School of Computing Science and Engineering

Bachelor of Computer Applications
Semester End Examination - Jul 2024

Duration : 180 Minutes
Max Marks : 100

Sem I - Q1UH120T - Introduction to Biological Technique

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)	What is the fundamental unit of life?	K1(2)
2)	How does gene therapy differ from traditional pharmaceutical approaches to treating genetic diseases, and what are its potential advantages?	K2(4)
3)	Elaborate on the stages involved in in silico drug discovery.	K2(6)
4)	Discuss the role of computer science in biological research.	K3(9)
5)	How does biotechnology play a role in the production of crops, and what are the potential environmental benefits of this technology?	K3(9)
6)	Explore the field of Biotechnology.	K5(10)
7)	Discuss the significance of biotechnology in crop improvement and the challenges it helps address in agriculture.	K4(12)
8)	Provide a detailed explanation of molecular docking techniques, algorithms, and their application in predicting the binding of small molecules to protein targets in drug design.	K5(15)
9)	Detail how computational techniques, such as molecular modeling and bioinformatics, support data analysis and interpretation in analytical research.	K5(15)
10)	Explain the various computational tools and methods involved in in silico drug discovery.	K6(18)