



**MAN-003-001637**

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

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

**March / April - 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) Define the term immunogen and immunogenicity.
- (2) Write the difference between agglutinin and agglutininogen.
- (3) What you understand by the term haptens ?
- (4) Write the name of complements which participate in alternative pathway.
- (5) Write the difference between endogeneous and exogeneous antigen.
- (6) Which immunoglobulins does not have hinge region ?
- (7) Write the disadvantages of RIA technique.
- (8) Full form of AIDS is \_\_\_\_\_.
- (9) Type-IV hypersensitive reaction is also known as \_\_\_\_\_
- (10) How many  $V_{\lambda}, J_{\lambda}$  gene segments are present in k-Chain Multigene Family in mouse ?
- (11) Write the name of two cytokines.
- (12) Write the full form of SLE.
- (13) Define the role of follicular dendritic cells.
- (14) What do you understand by the term germinal center?
- (15) Which area of the lymph node is rich in T lymphocytes?

- (16) Write the full form of HLA gene complex.
- (17) What do you mean by the term: red pulp?
- (18) Define passive immunization.
- (19) What is the chemical nature B cell receptor?
- (20) What is the role of opsonins?

- 2 (a) Answer any **three** from the following : **6**
- (i) Write the difference between self and non self antigen.
  - (ii) Briefly write about memory cells.
  - (iii) Write the functions of IgA.
  - (iv) Write the role of  $\beta 2$  microglobulin
  - (v) Explain the method single diffusion in one dimension.
  - (vi) Write the functions of NK cells.
- (b) Answer any **three** from the following : **9**
- (i) Write a short note on Human HLA gene complex.
  - (ii) Draw the labelled diagram of immunoglobulin.
  - (iii) Draw the diagram showing the processing of endogenous antigen.
  - (iv) Write the difference between type-I and type-II hypersensitive reaction.
  - (v) Write the differences between B and T lymphocytes.
  - (vi) Write a brief note on structure of HIV.
- (c) Answer any **two** from the following : **10**
- (i) Write a detailed note on Coomb's test.
  - (ii) Write a note on DNA vaccine.
  - (iii) Explain classical pathway of complement system.
  - (iv) Write a note on Myasthenia Gravis with suitable diagram.
  - (v) Write a detailed note on precipitation reaction.

- 3** (a) Answer any **three** from the following : **6**
- (i) What do you understand by HIV and AIDS ?
  - (ii) Draw labelled diagram showing margination.
  - (iii) Write the factors affecting antigenicity.
  - (iv) Define humoral immune response.
  - (v) Write the full form of MASP participate in complement pathway.
  - (vi) Write the differences between plasma cell and memory cell.
- (b) Answer any three from the following : **9**
- (i) Write a note on polysaccharide vaccine.
  - (ii) Write a brief note on RIA.
  - (iii) Write the note on MALT.
  - (iv) Explain enzymatic degradation of immunoglobulin.
  - (v) Write a note on maturation of MHC class I molecule in RER with the help of diagram.
  - (vi) Write a detailed 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) Explain Toxoid and polio (Sabin) vaccine.
  - (iii) Explain with diagram: Hemopoiesis
  - (iv) Draw the diagram showing the overview of endocytotic antigen processing and presentation.
  - (v) Write a detailed note on ELISA.
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