

M.Sc. (Microbiology) Second Semester Old
MB2-T006 – Membrane Structure & Signal Transduction Paper – II

P. Pages : 1

Time : Three Hours



GUG/W/18/2235

Max. Marks : 80

Note : All questions are compulsory and carry equal marks.

1. Write in detail electron microscopic method to study structure of cytoplasmic membrane. **16**
- OR**
- Describe structure and organization of endoplasmic reticulum and mitochondria. **16**
2. Write notes on :
- a) Passive transport. **8**
- b) Non gated ion channels. **8**
- OR**
- Explain in detail about cotransport by symporters and antiporters. **16**
3. Discuss the concept of cell signaling. Write about interaction and regulation of signaling pathways. **16**
- OR**
- Write in brief on :
- a) G – protein coupled receptors. **8**
- b) MAP kinase pathways. **8**
4. a) What is basic two component system? Discuss with respect to bacteria. **8**
- b) Discuss about mating types of yeast. **8**
- OR**
- Give the details of Histidine kinase pathway of signal transduction. **16**
5. Write notes on :
- a) Differential scanning colorimetry. **4**
- b) ATP powered pump. **4**
- c) Cytokine receptors. **4**
- d) Heat shock proteins. **4**
