

2053

B.A./B.Sc. (General) Fourth Semester  
Bio-Chemistry  
Paper – B: Membrane Biochemistry

Time allowed: 3 Hours

Max. Marks: 45

**NOTE:** Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.

x-x-x

I. Write in the very brief about the following:-

- a) Sphingolipids.
- b) Give name of a membrane protein.
- c) Ionophores?
- d) Write name of two techniques used in membrane study.
- e) Glycophorins.
- f) Write function of ATPase.
- g) Liposome.
- h) Give two functions of Na, K- ATPase.
- i) Passive diffusion.

(9x1)

**UNIT - I**

II. (a) Write about the structural features of a membrane with a diagram.

(b) Write the merit and demerits of fluid mosaic model of Singer and Nicolson. (5,4)

III. (a) Write a short note on mammalian membrane.

(b) Describe in brief about biochemical probes used in membrane study. (4,5)

**UNIT - II**

IV. (a) What do you mean by membrane fluidity? Write the advantage of fluidity present in membrane.

(b) Write short notes on active transport. (5,4)

V. (a) Write structure and functions of siderophores.

(b) Describe in brief the role of Na, K-ATPase in membrane. (4,5)

P.T.O.

(2)

**UNIT - III**

- VI. (a) Describe about the various criteria of membrane purity.  
(b) What is the labelling of membrane probes? (5,4)
- VII. (a) What is the liposomes? Write about the different application of liposomes.  
(b) Describe in brief about the method related to membrane solubilization. (5,4)

**UNIT - IV**

- VIII. (a) What is signal hypothesis? How the proteins are transport into membrane?  
(b) How the regulation and coordination of membrane component synthesis are achieved in biological systems. (5,4)
- IX. (a) Write a short note on a coated vesicle.  
(b) What is the membrane disorder? (4,5)

x-x-x