CLASS: MSc   SEMESTER : II
BRANCH: B&CB   SESSION : SP2024

SUBJECT: BT407 GENOMICS

TIME: 3 Hours   FULL MARKS: 50

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

			CO	BL
Q.1(a)	Describe the RNA world hypothesis?	[5]	1	
Q.1(b)	Differentiate between forward and reverse genetics	[5]	1	
Q.2(a)	Distiguish between PacBio and ONT long read sequencing technologies	[5]	2	
Q.2(b)	Explain the role of genomics in candidate gene identification	[5]	2	
Q.3(a)	Distinguish between TALENs and CRISPR-Cas9	[5]	3	
Q.3(b)	Compare and contrast any two microarray technologies	[5]	3	
Q.4(a)	Explain the importance of conserved domain and tandem repeats in the characterization of rice genome	[5]	4	
Q.4(b)	Illustrate the use genomic technologies for crop improvement	[5]	4	
Q.5(a)	Outline the advantages of Genomics in new drug discovery	[5]	4	
Q.5(b)	Design a hypothetical experiment involving site directed mutagenesis to improve thermal stability of DNA polymerase	[5]	4	

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