

School of Medical and Allied Sciences

B.Sc Medical Lab Technology
Semester End Examination - Aug 2024

Duration : 180 Minutes
Max Marks : 100

Sem V - BMLS5008/BMLS5005 - Immunopathology and Molecular BiologyGeneral 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) Define the cells of the immune system and categorize them into their respective types. K1(2)
- 2) Demonstrate the procedure of gel electrophoresis for DNA fragment analysis. K2(4)
- 3) Summarize and explain the concept of crossmatching in organ transplantation. K2(6)
- 4) Organize the types of immune cells involved in different phases of immune response activation. K3(9)
- 5) Organize the stages of the cell cycle and describe the major events that occur in each phase. K3(9)
- 6) Justify the role of DNA damage and repair mechanisms in maintaining genomic integrity. K5(10)
- 7) Categorize the different molecular biology techniques based on their principles and applications in medical diagnostics, such as PCR, gel electrophoresis, and next-generation sequencing. K4(12)
- 8) Evaluate the different mechanisms of immune response and their effectiveness in fighting infections. K5(15)
- 9) evaluate the advantages and limitations of PCR and its advanced versions in medical diagnostics? K5(15)
- 10) Design a system to educate the public about different types of hypersensitivity reactions and their triggers. Create an interactive educational platform that uses multimedia content to explain the immune mechanisms underlying hypersensitivity, along with practical strategies for prevention, identification, and management of allergic responses. K6(18)