GALGOTIAS UNIVERSITY

ADMISSION NUMBER

School of Biological and Life sciences

Master of Science in Biochemistry
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem II - P1PP204B - Genetics

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 a sex-linked trait, and how does it relate to X and Y chromosomes?	K1(2)
2)	Explain how a recessive genetic disorder can be expressed in individuals with heterozygous genotypes	K2(4)
3)	Give an example of a sex-limited trait that is influenced by both genetic and environmental factors.	K2(6)
4)	Explain the concept of parent-specific gene expression in imprinting.	K3(9)
5)	Explain why double crossovers are less frequent than single crossovers during genetic recombination.	K3(9)
6)	What is position effect variegation (PEV), and how does it manifest in terms of gene expression?	K5(10)
7)	What is crossing over, and how does it contribute to genetic diversity?	K4(12)
8)	Discuss the significance of DNA methylation in genomic imprinting.	K5(15)
9)	Why are phylogenetic trees important in understanding the diversity and evolutionary history of organisms?	K5(15)
10)	What is human polymorphism, and how does it contribute to genetic diversity in populations?	K6(18)