S. Y. B. SC. (BIOTECHNOLOGY) SEM – III (CBCS - 2015 COURSE) : WINTER - 2017

SUBJECT: IMMUNOLOGY

Day: **Wednesday** Time: **10.00 AM TO 01.00 PM**

Date: **08/11/2017** Max. Marks: 60

W-2017-0942

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.

SECTION-I

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

a) Define monoclonal antibodies

b) Differentiate between direct and indirect Immunofluorescence

c) Why are adjuvants used?

d) Enlist any two immuno-deficiency diseases

e) Enlist any four mechanisms of innate immunity

f) Name two cells of lymphoid lineage and state their function

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

a) Describe with the help of a neat labelled diagram the structure and function of Lymph node.

b) Describe the process of Phagocytosis.

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

a) Briefly describe the three major events of inflammatory response.

b) With the help of a diagram explain the classical pathway of complement activation.

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

a) Granulocyte

b) Organ specific autoimmune diseases

c) Western blotting

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SECTION-II

Q.5 Answer in brief: **(10)**

a) Match the following characteristics with the correct arm of immunity, using 'I' for innate and 'A' for adaptive

i) Is the most pathogen specific

ii) Includes a memory component

iii) First to engage after initial contact

iv) Is the target for vaccination

b) Define the term redundancy and antagonism as they apply to cytokine action.

c) Name two cytokines produced by T_H1 cells.

d) Define complete antigen

e) What is hypervariable region in antibody?

f) State any two points that differentiate between primary and secondary immune response.

Q.6 Answer the following: **(10)**

a) Explain the pathophysiology of Systemic Lupus Erythematosus.

b) Explain the pathophysiology of Complement deficiency disorders.

Q.7 Answer the following: **(10)**

a) Describe activation of cytotoxic T lymphocytes and the process of CTL mediated target cell killing.

b) Describe activation of B cells by TD antigens.

Q.8 **a)** Give an account of type IV hypersensitivity reaction. **(10)**

OR

b) Define precipitation reaction and comment on 'precipitation in gel'

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