DBJ-003-1015009 Seat No. _____

Third Year B. Sc. (Sem. V) (CBCS)
(W.E.F. 2016) Examination

June - 2022

MB-501 : Immunology & Medical Microbiology

Faculty Code : 003
Subject Code : 1015009

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instruction : Attempt any five questions.

1 (a) Objective : **4**
(1) Give examples of Granulocytes.
(2) Give fullforms : GALT, TC cell.
(3) Role of thymus in immune system.
(4) Function of mast cell.

(b) Answer in brief : **2**
Explain Neutrophiles.

(c) Answer in detail : **3**
Describe Innate immunity.

(d) Write short note on : **5**
Explain secondary lymphoid. organs.

2 (a) Objective : **4**
(1) Give examples for Anatomic barrier of Innate immunity.
(2) Importance of bone marrow.
(3) Define: Immunity
(4) Enlist Agranulocytes.

(b) Answer in brief : **2**
Dendritic cells.

(c) Answer in detail : **3**
Explain primary lymphoid organs.

(d) Write short note on : **5**
Describe adaptive immunity.

3 (a) Objectives : **4**

(1) Define: Cytokines.

(2) Which type of antigen processed by MHC I molecule?

(3) Give fullforms of : APC, ADCC.

(4) Function of B lymphocyte ?

(b) Answer in brief : **2**

Give difference between primary & secondary immune response.

(c) Answer in detail : **3**

Generation of B cell mediated immune response.

(d) Write short note on : **5**

Explain Cytokines in detail.

4 (a) Objectives : **4**

(1) CD8 T cells are generally restricted by which class of MHC molecule?

(2) Define: Opsonisation.

(3) Which type of cytokines generally help in growth & maturation of lymphocytes?

(4) Give fullforms: CD, NK Cell.

(b) Answer in brief : **2**

Explain: Phagocytosis

(c) Answer in detail : **3**

Explain MHC molecules.

(d) Write short note on : **5**

Describe Antigen processing & presentation pathways.

5 (a) Objectives : **4**

(1) What is antigen ?

(2) Which antibody has the pentamer structure?

(3) What is hybridoma technology ?

(4) Define: Haptens.

(b) Answer in brief : **2**

Give difference between immunogen & antigen.

(c) Answer in detail : **3**

Explain Epitopes.

(d) Write short note on : **5**

Clonal selection theory for antibody diversity.

6 (a) Objectives : **4**

(1) Which Immunoglobulin present in body secretion ?
(2) Define: Polyclonal antibody.
(3) Which Immunoglobulin able to cross the placenta ?
(4) Define: Adjuvant.

(b) Answer in brief : **2**
Draw labeled diagram for basic structure of antibody.

(c) Answer in detail : **3**
Explain monoclonal antibody.

(d) Write short note on : **5**
Describe Immunoglobulin classes with their functions.

7 (a) Objective : **4**

(1) What is graft ?
(2) When organ is transplanted from one to another individual but among the different species is called, _____
(3) Which molecules of immune system are actively participating in type I hypersensitive reaction?
(4) The main reason behind autoimmune disease ?

(b) Answer in brief : **2**
What is immunosuppressors ?

(c) Answer in detail : **3**
Write down about Graft rejection,

(d) Write short note on : **5**
Explain Immunodeficiency disease.

8 (a) Objective : **4**

(1) When organ is transplanted from one to another individual within the same species is called, _____
(2) AIDS is the example of immunodeficiency disease. True/false ?
(3) What is immunodeficiency disease ?
(4) Which molecules of immune system are actively participating in type II hypersensitive reaction?

(b) Answer in brief : **2**
Explain Hypersensitivity type I.

(c) Answer in detail : **3**
Define Graft & explain its types.

(d) Write short note on : **5**
What is Autoimmune disease? Explain any two examples in detail.

9 (a) Objective : **4**
(1) What is normal flora ?
(2) Where Enterococci are found as normal flora ?
(3) The LD50 dose can be determined more precisely than LD 100 dose. True/False?
(4) What is chronic infection ?

(b) Answer in brief : **2**
Define : Acute infection with example.

(c) Answer in detail : **3**
Discuss microbial virulence factors.

(d) Write short note on : **5**
Natural resistance.

10 (a) Objective : **4**
(1) Give examples of normal flora of mouth.
(2) A communicable disease that can be easily transmitted from person to person is also known as _____ ?
(3) Define: Normal flora.
(4) Cilia, fimbriae, and pili are all examples of structures used by microbes for _____?

(b) Answer in brief : **2**
What is Pathogenecity? give examples of any 4 pathogens.

(c) Answer in detail : **3**
Discuss process of infection.

(d) Write short note on : **5**
Normal flora of a healthy human host.