

B.Sc. Semester - 5 (CBCS) Examination**Oct/Nov. - 2018****IMMUNOLOGY AND MEDICAL MICROBIOLOGY (CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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- Q-1(A) Answer the following (Any one) (07)
- (1) Explain the types of immunity in detail.
 - (2) Describe the distribution of immune system in human body.
- Q-1(B) Attempt any one (04)
- (1) Discuss the characteristics of adaptive immune response.
 - (2) Explain the function and properties of APC and B cell with suitable diagram.
- Q-1(C) Attempt any three (03)
- (1) Define: Herd Immunity
 - (2) What is anamnesis?
 - (3) Mention the functions of Th and Tc in brief.
 - (4) What are physiological barriers of Innate immunity?
 - (5) What is GALT and Peyer's patches?
- Q-2(A) Answer the following (Any one) (07)
- (1) Explain processing and presentation of antigens.
 - (2) Describe types, properties and importance of MHC in immune response.
- Q-2(B) Attempt any one (04)
- (1) Discuss activation of humoral immune response.
 - (2) What are cytokines? Explain types of IFN in brief.
- Q-2(C) Attempt any three (03)
- (1) What is opsonization?
 - (2) Define: NK cells
 - (3) Give names of two pathways of complement activation.
 - (4) What are Tolerogens?
 - (5) What are Interleukins?
- Q-3(A) Answer the following (Any one) (07)
- (1) Explain the factors affecting immunogenicity.
 - (2) Describe the theory of antibody diversity in detail.
- Q-3(B) Attempt any one (04)
- (1) Explain Burnet's theory with diagram.
 - (2) Describe HAT selection in detail.

- Q-3(C) Attempt any three (03)
- (1) What is Freund's complete adjuvant?
 - (2) Define: Epitope, Paratope and Agrelope
 - (3) Which IgG subtype has maximum interchain disulfide bonds?
 - (4) What are incomplete antigens?
 - (5) Who deciphered the structure of immunoglobulin?
- Q-4(A) Answer the following (Any one) (07)
- (1) Explain types 1 and types 3 hypersensitivity in detail.
 - (2) Describe the mechanisms of autoimmunity.
- Q-4(B) Attempt any one (04)
- (1) What are primary or congenital immunodeficiency diseases? Explain.
 - (2) Discuss: Prevention of allograft rejection.
- Q-4(C) Attempt any three (03)
- (1) What are TAA and TSA?
 - (2) What is Haemolytic Anemia of Newborn?
 - (3) What contact dermatitis?
 - (4) Give examples of immunosuppressive drugs.
 - (5) Give examples of oncogenic viruses.
- Q-5(A) Answer the following (Any one) (07)
- (1) Write a note on microbial virulence factors.
 - (2) Explain normal flora of mouth, skin and genitourinary tract.
- Q-5(B) Attempt any one (04)
- (1) Describe microbial adherence in detail.
 - (2) Explain individual immunity with examples.
- Q-5(C) Attempt any three (03)
- (1) What are siderophores?
 - (2) What is human microbiome?
 - (3) What are the functions of A and B subunit of exotoxins?
 - (4) Which pathogens cause Gas gangrene and Anthrax?
 - (5) What is Gnotobiotic life?
