

# **AE-795**

M.Sc. (Final)  
Term End Examination, 2016-17

## **MICROBIOLOGY**

Paper - I

Fundamentals of Immunology

*Time : Three Hours] [Maximum Marks : 100*  
*[Minimum Pass Marks : 36*

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**Note** : Answer **all** questions. All questions carry equal marks.

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### **Unit-I**

1. Describe in detail the organs involved in immune system along with their well labelled diagram.

**OR**

Describe in detail the immunohaematology and various complications that arises due to mismatch of blood groups and Rh factors.

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( 2 )

**Unit-II**

2. Describe in detail the various properties of complement system with special emphasis on its alternative pathway.

**OR**

Describe in detail the various types of vaccines. What is the relationship between vaccine and memory cells of the body ?

**Unit-III**

3. Describe in detail the various forms of precipitation reactions. What do you understand by zone of equivalence ?

**OR**

Write notes on the following :

- (a) ELISA and its applications
- (b) Complement fixation

**Unit-IV**

4. Describe in detail the structure of MHC-1 and MHC-2. How does various T cell population interacts with MHC-1 and MHC-2 molecules, along with their consequences ?

**OR**

( 3 )

Describe in detail the graft transplantation, in terms of its types and its mechanism of acceptance or rejection.

**Unit-V**

5. Describe, in detail, the mechanism of anaphylaxis along with suitable diagram.

***OR***

Write notes on the following :

- (a) Arthus Reaction
  - (b) Functions of Lymphokines
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