

**B.Sc. Examination (APRIL-2016)**

**Semester - III**

**Paper :Mi-303 - Introduction to environmental Microbiology**  
**Time: 2:30 Hours**

**Paper Code: 3793**  
**Total Marks: 70**

**Instructions:** (a) Figure to the right indicates total marks of respective question.  
(b) Draw neat, clean and labeled diagram wherever necessary.

- 1.(a) Explain: pH as environmental extreme. 10  
1.(b) Define osmotic pressure. Explain plasmolysis & plasmoptysis in brief. 04

OR

- 1.(a) Explain: Distribution of microorganisms in nature. 10  
1.(b) Write short note on: Bacteria living in saline environment. 04

- 2.(a) Explain: Legume- *Rhizobium* interaction. 10  
2.(b) Explain: Termite - microbe interaction. 04

OR

- 2.(a) What is mycorrhiza? Explain the same as an example of positive interaction. 10  
2.(b) Explain: Plant - microbe interactions above ground parts. 04

- 3.(a) Explain: Insecticides & pesticides as pollutants. 10  
3.(b) Explain: Radiation pollution. 04

OR

- 3.(a) Discuss: Land pollution. 10  
3.(b) Write a note on: Need & scope of bioremediation. 04

- 4.(a) Explain: Archaeobacteria in extreme environment. 10  
4.(b) What is optimum temperature? Classify bacteria on the basis of their optimum growth temperature. 04

OR

- 4.(a) Explain: Positive interaction between fungi & algae. 10  
4.(b) Explain: Clay-humus microbe interaction. 04

- 5.(a) Explain: Biodegradation of oil pollutants & chlorinated hydrocarbons. 10  
5.(b) Write a short note on: Thermal pollution. 04

OR

- 5.(a) Explain: Any one microbe-microbe interaction in detail.. 10  
5.(b) Write a note on: Prevention of water pollution. 04