

Reg. No .....

Name .....

18P3635

**MSc DEGREE END SEMESTER EXAMINATION - OCTOBER 2018**  
**SEMESTER 3 : ZOOLOGY**  
**COURSE : 16P3ZOOT11 : MICROBIOLOGY AND BIOTECHNOLOGY**  
*(For Regular - 2017 Admission & Supplementary - 2016 Admission)*

Time : Three Hours

Max. Marks: 75

**Section A**

**Answer any 8 (2 marks each)**

1. Comment on atomic force microscope
2. Classify microorganisms based on their carbon source
3. Draw and explain the growth curve of bacteria.
4. Comment on mutualism between microbes and plants.
5. Comment on DNA viruses
6. What is the significance of chromosome walking?
7. What are reporter genes?
8. Comment on Gene Knockout.
9. Name the different types of biosensors
10. Define SCP with examples
11. What is biostimulation?
12. Define patent

**(2 x 8 = 16)**

**Section B**

**Answer any 7 (5 marks each)**

13. Explain the role of active transport in the uptake of nutrients by the bacterial cell
14. Give an account of the cooperative relationships involving microorganisms
15. What are oncoviruses? Add notes on oncoviral mechanism.
16. Describe the various routes of transmission of disease pathogens citing suitable examples
17. Brief on Maxam and Gilberts chemical degradation DNA sequencing method
18. Brief on cloning methodologies.
19. Give an account on therapeutic cloning.
20. Explain the mechanism of nitrogen fixation in root nodules.
21. Elaborate on terminator gene technology
22. Write an account on biogas

**(5 x 7 = 35)**

**Section C**

**Answer any 2 (12 marks each)**

23. Give an account of food spoilage. Explain food preservation methods.
24. Explain the construction of genome libraries.
25. What are the various transfection methods?
26. Elaborate on bioleaching

**(12 x 2 = 24)**