

**M. SC. (MICROBIOLOGY) SEM-I (C.B.C.S.) (2012 COURSE) :**  
**SUMMER - 2018**  
**SUBJECT : IMMUNOLOGY**

Day : **Thursday**  
Date : **12/04/2018**

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

**S-2018-0902**

**N.B.:**

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

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**Q.1** Explain Type I and Type IV hypersensitivity reaction with examples. **[15]**

**OR**

Explain with diagram the structure of MHC Class I and MHC Class II. Explain the role of MHC in disease susceptibility.

**Q.2 a)** Explain tumor evasion mechanism. **[08]**

**b)** Describe the animal models for Autoimmune disorders. **[07]**

**Q.3** Attempt **ANY THREE** of the following: **[15]**

- a) What are the clinical manifestations of Graft rejection?
- b) Explain with diagram structure of immunoglobulin.
- c) Give the therapeutic uses of cytokines.
- d) Give the characteristics features of inflammation.
- e) Explain Type II hypersensitivity reaction.

**Q.4** Write short notes on **ANY THREE** of the following: **[15]**

- a) Antibody engineering
- b) Systemic lupus erythematosus
- c) Oncogenes
- d) AIDS
- e) De George syndrome

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