

Reg. No

Name

17P3635

MSc DEGREE END SEMESTER EXAMINATION- OCTOBER-NOVEMBER 2017

SEMESTER 3 : ZOOLOGY

COURSE : 16P3ZOOT11 ; MICROBIOLOGY AND BIOTECHNOLOGY

(For Regular - 2016 admission)

Time : Three Hours

Max. Marks: 75

Section A

Answer any 8 (2 marks each)

1. Classify microorganisms based on energy requirements.
2. Comment on formic acid fermentation.
3. Comment on resuscitation culture media.
4. Comment on mutualism between microbes and animals.
5. Comment on plant viruses.
6. What are plasmids?
7. What are reporter genes?
8. What is T-DNA?
9. Mention the advantages and disadvantages of DNA vaccines.
10. Name a few microbial strains used as probiotics.
11. Define xenobiotics.
12. Write notes on WIPO.

8 x 2 (16)

Section B

Answer any 7 (5 marks each)

13. Classify bacteria based on temperature requirements.
14. Differentiate between sulfide-based mutualism and methane-based mutualism.
15. Explain viral replication.
16. Describe the microbiology of beer, wine and spirits.
17. Briefly explain the different molecular markers.
18. Elaborate the process of blue white screening.
19. Give an account on therapeutic cloning.
20. Explain the mechanism of nitrogen fixation in root nodules.
21. Write a detailed account on the mechanism of microbial leaching and mining.
22. Give an overview of the principles of recombinant DNA research.

7 x 5 (35)

Section C

Answer any 2 (12 marks each)

23. Give an account of the ultrastructure of bacterial cell.
24. Give an account of nosocomial infections.
25. Write an essay on the molecular markers and probes in rDNA technology.
26. Write an essay on commercial production of organic acids with reference to citric acid production.

2 x 12 (24)