

Ref. No.: Ex/MPB202T/2024

**JADAVPUR UNIVERSITY**

**Dept. of Pharmaceutical Technology**

**M. Pharm 1<sup>st</sup> Year, 2<sup>nd</sup> Semester Examination, 2024**

**Sub: Immunotechnology**

Time: 3Hrs.

Full Marks: 75

Answer **ANY FIVE** of the following questions

1. Define immunity and immune system. Elaborate the components of Immune system.  
Write down the applications of Immunotechnology in the field of medicine. 3+5+7=15
2. What are Antigens? Enlist their properties.  
Describe the structure of an Immunoglobulin with proper diagram. 5+10=15
3. What are lymphoid organs? Define epitope and paratope. Give a brief idea on T cells and B cells. 3+2+5+5=15
4. Write short notes on –  
a. Immunotolerance b. Types of Immunoglobulins c. Anaphylactic shock 5x3=15
5. Differentiate between primary and secondary immune response. Discuss the types of hypersensitive reactions based on mechanism of action. 7+8=15
6. What is the principle and application of agglutination test? Discuss the limitations of agglutination test. 8+7=15
7. Compare and contrast between the following  
a. Active and passive immunization  
b. Attenuated and inactivated vaccines  
c. Phagocytosis and Pinocytosis 5x3=15