

M.Sc. (Microbiology) (NEP Pattern) Semester-II
02MSCMB02 Major Paper-II : Membrane Structure and Signal Transduction

P. Pages : 1

Time : Three Hours



GUG/W/24/15407

Max. Marks : 80

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- Notes : 1. All the questions are compulsory and carries equal marks.
2. Draw the diagram wherever it is necessary.

- 1.** Discuss flow cytometry techniques of membrane study. **16**
- OR**
- Describe in detail the following.
- a) Gap Junctions. **8**
- b) Tight Junctions. **8**
- 2.** Give detail account on ATP powered pumps. **16**
- OR**
- a) Antiporters and symporters. **8**
- b) Explain differential scanning calorimetry techniques in details? **8**
- 3.** Discuss G-protein coupled receptors in detail. **16**
- OR**
- a) Describe RTK kinases. **8**
- b) Describe about MAP kinases. **8**
- 4.** Explain sporulation as a model of bacterial signal transduction. **16**
- OR**
- Write short notes on-
- a) Histidine kinase pathway. **8**
- b) Mating type yeast. **8**
- 5.** Write a note on the following.
- a) Mitochondria. **4**
- b) Uniport. **4**
- c) Concept of cell signaling. **4**
- d) Heat shock proteins. **4**
