

**17P416**

(Pages: 2)

Name.....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2019**

(CUCSS - PG)

(Zoology)

**CC15P ZO4 C11 - MICROBIOLOGY AND BIOTECHNOLOGY**

(Improvement\Supplementary)

(2015 & 2016 Admissions)

Time: Three Hours

Maximum: 36 Weightage

I. Answer *all* questions:

1. What are the contributions of Robert Koch?
2. Define replica plate method for microbial multiplication.
3. Comment on phenetic classification.
4. Distinguish between gram positive and gram negative cell wall.
5. Comment on Pour plate technique.
6. Write on bacterial motility.
7. What is candidiasis?
8. What are Plasmids?
9. What are shuttle vectors?
10. Explain electroporation.
11. Comment on RFLP.
12. Outline biosensors.
13. Explain antenatal diagnosis..
14. Define Gene knockout.

**(14 x 1 = 14 Weightage)**

II. Answer any *seven* of the following:

15. What are the Properties of a good cloning vector?
16. Discuss Intellectual Property Rights.
17. Write on Chemical synthesis of tRNA gene.
18. Explain DNA finger printing.
19. Describe Southern blot and Northern blot.
20. Explain the components external to cell wall of bacteria.
21. Write an account on Streptococcal diseases.
22. Describe briefly microbial drug resistance.
23. Illustrate the structure of a bacterial cell.

24. Describe the transport of nutrients in bacteria.

**(7 x 2 = 14 Weightage)**

III. Answer any *two* of the following:

25. Write an essay on construction of Chimeric DNA.

26. Discuss various methods in Microbiological analysis of drinking water.

27. Explain different Molecular markers.

28. Provide an account on general structural properties of Viruses.

**(2 x 4 = 8 Weightage)**

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