22U523 (Pages: 2) Name: ....

Reg.No: ....

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U ZOL5 B07 - BIOTECHNOLOGY MICROBIOLOGY AND IMMUNOLOGY

(Zoology - Core Course)

(2019 Admission onwards)

Time : 2.5 Hours   Maximum : 80 Marks

Credit : 4

Part A (Short answer questions)

Answer *all* questions. Each question carries 2 marks.

1. Differentiate between DNA ligase and DNA polymerase.

2. What are monoclonal antibodies?

3. Comment on knock out mice and Bt cotton.

4. Write a short note on transgenic goats.

5. Define bioventing.

6. Define disinfection.

7. What is a glyocalyx?

8. Comment on riboflavin production.

9. Comment on Typhoid.

10. Comment on Herpes.

11. What is MALT and GALT?

12. Differentiate antigen and immunogen.

13. Sketch the domain structure of Class 1 MHC with apprpriate labelling.

14. What is Immunodeficiency or immunocompromisation? Give examples.

15. What are the options available for antibody therapy for cancer?

(Ceiling: 25 Marks)

Part B (Paragraph questions)

Answer *all* questions. Each question carries 5 marks.

16. Explain the branches of biotechnology.

17. Mention the techniques in gene cloning.

18. Describe microsatellite DNA and its applications.

19. Discuss the life forms studied under microbiology.

20. What are the methods adopted for isolation of individual microorganisms from a mixed culture?

21. Discuss about bioinsectcides and its applications.

22. Comment on types of vaccine with examples.

23. What is autoimmunity? Give four examples with its clinical manifestation.

(Ceiling: 35 Marks)

Part C (Essay questions)

Answer any *two* questions. Each question carries 10 marks.

24. Give an account on molecular diagnosis of genetic diseases.

25. Explain the life cycle of bacteriophage.

26. Write an essay on the different cells of immune system. Mention the structural as well as functional differences among them.

27. What are the different types of Immunoglobulins. Illustrate the structure of IgG.

(2 × 10 = 20 Marks)

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