22001205

Reg. No.....

Name.....

M.Sc. DEGREE (C.S.S.) EXAMINATION, JULY 2022

Third Semester

Faculty of Science

Branch VIII—Zoology

ZY 3C T13—MICROBIOLOGY AND BIOTECHNOLOGY

(2012—2018 Admissions—Supplementary/Mercy Chance)

Time : Three Hours Maximum Weight : 30

Section I (Short Answer Type Questions)

Answer any **ten** *questions.*
Each question carries a weight of 1.

Write notes on the following :—

1. DNA vaccines.
2. RT-PCR.
3. Facultative anaerobes.
4. Biosafety protocol 2000.
5. Prions.
6. Chromosome walking.
7. Archaea.
8. Differential media.
9. Automated DNA sequencers.
10. Botulism.
11. WIPO.
12. Single cell protein.

(10 × 1 = 10 weight)

Section II (Short Essay Type Questions)

Answer any **five** *questions.*
Each question carries a weight of 2.

13. Explain various steps involved in glycolysis.
14. Discuss various phases of bacterial growth curve.
15. Describe lytic and lysogenic life cycle of bacteriophages.
16. What are monoclonal antibodies ? Elaborate various applications of monoclonal antibodies.
17. Give an account of transgenic plants and its advantages.
18. Describe microbial biofuel production and its applications.

Turn over

19. Differentiate cell walls of gram positive and gram negative bacteria.

20. Explain various cloning and expression vectors widely used in rDNA technology.

(5 × 2 = 10 weight)

Section III (Long Essay Type Questions)

Answer any **two** *questions.*
Each question carries a weight of 5.

21. Describe various physical and chemical methods used in control of micro-organisms.

22. Explain various transfection methods used in transgenic animal production.

23. Elucidate molecular markers and probes used in biotechnological applications.

(2 × 5 = 10 weight)