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Reg. No. : .....

Code No. : 30547 E      Sub. Code : CMMI 31

B.Sc. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2023.

Third Semester

Microbiology – Core

FUNDAMENTALS OF IMMUNOLOGY

(For those who joined in July 2021-22 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The ability of an organism to resist infections by the pathogens is called \_\_\_\_\_
- (a) Infection                      (b) Hypersensitivity  
(c) Immunity                      (d) Allergy

2. Which of these is not a characteristic feature of adaptive immunity?
- (a) Immunogenic memory  
(b) Antigen-non specific  
(c) Self/non self recognition  
(d) Diversity
3. Which of the following antibody gives a primary Immune reaction?
- (a) IgG                              (b) IgM  
(c) IgA                              (d) IgE
4. Name the cytokines which released in response in virus infection?
- (a) Interferons                      (b) Monokines  
(c) Lymphokines                      (d) Interleukin
5. Antibodies are \_\_\_\_\_
- (a) Proteins                              (b) Glycoproteins  
(c) Carbohydrates                      (d) Nucleic acids
6. The antigen binding site on an antibody is called \_\_\_\_\_
- (a) Antitope                              (b) Epitope  
(c) Paratope                              (d) Endotope

7. The bonds involved in antigen-antibody interactions are \_\_\_\_\_
- (a) Weak hydrogens bonds
  - (b) Vanderwalls force
  - (c) Both (a) and (b)
  - (d) Strong covalent bonds
8. Small chemical group of an antigen that can react with antibody \_\_\_\_\_
- (a) Epitope
  - (b) Paratope
  - (c) Isotope
  - (d) Allotope
9. Type IV hypersensitivity is also called as \_\_\_\_\_
- (a) Immediate hypersensitivity
  - (b) Delayed hypersensitivity
  - (c) Cytotoxic hypersensitivity
  - (d) Immune complex hypersensitivity
10. Allergy to penicillin is an example of \_\_\_\_\_
- (a) Type I hypersensitivity
  - (b) Type II hypersensitivity
  - (c) Type III hypersensitivity
  - (d) Type IV hypersensitivity

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).  
Each answer should not exceed 250 words.

11. (a) Analyze the term Immunohaematology and explain its functions.
- Or
- (b) What do you understand by the term Blood transfusion?
12. (a) Compare and contrast T cells and B cells.
- Or
- (b) Illustrate Humoral immune response with explanation.
13. (a) How will you describe the structure of Antigens?
- Or
- (b) Discuss about Toxoids and its applications.
14. (a) Explain in detail of steps involved in RIA.
- Or
- (b) Summarize the invitro methods of Antigen-Antibody reactions.

15. (a) Describe in detail of Antibody – dependent cell cytotoxicity.

Or

- (b) Explain about Acquired immuno deficiency disease with illustration.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)  
Each answer should not exceed 600 words.

16. (a) Analyse the different types of Blood groups with neat illustration.

Or

- (b) List out the structure and functions of Immune cells.

17. (a) Discuss in detail of primary Lymphoid organs.

Or

- (b) Describe about Lymphokines and cytokines.

18. (a) Write an account on complementary pathways with neat sketch.

Or

- (b) Explain in detail of structure of Immunoglobulins.

19. (a) State the process of Immunofluorescence technique.

Or

- (b) Summarize the serological techniques used in the diagnosis of disease.

20. (a) Compare and contrast Normal cells and cancerous cells.

Or

- (b) Describe about Transplantation technology and its applications.
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