

M.Sc. (Semester-I) (C.B.C.S. Scheme) Examination

BIOCHEMISTRY

Paper—I : Biomolecules

Time : 3 hours]

[Maximum Marks : 80

Note :—(1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams and figures wherever necessary.

1. Discuss the following in short :

- (a) Isolation of enzymes (proteins). 5
- (b) Assay method. 5
- (c) Protein sequencing. 6

OR

- (p) Ramchandran plot. 5
- (q) Concept of covalent and weak bonds. 5
- (r) Primary and secondary structure of protein. 6

2. Discuss the following in short :

- (a) Importance of glycoproteins. 5
- (b) What are glycolipids ? Give their importance. 5
- (c) Describe blood group sugars. 6

OR

- (p) What are lectins ? Describe their properties. 5
- (q) Discuss about starch. 5
- (r) What is animal starch ? Describe its structure. 6

3. (a) What is cholesterol ? Describe its structure. 5

(b) Describe chemistry of bile acids. 5

(c) What is role of testosterone ? How it is synthesized ? 6

OR

(p) What is progesterone ? What is its role in human beings ? 5

(q) What are bile salts ? What is its role ? 5

(r) Draw structure of Vitamin D. Describe its beneficiary symptoms in human beings. 6

4. Describe structure of DNA in detail. 16

OR

How Nucleic acid sequencing is performed ? Describe and discuss in detail. 16

5. What is the importance of porphyrins in biology ? 16

OR

Describe structure and role of hemoglobin. 16

