Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/M.Tech/INT PhD/Mol.Bio./SEM-3/PHMB-302/2011-12

2011

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

   i) Poison

   ii) Toxin

   iii) Xenobiotics

   iv) Prophylaxis

   v) Anaphylaxis

   vi) Chemotherapeutics

   vii) Cytokines

   viii) Antimetabolites

ix) Epitope

x) Paratope

xi) Hybridoma

xii) Malignant tumour.

2. Answer any *three* questions. 3 × 5 = 15

i) What is an Inflammatory reaction ? Is that a pre-requisite to Immune reaction ? Justify.

ii) What are the types of drug-receptor bonding ? Briefly discuss.

iii) Immunoglobulin and Antibody : Clarify the difference immunologically.

iv) How is the nutritional requirement maintained in a mammalian cell culture media ?

3. Answer any *three* questions : 3 × 10 = 30

i) What do you understand by Immunoglobulin therapy ? Describe a specific application approach to that.

ii) How will you prepare an ideal mammalian cell culture setup ? What is the difference between 'with serum' and 'serum-free' media ? Discuss.

iii) Classify malignant tumour with respect to tissue specificity. How are the Immune systems involved to combat Cancer ? Discuss briefly.

iv) Organ transplantation involves 'Immunological rejection phenomenon'. Justify. How is the problem overcome ?

4. Answer any *one* question : 1 × 15 = 15

i) What do you understand by 'Hybridoma technology' ? How is monoclonal antibody prepared in the laboratory ? Enumerate some examples of their use.

ii) Define and discuss 'Immunodeficiency diseases'. Write what you know about AIDS and the present mode of therapy at the event.