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School of Biomedical Science
Bachelor of Science in Medical Biotechnology
Mid Term Examination - May 2024

Duration : 90 Minutes
Max Marks : 50

Sem IV - Q1UG407C - Bioinstrumentation

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) Describe what is calibration error and what are its causes. K2 (2)
- 2) Explain why accuracy is the critical factor while selecting a bioinstrument. K1 (3)
- 3) Describe the difference between Random error and Systematic error along with ways to reduce these errors. K2 (4)
- 4) Describe sensitivity, specificity and selectivity of bioinstruments. K2 (6)
- 5) Illustrate the applications, advantages and disadvantages of Raman spectroscopy. K3 (6)
- 6) Discuss the working principle and result analysis of IR spectroscopy. K3 (9)
- 7) Elaborate the working principle and applications of phase contrast microscopy. K4 (8)
- 8) Elaborate the principle and working of NMR spectroscopy. K4 (12)

OR

Analyze the applications, advantages and disadvantages of electron microscopy. K4 (12)