

2056  
Bachelor of Science (FYUP)-Fourth Semester  
Biochemistry  
Paper: Membrane Biochemistry & Neurobiology  
(Common with B.Sc. Bio-technology 4<sup>th</sup> Semester FYUP)

Time allowed: 3 Hours

Max. Marks: 60

**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) Write name of membranous protein.
- c) Ionosphere?
- d) Write name of two techniques used in membrane movement.
- e) Fluid mosaic model.
- f) Write function of coated vesicles?
- g) ATPase.
- h) Give two names of neurotransmitter.

(8x1½)

**UNIT - I**

II. (a) Write the Singer-Nicholson model of a membrane composition.

(b) Write the merit and demerits of fluid and mosaic model.

(6,6)

III. (a) Difference between prokaryote and eukaryote membrane.

(b) Describe in brief about asymmetry of membrane.

(6,6)

**UNIT - II**

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

(b) Write short notes on uniport and symport.

(6,6)

V. (a) Biochemical methods for membrane study.

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

(6,6)

P.T.O.

(2)

**UNIT - III**

- VI. (a) Describe about the various criteria of membrane purity?  
(b) Mentioned about the solubility of cell membrane? (6,6)
- VII. (a) What is the liposomes? Write about the different application of liposomes.  
(b) Describe in brief about the siderophores membrane. (6,6)

**UNIT - IV**

- VIII. (a) What is neurotransmitter? How the neurotransmitter is important for nervous system?  
(b) Briefly mentioned mechanism of nerve impulse. (6,6)
- IX. (a) Write a short note on neuromuscular junction.  
(b) Briefly describe about the synaptic potential. (6,6)

x-x-x