

**School of Biological and Life sciences**

**Bachelor of Science Honours in Biomedical Science  
Semester End Examination - Jun 2024**

**Duration : 180 Minutes  
Max Marks : 100**

**Sem IV - P1UC403B - Gene Technology and Human Welfare***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) Write one limitation of DNA fingerprinting in forensic analysis. K1(2)
- 2) What are continuous cell lines, and how do they differ from primary cell cultures? K2(4)
- 3) Discuss the advancements in forensic science that have revolutionized crime scene analysis. K2(6)
- 4) Elaborate the role of pharmacogenetics and pharmacogenomics in improving translational medicine K3(9)
- 5) Describe particle bombardment and microinjection methods for gene transfection. K3(9)
- 6) Explain the advantages and disadvantages of using transgenic plants in agriculture with proper example. K5(10)
- 7) How does recombinant DNA technology contribute to the production of pharmaceuticals and agriculture fields. K4(12)
- 8) Compare and contrast the degradation processes of hydrocarbons and agricultural wastes in the environment, highlighting their environmental impacts and potential solutions. K5(15)
- 9) Analyze the potential applications of PHB (Polyhydroxybutyrate) production in addressing environmental challenges, discussing its advantages and limitations. K5(15)
- 10) Discuss the various applications of monoclonal antibodies in medicine, research, and diagnostics. K6(18)