

M. SC. (Microbiology) SEM-I (C.B.C.S.) (2012 COURSE) : WINTER -
2018

SUBJECT: IMMUNOLOGY

Day: Thursday
Date: 11/10/2018

Time: 03.00 PM TO 06.00 PM
Max. Marks: 60

W-2018-1020

N.B:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagram **WHEREVER** necessary.
-

Q.1 What is MHC? What are the major classes of MHC molecules? Comment on (15)
peptide binding by MHC molecules.

OR

Explain classical complement pathway. Describe biological consequences of complement activation.

Q.2 Answer the following:

- a) What are the applications of antibody engineering? (07)
- b) Describe the properties of cytokines and explain the families of cytokine receptors. (08)

Q.3 Attempt **ANY THREE** of the following: (15)

- a) Explain the clinical manifestations of graft rejection.
- b) What is hemolytic disease of newborn? Explain in brief.
- c) What is the role of oncogenes in tumor induction?
- d) What are cell adhesion molecules? Explain their role in leukocyte extravasation.
- e) Draw the prototype structure of IgG.

Q.4 Write short notes on **ANY THREE** of the following: (15)

- a) Grave's disease
- b) IgM
- c) Tumor antigens
- d) Hodgkin's disease
- e) Mediators of inflammation

* * * * *