

Reg. No

Name

20P3035

MSc DEGREE END SEMESTER EXAMINATION - OCT/NOV 2020: JAN 2021

SEMESTER 3 : ZOOLOGY

COURSE : 16P3ZOOT11 : MICROBIOLOGY AND BIOTECHNOLOGY

(For Regular - 2019 Admission and Supplementary - 2016/2017/2018 Admissions)

Time : Three Hours

Max. Marks: 75

PART A

Answer any 8 (2 marks each)

1. Comment on scanning tunneling microscopy
2. Comment on the functions of prokaryotic cell envelope
3. Draw and explain the growth curve of bacteria
4. Comment on 'Antagonism among microbes'
5. Comment on DNA viruses
6. Comment on the bacterial flora in water
7. Comment on bacterial toxins
8. What is FISH?
9. What is cell synchronisation?
10. How are probes used in disease diagnosis?
11. Define biotransformation
12. Comment on The Indian Patent Act 1970

(2 x 8 = 16)

PART B

Answer any 7 (5 marks each)

13. Explain Calvin cycle
14. Describe the role of active transport in the uptake of nutrients by a bacterial cell.
15. Differentiate between sulfide-based mutualism and methane-based mutualism.
16. Describe the structure and chemical composition of viral envelope
17. Write a note on the microbiology of dairy products
18. Explain the processes involved in cheese making
19. Explain the process of Blue white screening.
20. Brief on tissue engineering
21. Explain the steps in disease diagnosis using probes
22. Write short notes on production of aminoacids

(5 x 7 = 35)

PART C

Answer any 2 (12 marks each)

23. Give an overview of food spoilage. Explain food preservation methods
24. Comment on the vectors used in rDNA technology. Add note on differences between cloning and expression vectors
25. Write an essay on 'Gene knockout' technique.
26. Write an essay on sewage treatment

(12 x 2 = 24)