

AQ - 839

First Semester M. Sc. (Part-I) (CBCS) Examination

BIOCHEMISTRY

Paper I
Biomolecules

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

Note : All questions are compulsory and carry equal marks.

1. Explain the isolation, separation and assay methods of protein.

OR

Describe secondary and tertiary structure of protein.
Add a note on Ramchandran -plot. 16

2. Write in brief about following :—

- | | |
|----------------------------------|---|
| (a) Importance of glycolipids. | 5 |
| (b) Structure of glycogen. | 5 |
| (c) Blood group sugar compounds. | 6 |

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OR

- (p) Importance of glycoproteins. 5
- (b) Structure and functions of starch. 5
- (c) Uses and characteristics of Lectin. 6
3. (a) Explain the structure of cholesterol in detail. 6
- (b) Discuss the structural derivation of testosterone. 5
- (c) Write biosynthesis of bile acids. 5

OR

Discuss the structural derivation of

- (p) Progesterone. 6
- (q) Estrogen. 5
- (r) Vitamin D. 5
4. (a) Explain Maxam – Gilberts method of nucleic acid sequencing. 8
- (b) Give any two methods for separation of nucleic acids. 8

OR

- (p) Discuss in detail structure of DNA with all its forms. 8
- (r) Describe in brief the clover Leaf model of t – RNA. Give its functions. 8
5. Describe in detail structure and functions of Hemoglobin. Also give importance of porphyrins in biology.

OR

What are porphyrins ? Describe in brief the structure of chlorophyll. 16

