

(6 pages)

Reg. No. :

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M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Second Semester

Microbiology — Core

IMMUNOLOGY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following immunity is obtained during a lifetime?
(a) Acquired immunity
(b) Active immunity
(c) Passive immunity
(d) None of the above

2. Which of the following immune cells/molecules are most effective at destroying intracellular pathogens?
(a) T helper cells (b) Antibodies
(c) Complement (d) T cytolytic cells
3. The lymphocyte which are differentiated into the thymus gland are called
(a) Plasma cells (b) T cells
(c) B cells (d) Monocytes
4. T cells originate from stem cells located in the _____
(a) Liver
(b) Bone marrow
(c) Thyroid gland
(d) Gastro intestinal tract
5. The most suitable method of rapid chemical diagnosis of bacterial, mycoplasma and viral diseases is
(a) Double immunodiffusion
(b) Immuno electrophoresis
(c) Two-dimensional electrophoresis
(d) Counter immuno electrophoresis

6. In order to separate the antibodies in an antibody's mixture, the laboratory technologist may use a procedure called _____.
- (a) Transfusion
 - (b) Compliment fixation
 - (c) Electrophoresis
 - (d) Gene amplification
7. _____ is the first immuno deficiency diseases to have been recognized
- (a) Digeorge syndrome
 - (b) x linked agammaglobulinemia
 - (c) PMP deficiency
 - (d) Transcobalamin II deficiency
8. Analysis of protein antigen by
- (a) Southern blot
 - (b) Western blot
 - (c) Northern blot.
 - (d) None of the above
9. Which of the following immunoglobulin is present normally in plasma at the highest concentration?
- (a) IgA
 - (b) IGD
 - (c) IgE
 - (d) IgG

10. The specificity of an antibody is due to
- (a) Its valance
 - (b) The heavy chains
 - (c) The Fc portion of the molecule
 - (d) The variable portion of the nearly and light chain.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Give a brief account on Blymphocytes.
- Or
- (b) Write a short note on phagocytosis.
12. (a) Explain the classical pathway of complement.
- Or
- (b) Write a short note on Haptens.
13. (a) Explain briefly about ourchterlony double immuno diffusion technique.
- Or
- (b) What is agglutination? Describe the type of ABO and Rh blood grouping.

14. (a) Explain immuno suppression process.

Or

(b) What are the different categories of transplants?

15. (a) List out the application the monoclonal antibody.

Or

(b) What is adjuvant? Explain its types.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Give a detailed account on innate immunity.

Or

(b) Write about the structure and functions of thymus.

17. (a) Write a short note on allotypes, isotypes and idiotypes in detail.

Or

(b) Write an essay on major Histocompatibility complex.

18. (a) Write an essay on immuno electrophoresis.

Or

(b) Explain the principle, procedure and application of radio immuno assay.

19. (a) Describe the detail about the mechanism of tolerance.

Or

(b) Elaborate notes on immune deficiency diseases.

20. (a) Give an account of monoclonal antibody production.

Or

(b) What is vaccination? Give a brief note on types of vaccine.