

Seat No. : _____

BG-101

May-2015

B.Sc., Sem.-IV

BTI-205 : Bio-Technology (Immunology)

Time : 3 Hours]

[Max. Marks : 70

1. Answer any **two** : **14**
- (1) Write a detailed note on precipitation reactions.
 - (2) Write a detailed note on agglutination reactions.
 - (3) Explain the structure of immunoglobulin.
 - (4) Explain properties of Ig classes.
2. Answer any **two** : **14**
- (1) Explain role of spleen in immune response.
 - (2) Explain differences in the primary and secondary response with graph.
 - (3) Write the role of anatomical barriers, physiological barriers and chemical mediators in innate immunity.
 - (4) Explain processing and presentation of exogenous and endogenous antigen.
3. Answer any **two** : **14**
- (1) Explain structural differences between MHC class I and MHC class II genes.
 - (2) Explain organ transplantation with example of kidney.
 - (3) Explain mutagenic effects in tumor suppressor genes and by oncogenes causing cancer.
 - (4) Write a detailed note on nomenclature and classification of tumors.

4. Answer any **two** : **14**

- (1) What is serum sickness ? Explain correlation between immune complexes and symptoms.
- (2) Explain haemolytic disease of new born with diagrammatic representation.
- (3) Write a detailed note on autoimmune disease specific to any one organ.
- (4) Explain any two X-linked immunodeficiency diseases.

5. Answer the following : **14**

- (1) Who received Nobel Prize for transplantation immunology ?
 - (2) Define superantigens.
 - (3) Give the examples of cytokines.
 - (4) Differentiate role of plasma cells and memory cells.
 - (5) Write the full form of TNF and MIF.
 - (6) Define graft.
 - (7) Define immunological tolerance.
 - (8) What is Chediak Higashi syndrome ?
 - (9) Define pattern recognition receptors.
 - (10) What are atopic individuals ?
 - (11) Give the examples for primary and secondary mediators.
 - (12) Define positive and negative acute phase proteins of inflammation process.
 - (13) Draw the structure of blood group antigen 'O'.
 - (14) Differentiate between Antigen and Immunogen.
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