

Seat No. : _____

AR-102

May-2016

B.Sc., Sem.-IV

**CC-205 : Biotechnology
(Immunology)**

Time : 3 Hours]

[Max. Marks : 70

1. Answer the following : **14**

(A) Define Antigen and give its properties.

OR

Describe different classes of antibodies.

(B) Explain the types and determinants of antigenicity.

OR

Differentiate monoclonal and polyclonal antibodies.

2. Answer the following : **14**

(A) Differentiate the Innate immunity and Adaptive immunity.

OR

Explain the origin and types of principal cells in immune system.

(B) How does spleen provide adaptive immunity to blood infections ?

OR

Explain the different types of immune responses.

3. Answer the following : **14**

(A) What is MHC ? Explain its role in immune response.

OR

Why and how the body rejects organ transplants ?

(B) Give an overview of immunosuppression.

OR

Discuss Cancer and the immune system.

4. Answer the following : 14

(A) What happens when the body's lymphocytes fail to recognize its own antigen ?

OR

Explain Rheumatoid arthritis and Graves disease.

(B) Define hypersensitivity and name associated diseases.

OR

List three types of immunodeficiency disorders.

5. Answer the following in brief : 14

(1) Expand DAMPs and PAMPs.

(2) What are haptens ?

(3) What is inflammation ?

(4) What are effector cells ?

(5) Who coined the term 'Vaccination' ?

(6) Differentiate MIF and MLR.

(7) What are autoantibodies ?

(8) Give an example of carrier.

(9) What is the role of vaccine in immunity ?

(10) Which class the antibody secreted immediately after exposure to antigen belongs to ?

(11) What is an Rh Factor ?

(12) Explain an epitope.

(13) What is an idiootype ?

(14) Name the antibody found primarily in granular secretions.
