

16U619

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Name:

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2019

(Regular/Improvement/Supplementary)

(CUCBCSS - UG)

CC15U ZO6 B14 - BIOTECHNOLOGY, MICROBIOLOGY AND IMMUNOLOGY

Zoology - Core Course

(2015 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

I. Answer *all* the questions. Each question carries 1 mark.

1. The major immunoglobulin isotype in secretions like saliva, sweat, tears and colostrum.
2. Cytokines which provide protection against viral infections are known as.
3. Name two secondary lymphoid organs.
4. Causative organism of Syphilis.
5. Name a differential media used in bacteriology.
6. Example for a retrovirus.
7. A microorganism used for bioleaching.
8. An artificial vector used in gene cloning.
9. Example for a cell line.
10. Name an adjuvant.

(10 x 1 = 10 Marks)

II. Answer any *ten* questions. Each question carries 2 marks.

11. What are tumour antigens?
12. Differentiate dotblots and slotblots.
13. What is systemic autoimmune disease? Give two examples.
14. Differentiate agglutinin and precipitin.
15. Name four microorganisms and their products used in food industry.
16. Write on the functions of bacterial fimbriae and pili.
17. What are prions? Give two examples.
18. What is bioremediation? Name two microorganisms used in bioremediation.
19. Differentiate microsatellite and minisatellite DNA.
20. Write on any two uses of transgenic fish.
21. What is a restriction endonuclease? Give two examples.
22. Write on four uses of monoclonal antibodies.

(10 x 2 = 20 Marks)

III. Answer any *five* questions. Each question carries 6 marks.

23. Comment on hybridoma technology.
24. Write on DNA sequencing.
25. Explain techniques in molecular marker analysis.
26. Write on bacterial growth.
27. Explain any one differential staining method in bacteriology.
28. Comment on types of vaccines with examples.
29. Write on immunoassays.
30. Explain agglutination inhibition reaction with two examples.

(5 x 6 = 30 Marks)

IV. Write essay on any *two* questions. Each question carries 10 marks.

31. Describe transfection methods.
32. Write on cells of immune system.
33. Explain the gene cloning technique.
34. Comment on types of microorganisms.

(2 x 10 = 20 Marks)
