School of Biomedical Science

Bachelor of Science in Medical Biotechnology Summer /Backlog - Semester End Examination - Jul 2024

Duration : 180 Minutes
Max Marks : 100

Sem IV - Q1UG402T - Recombinant DNA Technology Tools and 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

1)	Tell the major cyclic reactions in PCR.	K1(2)
2)	Explain advantages and disadvantages of south-western blot.	K2(4)
3)	Explain a) Hot-start PCR b) In-situ PCR	K2(6)
4)	Illustrate the basic requirements for: a) An expression vector b) Yeast Artificial chromosome c) Human Artificial chromosome	K3(9)
5)	Illustrate how molecular probes contribute to the diagnosis and detection of genetic diseases.	K3(9)
6)	Examine the importance of fusion proteins in recombinant DNA technology.	K5(10)
7)	Analyze the differences between: A. South-western blot and southern blot B. Far-western blot and western blot C. Southern blot and Western blot	K4(12)
8)	Explain with examples, different kinds of animal vectors.	K5(15)
9)	Explain different methods for gene transfer in mammalian cells. How does the efficiency of gene transfer vary between different methods, and what factors influence this efficiency?	K5(15)
10)	Discuss different artificial chromosomes commonly used.	K6(18)