

Please check whether you have got the right question paper.

- N.B:
1. All questions carry equal marks
 2. All questions are compulsory
 3. Draw a necessary diagram whenever necessary

1. What is synapse? Describe the details electro-chemical phenomenon takes place in synapse **12**
OR
 How do you synthesize and characterize unilamellar and multilammellar vesicles? Explain in details **12**
2. Give full account on historical prospective of model biological cell membrane **12**
OR
 What are various types of membrane proteins? Write role of transmembrane proteins **12**
3. Discuss reduction potential and free energy changes in redox reaction. Write brief on chemiosmotic coupling, **12**
OR
 Write on co-transport and counter transport process in cell membrane with suitable example **12**
4. Describe charge-induced phase transition of membranes with example. **12**
OR
 Explain two possible mechanisms of lipid selection by proteins. **12**
5. Write short notes **any three** **12**
 - a) Nernst equation
 - b) Osmotic pressure
 - c) Phase transition temperature of lipids
 - d) SNARE
 - e) Transport by vesicles
 - f) Membrane geometry