

TKN/KS/16–6176

**Second Semester M. Sc. (CBS)
Examination**

MICROBIOLOGY

Paper – II

**Membrane Structure and Signal Transduction
(MSST)**

Time : Three Hours]

[Max. Marks :100

N. B. : All questions are compulsory and carry equal marks.

1. Discuss the different steps involved in cell membrane study by TEM.

OR

Describe FRAP and FLIP in cell membrane study.
20

2. (a) What is passive transport ? Explain the different types of passive transport. 10
(b) What is primary active transport ? Explain with example. 10

OR

- (c) Explain antiport with example. 10
(d) Explain symport with example. 10

3. Describe G-protein linked receptor mediated signal transduction.

OR

What is cell Signaling ? Explain JAK-STAT signaling pathway in detail. 20

4. Explain signal integration in bacterial two-component regulatory system.

OR

Explain sporulation process as a model of bacterial signal transduction. 20

5. Write short notes on :—
(a) Membrane vesicles. 5
(b) Uniport 5
(c) Signal molecules. 5
(d) Heat shock proteins. 5