

Name: _____						
Subject: Biology		Class: 11 th		Time: 80 minutes		
Chapter No.2 2 nd half		MJDexpert.com			Total Marks: 40	Obtained marks

Note: Please attempt any 11 short questions from Question 2. Also, attempt both parts (a and b) of Question 3. Cutting and removal of any content is strictly prohibited.

Objective-Section

Q. 1 Encircle the correct answer. (10x1=10)

- Lipids are soluble in which of the following solvents?
(A) Water (B) Ether (C) Alcohol (D) Chloroform
- Which type of lipid is composed of glycerol and fatty acids?
(A) Waxes (B) Phospholipids (C) Acylglycerols (D) Terpenoids
- Fatty acids with no double bonds are classified as:
(A) Saturated (B) Unsaturated (C) Polyunsaturated (D) Monounsaturated
- Phospholipids are derivatives of:
(A) Acylglycerols (B) Phosphatidic acid (C) Waxes (D) Terpenoids
- Which type of RNA carries genetic information from DNA to ribosomes?
(A) mRNA (B) tRNA (C) rRNA (D) DNA
- In a nucleotide, the nitrogenous base is attached to which position of the pentose sugar?
(A) Position 1 (B) Position 2 (C) Position 3 (D) Position 5
- The structure of DNA is described as:
(A) Single helix (B) Double helix (C) Triple helix (D) Quadruple helix
- What type of bond holds the two strands of DNA together?
(A) Ionic bond (B) Covalent bond (C) Hydrogen bond (D) Peptide bond
- Which type of amino acid linkage forms a peptide bond?
(A) Amino group with hydroxyl group (B) Carboxyl group with hydrogen (C) Amino group with carboxyl group (D) Carboxyl group with hydroxyl group
- Which type of protein structure is characterized by a spiral formation of the polypeptide chain?
(A) Primary structure (B) Secondary structure
(C) Tertiary structure (D) Quaternary structure

Subjective-Section

Q.2 Write short answers of any ten of the following questions: (11x2=22)

- Define lipids and name two types of lipids.
- What is the main function of phospholipids in cells?
- Describe the difference between saturated and unsaturated fatty acids.
- Explain the role of waxes in plants.
- What is the general formula of an amino acid?
- Define a peptide bond and describe how it is formed.
- What are the four levels of protein structure?
- Differentiate between fibrous and globular proteins.
- What is the significance of the primary structure of proteins?
- Describe the structure of DNA as proposed by Watson and Crick.
- List the types of RNA and briefly describe the function of each.
- How does the melting point of fatty acids change with the number of carbon atoms in the chain?

Q.No.3 Long Question: (4+4=8)

- Explain the double helix model of DNA and the role of complementary base pairing.
- Discuss the significance of the base-pairing rules in DNA replication and protein synthesis.