutral fats vs. phospholipids)
-Carbohydrates-Sugars, starch, cellulose, glycogen
-Proteins-1,2,3,4 structure, peptide bonding both ways
-Nucleic Acid-DNA, RNA, ATP, role and structure

Cells

Identify and give functions of organelles
Structure related to function
Fluid mosaic model
Transport passive/active facilitated endo/exocytosis, active transport and diffusion
Effect of osmosis over a semi-permeable membrane

DNA/Protein Synthesis

Process, Product, Location and Role of
Replication inc. semi-conservative
Transcription
Translation inc. Initiation, elongation, termination
Translation of a sequence of nucleotides to amino acids
Mutations

Enzymes

Role of enzymes
Effect of temperature, pH, [substrate], [enzyme] on enzymes
Inhibitors, competitive vs. non-competitive (active site vs. allosteric site)
Cofactors
Identify reactant (substrate), product, enzyme, enzyme-substrate complex
Induced fit vs. lock and key