



**PG-003-001637**

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

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

**July - 2018**

**BC - 602 : Immunology**

**Faculty Code : 003**

**Subject Code : 001637**

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

[Total Marks : 70

1 Answer the following questions in one word or one line : 20

- (1) Write name of enzymes participate in degradation of immunoglobulin.
- (2) \_\_\_\_\_ Immunoglobulin can cross the placentas.
- (3) Define the avidity of antigen-antibody reaction.
- (4) Write the difference between endogeneous and exogeneous antigen.
- (5) Write the factors affecting the antigenicity of antigen.
- (6) What is the difference between precipitation and agglutination reaction.
- (7) Write the name of complements participate in alternative pathway.
- (8) Write the advantages of adjuvants.
- (9) How many  $V_\lambda$ ,  $J_\lambda$  and  $C_\lambda$  segments are present in.  $\lambda$ -Chain multigene family of human .
- (10) Write the types of dendritic cells.
- (11) Write the full form of CLIP
- (12) What do you understand by the term germinal center?
- (13) Which cell types are abundant in paracortex of lymph nodes?
- (14) Write the full form of HLA gene complex
- (15) Write the role of Ubiquitin in antigen processing.

- (16) Write at least two examples of opsonins.
- (17) Write the full form of BCR and TCR.
- (18) Define the function of colony forming units in hemopoiesis.
- (19) Write the components of anatomical barrier.
- (20) Define the term: margination.

- 2** (A) Answer any **three** from the following : **6**
- (i) Write the difference between type-I and type-II hypersensitive reaction.
  - (ii) Write the difference of active and passive immunization
  - (iii) Write the functions of IgG
  - (iv) Draw the diagram showing autocrine function of cytokine.
  - (v) Explain the method double diffusion in one dimension.
  - (vi) Write the significance of fever.
- (B) Answer any **three** from the following : **9**
- (i) Write a short note on primary immune response
  - (ii) Briefly explain immunoglobulin IgG.
  - (iii) Write a note on B cell
  - (iv) Explain radial immune diffusion.
  - (v) Draw a well labeled diagram of spleen.
  - (vi) Briefly explain HIV with mode of action
- (C) Answer any **two** from the following : **10**
- (i) Explain the agglutination inhibition reaction with example.
  - (ii) Write a note on phagocytosis with diagram
  - (iii) Explain classical: pathway of complement system:
  - (iv) Define autoimmune response and explain SLE.
  - (v) Write a detail note on Ouchterlony technique.

- 3 (A) Answer any **three** from the following : **6**
- (i) Write the sign and symptoms of AIDS.
  - (ii) Write the, full form of KIR and KAR
  - (iii) What do you understand by direct ELISA?
  - (iv) Define humoral immune response
  - (v) Write the function of  $C_3$  convertage in complement system.
  - (vi) Write the role of plasma cell and memory cell.
- (B) Answer any **three** from the following : **9**
- (i) Write a note on BCG vaccine.
  - (ii) Explain epitop and paratop with diagram.
  - (iii) Draw the diagram showing the processing of cytosolic antigen.
  - (iv) Explain immunoglobulin with labeled diagram
  - (v) Draw labeled diagram showing inflammation:
  - (vi) Write a detail note on type-II hypersensitive reaction.
- (C) Answer any **two** from the following : **10**
- (i) Explain  $\lambda$ -light chain multigene organization of Ig genes.
  - (ii) Write a note on MHC class II and its interaction of antigenic peptide.
  - (iii) Explain with diagram: Thymus
  - (iv) Explain any two types of attenuated vaccines.
  - (v) Write a detail note on RIA with its advantages and disadvantages.
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