



**JA-003-001631**

Seat No. \_\_\_\_\_

**B. Sc. (Sem. VI) (CBCS) Examination**

August - 2019

**Microbiology : MB-601**

*(Immunology & Clinical Microbiology)*

**Faculty Code : 003**

**Subject Code : 001631**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

- Instructions :**
- (1) All questions are compulsory.
  - (2) Marks for all the questions are indicated on the right.
  - (3) Support your answer with suitable diagram wherever applicable.

- 1 Objective type questions : **20×1=20**
1. Define Herd immunity.
  2. State function of B lymphocytes.
  3. Define Immunogen.
  4. Define Haptens.
  5. What is the chemical nature of antibody molecule ?
  6. Define Paratope.
  7. What is antibody affinity ?
  8. What is opsonization ?
  9. What is Autoimmunity ?
  10. Define TAA.
  11. What is primary immunodeficiency ?
  12. Define Transplantation.
  13. Define Normal flora.
  14. Define Epidemiology.
  15. Name any two pathogenic species of Clostridium.
  16. Name a disease caused by Treponema.

17. Who discovered the ABO blood grouping system?
18. Define Precipitation reaction.
19. Name any two fluorescent dyes.
20. What is a clinical specimen ?

**2 (A) Answer specifically (Any 3 out of 6) 3×2=6**

1. Differentiate between Primary and Secondary immune response.
2. Draw a well labelled diagram of IgM.
3. What is Graft versus Host reaction?
4. Enlist normal flora of GI tract.
5. Explain the process of Blood coagulation.
6. Write a brief note on Natural immunity.

**(B) Answer specifically (Any 3 out of 6) 3×3=9**

1. Discuss various factors affecting immunogenicity of a molecule.
2. Explain with suitable diagram - Basic structure of antibody molecule.
3. Discuss various mechanisms of graft rejection.
4. Write a brief account of various microbial adherence factors for interaction with host.
5. Explain in brief - ELISA.
6. Explain Clonal selection theory.

**(C) Write notes on : (Any 2 out of 5) 2×5=10**

1. Organs of immune System
2. Hybridoma technology
3. Hypersensitivity
4. Normal flora of Healthy human host
5. Molecular methods for identification of microbes from specimen.

**3 (A) Answer specifically (Any 3 out of 6) 3×2=6**

- 1 Explain Acquired immunity in brief.
2. Discuss the experiment to elucidate the chemical nature of antibody molecule.

3. Enlist various tumour antigens and state their significance.
4. Enlist various microbial virulence factors and discuss any one in brief.
5. Briefly explain Immunofluorescence
6. Write a brief note on transmission of diseases caused by Shigella.

(B) Answer specifically (Any 3 out of 6) **3×3=9**

1. Discuss different cells of immune system with their significance.
2. Briefly discuss various biological activities of Immunoglobulins.
3. Write a brief note on Immunodeficiency.
4. Write a brief account on pathogenicity, occurrence and spread of Malaria.
5. Explain in brief - Western Blot.
6. Briefly discuss the process of host - Microbe interactions.

(C) Write note on (Any 2 out of 5) **2×5=10**

1. Innate Immunity
2. Classes of Immunoglobulins, their structure and significance.
3. Autoimmunity
4. Vaccines
5. Rapid methods of identification of microbes from specimen.

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