D 50667 (Pages : 3) Name.....

Reg. No.....

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2018

(CUCBCSS—UG)

Microbiology

MBY 5B 11—IMMUNOLOGY

Time : Three Hours Maximum : 80 Marks

Draw diagrams wherever necessary.

Part A

Answer **all** *questions.*
Each question carries ½ mark.

I. Choose the correct answer :

1. The ABO blood group system was identified by :

   (a) Edward Jenner. (c) Robert Koch.

   (b) Richard Porter. (d) Karl Landsteiner.

2. Transfusion reactions are due to :

   (a) Type I hypersensitivity reaction.

   (b) Type III hypersensitivity reaction.

   (c) Type II hypersensitivity reaction.

   (d) Type IV hypersensitivity reaction.

3. The virus causing hepatocellular carcinoma is :

   (a) Hepatitis B virus. (c) Herpes simplex virus.

   (b) Hepatitis A virus. (d) Epstein Barr virus.

4. The enzyme used to cleave IgG into Fc and Fab fragments is :

   (a) Pepsin. (c) Amylase.

   (b) Papain. (d) β -lactamase.

Turn over

II. Fill in the blanks :

5. The cells that are capable of producing and secreting antibodies are ————.
6. The enzyme present in tears that inhibit bacterial growth is ————.
7. The most efficient antibody in complement fixation is ————.
8. The substance that mixed and injected with the antigen to enhance the immunogenicity of the antigen is called ————.

III. Answer in *one word* :

9. Splenomegaly is an indication of the spread of antigen or pathogen through.
10. Tc cell activation requires presentation of antigen on.
11. Fixed macrophages in liver is called ————.
12. The enhancement of phagocytosis in presence of antibody or complement is called ————.

(12 × ½ = 6 marks)

Part B

Answer **all** *of the following in two* **or** *three sentences.*
Each question carries 2 *marks.*

13. Haematopoietic stem cells.
14. Passive immunization.
15. CALT.
16. Hyperacute rejection.
17. Passive agglutination.
18. Thymus independent antigens.
19. Clonal selection theory.
20. Idiotypes.
21. Rheumatoid factor.
22. Immunotoxins.

(10 × 2 = 20 marks)

Part C

Write short notes on any **six** *of the following.*
Each question carries 5 *marks.*

23. Tumour antigens.
24. Structure of IgG.
25. Delayed type hypersensitivity.
26. Radioimmunoassay.
27. Hybridoma technology.

28. Major histocompatibility complex.

29. Structure and functions of granulocytes.

30. Structure of GALT associated with intestine.

(6 × 5 = 30 marks)

Part D

Write essays on any **two** *of the following.*
Each question carries 12 *marks.*

31. What are the functions of complement system ? Describe the activation of complement system in the presence and absence of specific immunity.

32. Differentiate agglutination and precipitation reactions. Discuss various methods of immunodiffusion techniques.

33. Classify autoimmune disorders. Write about various mechanisms involved in the development of autoimmune disorders.

(2 × 12 = 24 marks)