21000164

21000164

Reg. No.....

Name.....

M.Sc. DEGREE (C.S.S.) EXAMINATION, FEBRUARY 2021

Third Semester

Faculty of Science

Branch VIII : Zoology

ZY 3CT 13—Course XIV—MICROBIOLOGY AND BIOTECHNOLOGY

(2012—2018 Admissions)

Time : Three Hours

Maximum Weight : 30

Section I (Short Answer Type Questions)

Answer any **ten** *out of twelve.*
Each question carries 1 *weight.*

1. Endospore.
2. Autotroph and heterotroph.
3. Facilitated diffusion.
4. What is bioterrorism ? Comment on biological weapons.
5. Terminator gene technology.
6. Single cell protein.
7. Prions.
8. Nosocomial infection.
9. Biosensor.
10. Types of RNA.
11. Role of soil bacteria.
12. Restriction endonuclease.

(10 × 1 = 10)

Section II (Short Essay Type Questions)

Answer any **five** *out of eight.*
Each question carries 2 *weight.*

13. What is the role of vectors in recombinant DNA technology ?
14. Write down the procedure of gene cloning.

Turn over

15. Explain replication of virus.
16. Describe the structure of a bacterium.
17. What are the requirements of bacterial growth ? Add a note on factors influencing growth.
18. Give an account of the growth of Biotechnology in India.
19. Explain the methodology of sewage treatment.
20. Write a short essay on IPR and how it is related to biotechnology.

(5 × 2 = 10)

Section III (Long Essay Type Questions)

Answer any **two** *out of three.*
Each question carries 5 weight.

21. Write in detail about the principle involved in PCR, its types and applications.
22. Discuss in detail the techniques of mammalian cell culture.
23. Write an essay on types of microbial interactions.

(2 × 5 = 10)