D 90118 (Pages : 2) Name.....

Reg. No.....

FIFTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, NOVEMBER 2020

(CUCBCSS—UG)

Biotechnology

BTY 5B 08—IMMUNOLOGY AND IMMUNOTECHNOLOGY

Time : Three Hours Maximum : 80 Marks

Section A

Answer any **two** *questions in about* 1,500 *words.*
Each question carries 10 *marks.*
All questions can be attended.
Overall Ceiling 20.

1. Discuss about the cells of the immune system.
2. Describe the general structure of antibody.
3. Briefly explain the immune complex mediated hypersensitivity reaction.
4. Discuss about the production and application of monoclonal antibodies.

(2 × 10 = 20 marks)

Section B

All questions can be attended.
Overall Ceiling 35.

5. Briefly explain the innate immunity.
6. Write the function of NK cell and Mast cell.
7. What is hematopoiesis ? Explain it.
8. Write the structure and function of Thymus.
9. Write the functions of MALT.
10. Write the general characteristics of antigens.
11. What is adjuvant ? Explain the role of adjuvant in immune response.
12. Explain the applications of antigen-antibody reactions.
13. Explain the principle and applications of RLA.
14. What is allergen ? Explain the different types of allergen.
15. Briefly explain the anaphylaxis reaction.
16. Describe the type IV hypersensitivity reaction.

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17. Briefly explain the grave's disease.

18. Discuss about the passive immunization.

(7 × 5 = 35 marks)

Section C

Answer any **three** *questions in about* 300 *words.*
Each question carries 5 *marks.*
All questions can be attended.
Overall Ceiling 15.

19. Write the contributions of Edward Jenner.

20. What is bone marrow ? Explain its function.

21. What is immune response ? Write about primary immune response.

22. What is RID ? Explain it.

23. Write about the tumor necrosis factor.

(3 × 5 = 15 marks)

Section D

Answer **all** *questions in about* 200 *words.*
Each question carries 2 *marks.*

24. What is variolation ?

25. What is phagocytosis ?

26. Define isotype and allotype.

27. Write the applications of ELISA.

28. What is interferon ?

(5 × 2 = 10 marks)