

School of Biomedical Science**Bachelor of Science in Medical Biotechnology
Semester End Examination - Jun 2024****Duration : 180 Minutes
Max Marks : 100****Sem IV - Q1UG405T - Bioinformatics**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) | Describe the process of pairwise sequence alignment? | K1(2) |
| 2) | Explain central dogma of molecular biology. | K2(4) |
| 3) | Write down the names of primary and secondary databases. | K2(6) |
| 4) | Illustrate protein sequence databases. | K3(9) |
| 5) | Illustrate the steps involved in the clinical trials. | K3(9) |
| 6) | Discuss how protein structure determination can be applied in drug discovery. | K5(10) |
| 7) | Analyze the different methodology used for the protein three dimensional structure validation. | K4(12) |
| 8) | Examine the importance of protein sequence and structure databases in molecular biology? | K5(15) |
| 9) | Examine the different softwares/tools used in the drug discovery. | K5(15) |
| 10) | Elaborate the role of bioinformatics in metabolic pathways, discussing how computational methods aid in pathway reconstruction, simulation, and analysis? | K6(18) |