

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





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**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 out 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)

