



RP-003-1015035

Seat No. _____

B. Sc. (Sem. V) (CBCS) Examination

February - 2019

BT - 503 : Immunology

(New Course)

Faculty Code : 003

Subject Code : 1015035

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

[Total Marks : 70

- Instructions :** (1) Objective types of questions are compulsory
(2) Figures on the right indicate the marks of individual questions

- 1 (A) Objective type questions : 4
(1) Which organ plays a role in mounting immune responses to blood borne antigens ?
(2) Who gave the term Phagocyte?
(3) _____ cell destroy the targeted cell by ADCC.
(4) Enlist the cardinal signs of Inflammation.
- (B) Answer in brief : (Any **One** out of two) 2
(1) What is Innate & Adaptive Immunity?
(2) Draw a well labeled diagram of Neutrophil & Eosinophil.
- (C) Answer in detail : (Any **One** out of two) 3
(1) Write a short note on structure and function of Macrophages.
(2) Explain: MALT.
- (D) Write a note on : (Any **One** out of two) 5
(1) Explain: Process of blood cell formation.
(2) Describe about primary lymphoid organs in brief.

- 2** (A) Objective type questions : **4**
- (1) Give the example of Fluorescent dye used in immunofluorescence.
 - (2) A molecule that react with specific antibody but is not immunogenic by itself is called _____
 - (3) B-cell & T-cell epitopes present on the surface of antigen. True/False ?
 - (4) Which immunoglobulin present in mother milk?
- (B) Answer in brief : (Any **One** out of two) **2**
- (1) What is adjuvants? Give its function.
 - (2) What is cross reactivity?
- (C) Answer in detail : (Any **One** out of two) **3**
- (1) Explain: Factors that affect immunogenicity.
 - (2) Write in detail about structure and function of immunoglobulin.
- (D) Write a note on : (Any **One** out of two) **5**
- (1) Describe in detail about ELISA.
 - (2) What is monoclonal antibody? Write in detail about hybridoma technology.
- 3** (A) Objective type questions : **4**
- (1) Give the example of professional antigen presenting cells.
 - (2) Endogenous antigens can be presented by class II MHC molecules. True/False.
 - (3) MHC genes are present on chromosome _____ in human & chromosome _____ in mice.
 - (4) The proliferation and differentiation of thymocytes occurs in _____
- (B) Answer in brief : (Any **One** out of two) **2**
- (1) What is the function of T-cell receptor?
 - (2) What is Co-Stimulatory signals?

- (C) Answer in detail : (Any **One** out of two) **3**
- (1) Explain: Signal transduction pathway for T_H-cell activation.
 - (2) Give the difference between Class-I and Class-II MHC molecules.
- (D) Write a note on : (Any **One** out of two) **5**
- (1) Write in detail about signal transduction in B-Cell.
 - (2) Explain: Cytosolic pathway for antigen presentation.
- 4 (A) Objective type questions : **4**
- (1) Classical pathway of complement system is activated by _____.
 - (2) Which cell arrives first at the site of Inflammation?
 - (3) Which cytokine induces an antiviral state in most nucleated cells?
 - (4) Vaccination is an example of passive immunization. True/False ?
- (B) Answer in brief : (Any **One** out of two) **2**
- (1) What are the advantages & disadvantages of using attenuated organisms of vaccines?
 - (2) What is the functions of complement?
- (C) Answer in detail : (Any **One** out of two) **3**
- (1) What is Cytokines? Discuss in detail about properties of Cytokines.
 - (2) Explain: Mechanism of CTL for cell killing.
- (D) Write a note on : (Any **One** out of two) **5**
- (1) Explain: DNA vaccine.
 - (2) Write a detail note on classical pathway of complement.

- 5 (A) Objective type questions : 4
- (1) The transfer of tissue between genetically different but individually of the same species is called _____.
 - (2) The most common class of antibody involved in type-II hypersensitivity is _____.
 - (3) Give full form of AIDS.
 - (4) The inability to distinguish between self cells and non-self cells may lead to _____.
- (B) Answer in brief : (Any **One** out of two) 2
- (1) What is Immunosuppressive drugs? Give its function.
 - (2) What is Grave's disease?
- (C) Answer in detail : (Any **One** out of two) 3
- (1) What is Immunodeficiency disease? Discuss in detail about SCID.
 - (2) Write in detail about mechanism of graft rejection.
- (D) Write a note on : (Any **One** out of two) 5
- (1) Write a detailed note on Protozoan disease.
 - (2) Discuss in detail about type-III hypersensitivity.
-