

**School of Biomedical Science****Bachelor of Science Honours in Forensic Science  
Semester End Examination - Jun 2024****Duration : 180 Minutes  
Max Marks : 100****Sem IV - Q1UA402T - Biological-Analytical Techniques***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*

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|-----|---|--------|
| 1)  | What is two-dimensional electrophoresis?  | K1(2)  |
| 2)  | Explain density Gradient centrifugation   | K2(4)  |
| 3)  | Explain the structure and types of Antibodies   | K2(6)  |
| 4)  | Identify all three types of rotors used in centrifuges  | K3(9)  |
| 5)  | Identify all three types of centrifuges   | K3(9)  |
| 6)  | Compare all types of centrifuges in detail  | K5(10) |
| 7)  | Compare how isocratic mobile phase is different from gradient mobile phase? Give proper example? Why hexane and Uracil are taken as a mobile phase to get dead time in reverse phase and normal phase chromatography? | K4(12) |
| 8)  | Explain all enzyme assays techniques in detail  | K5(15) |
| 9)  | What is the applied centrifugal field at a point equivalent to 5 cm from the centre of rotation and an angular velocity of 3000 rad/s ?   | K5(15) |
| 10) | Discuss theory and instrumentation of Liquid column chromatography  | K6(18) |