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School of Biomedical Science

Master of Science in Medical Biotechnology

Mid Term Examination - May 2024

Duration : 90 Minutes

Max Marks : 50

Sem II - Q1PP207B - Analytical TechniquesGeneral 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) Explain the effect of heavy metals on protein solubility. K2 (2)
- 2) What are the commonly used methods to disrupt a bacterial cell? K1 (3)
- 3) Explain the process of salting in and salting out. K2 (4)
- 4) Give a detailed explanation of how osmotic shock can be utilized in sample preparation. K2 (6)
- 5) Illustrate different types of detergents used in biological sample preparations. K3 (6)
- 6) Illustrate the mechanical methods used to disrupt the cells K3 (9)
- 7) Analyze the role of salts in determining the solubility of proteins. K4 (8)
- 8) Analyze how will I prepare a cell lysate of bacterial cells for protein purification. K4 (12)

OR

- Analyze the process of sucrose gradient centrifugation and its applications in biochemistry and molecular biology. K4 (12)