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School of Biological and Life sciences
Bachelor of Science in General Zoology Botany Chemistry
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem IV - P1UG402T - Introduction to Immunology

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Differentiate between antigens and haptens. K1 (2)
- 2) How does immunotherapy differ from traditional vaccination? K2 (4)
- 3) What is the difference between CD4 and CD8 immune response? K2 (6)
- 4) Explain the concept of monoclonal antibodies and their applications in medicine and research. K3 (9)
- 5) Discuss the steps involved in the development and production of a vaccine. K3 (9)
- 6) Differentiate between the five classes of immunoglobulins (IgG, IgM, IgA, IgD, and IgE) based on their structural features and properties. K5 (10)
- 7) How does Western blotting differ from other protein detection techniques, and what are the key steps involved in performing a Western blot? K4 (12)
- 8) Discuss the lectin pathway of complement activation, focusing on the role of mannose-binding lectin (MBL) and ficolins in pathogen recognition and activation of the complement cascade K5 (15)
- 9) How does the Chediak-Higashi syndrome affect the immune system, and what are the characteristic features of this disorder in terms of cellular morphology and function? K5 (15)
- 10) Can you explain the differences between direct, indirect, sandwich, and competitive ELISA in terms of their applications and suitability for different experimental objectives? K6 (18)