19002113

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Reg. No.....

Name.....

M.Sc. DEGREE (C.S.S.) EXAMINATION, NOVEMBER 2019

Third Semester

Faculty of Science

Branch VIII : Zoology

ZY3CT13—MICROBIOLOGY AND BIOTECHNOLOGY

(2012—2018 Admissions)

Time : Three Hours

Maximum Weight : 30

Section I (Short Answer Type Questions)

Answer any **ten** *out of twelve.*

Weight 1 *each.*

1. Biochip.
2. Peptidoglycan.
3. Flagella and Pili.
4. Plasmid.
5. RAPD.
6. Cryogenics.
7. Stem cell.
8. Extra cellular enzyme.
9. TRIPS.
10. Transgenic.
11. Bioethics.
12. Terminator gene technology.

(10 × 1 = 10)

Turn over

Section II (Short Essay Type Questions)

Answer any **five** *out of eight.*
Weight 2 each.

13. Explain blotting techniques. Comment on its significance.
14. Describe Embden-Meyerhof pathway.
15. Explain the role of vectors in recombinant DNA technology.
16. What are restriction enzymes and their role in rDNA technology ?
17. What are the different steps involved in PCR reaction ?
18. Give an account of the classification of virus.
19. Explain the concept of bioethics in the concept of human cloning.
20. Explain the structure of plasma membrane.

(5 × 2 = 10)

Section III (Long Essay Type Questions)

Answer any **two** *our of three.*
Weight 5 each.

21. Discuss the factors affecting microbial growth.
22. Explain the principle and methodology of DNA sequencing.
23. Describe the ultra-structure of bacterium with suitable illustrations.

(2 × 5 = 10)