

(i) Printed Pages: 3

Roll No. ....

(ii) Questions : 9

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Exam. Code : 

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**B.A./B.Sc. (General) 4<sup>th</sup> Semester  
(2054)**

**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. Q. No. 1 is compulsory.

1. Write in very brief about the following :—

(i) Sphingolipids.

(ii) Give name of a membrane protein.

(iii) Ionophores.

(iv) Write name of two techniques used in membrane study.

(v) Porins.

(vi) Write function of flip-flop mechanisms.

(vii) Coated vesicles.

(viii) Give two functions of Na, K-ATPase.

(ix) Give name of one disease caused by faulty membrane.

9×1

## SECTION—I

2. (a) Write the common structural features of a plasma membrane.  
(b) Give the merits and demerits of fluid and mosaic model. 5,4
3. (a) Write a short note on structure of RBC membrane.  
(b) What do you mean by asymmetry of biomembrane and its implications ? 4,5

## SECTION—II

4. (a) What do you mean by membrane fluidity ? Write the advantage of fluidity.  
(b) Describe in brief about passive and facilitative diffusion. 5,4
5. (a) Briefly describe structure and functions of siderophores.  
(b) Describe in brief the role of  $H^+$ -ATPase in membrane. 4,5

## SECTION—III

6. (a) Describe about the various criteria of membrane purity.  
(b) What is the labelling of membrane probe ? 5,4
7. (a) What are the liposomes ? Write about the different applications of liposomes.  
(b) Describe in brief about characterization of isolated membrane. 5,4

## SECTION—IV

8. (a) What is signal hypothesis ? How the proteins are transport into mitochondria ?
- (b) How the regulation of membrane component synthesis is achieved in biological systems ? 5,4
9. (a) Write in very short about two membrane disorders.
- (b) What are the erythrocyte deformities ? 4,5