

(i) Printed Pages : 2

Roll No.

(ii) Questions : 9 Sub. Code :

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Exam. Code :

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B.A./B.Sc. (General) 4th Semester
(2055)

BIO-CHEMISTRY

Paper : B Membrane Biochemistry

Time Allowed : Three Hours]

[Maximum Marks : 45

Note :— Attempt *five* questions; at least *one* question is compulsory from each section. Question No. 1 is compulsory.

(Compulsory Question)

1. Write briefly about the following :

- (1) Cholesterol and its role in membranes.
- (2) Peripheral membrane proteins.
- (3) Endocytosis.
- (4) Name two lipid raft components.
- (5) Role of SNARE proteins.
- (6) What are exosomes ?
- (7) Proteoglycans.
- (8) Give two functions of H⁺-ATPase.
- (9) Membrane curvature.

9×1=9

SECTION—I

2. (a) Explain the role of membrane proteins in cellular functions.
(b) Describe the evidence supporting the fluid mosaic model. 5,4
3. (a) Write a short note on RBC membrane.
(b) Explain the effect of temperature on membrane structure. 4,5

SECTION—II

4. (a) What is lateral diffusion ? Describe its biological significance.
(b) Write a short note on ionophores. 5,4
5. (a) Explain the function and classification of Na, K ATPases.
(b) Discuss the importance of proton pumps in biological membranes. 4,5

SECTION—III

6. (a) What are the criteria used for membrane protein characterization ?
(b) Discuss the principles of membrane reconstitution. 5,4
7. (a) Explain the composition and function of liposomes.
(b) Describe the role of probes in studying membranes. 5,4

SECTION—IV

8. (a) What is ER-Golgi transport ? Explain its role in protein trafficking.
(b) What is the signal hypothesis ? 5,4
9. (a) Write a short note on lipid storage disorders.
(b) What is the significance of erythrocytes deformities ? 4,5