2003001105020001
EXAMINATION MARCH 2025
BACHELOR OF SCIENCE (BIO TECHNOLOGY) (MASTER OF SCIENCE (BIO TECHNOLOGY) 5 YEAR INTEGRATED COURSE) (FIFTH SEMESTER)
IMMUNOTECHNOLOGY - LEVEL 2

[Time: As Per Schedule] **[Max. Marks : 50]**

Instructions:
1. Fill up strictly the following details on your answer book
   a. Name of the Examination : **BACHELOR OF SCIENCE (BIO TECHNOLOGY) (MASTER OF SCIENCE (BIO TECHNOLOGY) 5 YEAR INTEGRATED COURSE) (FIFTH SEMESTER)**
   b. Name of the Subject : **IMMUNOTECHNOLOGY - LEVEL 2**
   c. Subject Code No : **2003001105020001**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

Student's Signature

Q.1 Write answers to Any Four: **8**

a) Which assay uses enzymes to produce a detectable signal for antigen-antibody interactions?
b) Name the autoimmune disease characterized by chronic inflammation of joints.
c) Who was awarded Nobel Prize for work on Hybridoma Technology?
d) Draw the typical labelled diagram of antibody.
e) Elaborate on term: Immunochromatography.

Q.2 Attempt Any Two: **14**

a) Explain the concept of abzymes and their potential applications in biotechnology and medicine.
b) Describe the development and characteristics of myeloma tumors.
c) Explain the role of adjuvants in enhancing the efficacy of subunit vaccines.

Q.3 Explain in detail Any Two: **14**

a) Discuss the principles of precipitation and agglutination reactions. Describe the different types of agglutination reactions used in diagnostic techniques.
b) Compare and contrast between direct and indirect ELISA.
c) Discuss multivalent subunit vaccines, focusing on their design and applications in providing immunity against multiple strains or pathogens.

Q.4 Attempt Any Two of the following: **14**

a) Discuss the role of immune system dysregulation in the pathogenesis of rheumatoid arthritis. How is this disease diagnosed and managed?
b) Describe the mechanisms involved in Type II hypersensitivity reactions.
c) Explain the concept of recombinant vector vaccines. How are they developed, and what are their potential applications in preventing infectious diseases?

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