

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
B.Sc. Summer 2017-18 Examination

Semester: 4
Subject Code: 11103251
Subject Name: Membrane Biology

Date: 10/05/2018
Time: 10:30 am to 1:00 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Essay type Question (08)**
Explain Fluid Mosaic model of plasma membrane.
- Q.1. B) Answer the following questions (Any two) (04)**
(a) Explain in brief: (04)
1. Flippases
2. Floppases
(b) What is 'Positive inside rule'? Discuss in brief. (04)
(c) Write a short note on Effect of Botulinum toxin. (04)
- Q.2. A) Answer the following questions. (04)**
(a) Short note Question (Each of 02 marks) (04)
1. What is Sphingolipid?
2. Explain in very brief the structure of Acetyl choline.
(b) Explain Ligand Gated Ion channels (04)
- Q.2. B) Answer the following questions (Any two)**
(a) Narrate functions of membrane proteins. (03)
(b) Define Liposome and draw a labeled diagram of it. (03)
(c) Write a short note on G- proteins. (03)
- Q.3. A) Essay type Question (08)**
Describe synthesis and trafficking of membrane proteins.
- Q.3. B) Answer the following questions (Any two)**
(a) Short note (Each of 02 marks) (04)
1. SNARE Proteins
2. Claudin Proteins
(b) Explain Cholesterol lipid bilayer in detail. (04)
(c) Write a short note on Desmosomes. (04)
- Q.4. A) Answer the following questions. (04)**
(a) Short note (Each of 02 marks) (04)
1. Define: Topology
2. What is Glycoprotein?
(b) Explain in brief: Action potential (04)
- Q.4. B) Answer the following questions (Any two)**
(a) Explain functioning of Tight junctions. (03)
(b) What is GPI? (03)
(c) Draw a labeled diagram of voltage gated channels. (03)