Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/M.Tech(PBIR)/SEM-3/PHMB-302/2012-13

2012
IMMUNOTECHNOLOGY

Time Allotted : 3 Hours *Full Marks* : 70

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

1. Define any *ten* of the following : 10 × 1 = 10

   a) Antigen specificity.

   b) Abusive drug.

   c) Extravasations of leucocytes.

   d) Hapten carrier conjugates.

   e) Epitope.

   f) Polyclonal antibody.

   g) Antimetabolities.

   h) Corticosteroid.

   i) Hybridoma.

   j) ADCC.

   k) Paratope.

   l) Immune-complex.

   m) Tumour Antigens.

2. Answer any *three* of the following : 3 × 5 = 15

   a) Enumerate the characteristic symptoms in inflammatory response. How do the acute and chronic inflammatory reactions differ ?

   b) Describe briefly the role of anti-inflammatory agents. What are NSAIDs ?

   c) Differentiate between Antigens and Haptens. Explain how the haptens can be utilized to produce Antibody.

   d) What is an Adjuvant ? Can adjuvants be used to stimulate therapeutic effects ?

3. Answer any *three* of the following : 3 × 10 = 30

   a) Explain what you mean by "Passive Immunoglobulin Therapy". Describe the first experimental approach by Behring and Kitasato that enabled them to win Nobel Prize.

   b) What do you understand by "Nutritional requirement for *in vitro* mammalian cell culture" ? Justify the use of 'serum free media' in cell culture.

   c) How 'Monoclonal Antibody' is prepared in the laboratory ? Describe briefly their clinical use.

   d) Describe the Immunological basis of 'graft rejection'. Explain the measures taken for Organ transplantation in human.

4. Answer any *one* of the following : $15 \times 1 = 15$

a) Differentiate between Benign and Malignant Tumours. What do you understand by "immunological Escape of Tumour" ? Discuss briefly the role of Tumour Immunotherapy.

b) Define Acquired Immunodeficiency syndrome. Enumerate Immunological involvement of HIV infection. How is HIV therapeutically treated ?