

**S. Y. B. SC. (BIOTECHNOLOGY) SEM – III (CBCS - 2015
COURSE) : SUMMER - 2018
SUBJECT: IMMUNOLOGY**

Day: **Thursday**
Date: **05/04/2018**

Time: **02.00 PM TO 05.00 PM**
Max. Marks: 60

S-2018-1053

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining attempt any **TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.
- 4) Draw neat and labelled diagrams **WHEREVER** necessary.

SECTION-I

Q.1 Answer the following (**ANY FIVE**) **(10)**

- a) Name two secondary lymphoid organs and state their function.
- b) Define agglutination reaction
- c) What are haptens?
- d) What products are obtained when an antibody molecule is treated with papain?
- e) What are cytokines?
- f) Name two cells of myeloid lineage and state their function.

Q.2 Answer the following: **(10)**

- a) Describe with the help of a neat and labelled diagram the structure and function of secretory IgA molecule.
- b) Discuss the endocytic pathway for processing and presentation of exogenous antigen.

Q.3 Answer the following: **(10)**

- a) Briefly discuss the factors that influence immunogenicity of an antigen.
- b) What is innate immunity? Name the type of defensive barriers of innate immunity and explain any two in detail.

Q.4 Write short notes on any **TWO** of the following: **(10)**

- a) Anaphylaxis
- b) Passive agglutination inhibition
- c) MHC –II complex

P. T. O.

SECTION-II

- Q.5** Answer in brief: (10)
- a) What are antigenic determinants?
 - b) To which branch of immune system (humoral or cell mediated) do the following belong:
 - i) Responds to extracellular bacterial infections
 - ii) Kills virus infected self-cells
 - c) Define the term pleiotrophy and synergy as they apply to cytokine action.
 - d) Name two antigen presenting cells.
 - e) Define 'Membrane attack complex'
 - f) Enlist with example types of acquired immunity.
- Q.6** Answer the following: (10)
- a) Differentiate between role of autoantibodies in Myasthenia gravis and Grave's disease.
 - b) Explain the pathophysiology of phagocytic deficiency disorders.
- Q.7** Answer the following: (10)
- a) Describe any two mechanisms of autoimmunity.
 - b) Explain the process of T cell differentiation.
- Q.8** a) Describe in detail the hybridoma technology for production of monoclonal antibodies. (10)

OR

- b) Define hypersensitivity and explain in detail type I hypersensitivity reaction giving one clinical example.

* * * *