BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: MTECH   SEMESTER : I
BRANCH: BIOTECHNOLOGY   SESSION : MO/2024

SUBJECT: BE502 rDNA TECHNOLOGY & GENETIC ENGINEERING

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)	Outline a technique commonly used to study DNA-Protein interactions	[5]	1	II
Q.1(b)	Illustrate a technique commonly used to study Protein-Protein interactions	[5]	1	III
Q.2(a)	Illustrate the technique of IMAC with suitable diagrams.	[5]	2	II
Q.2(b)	Compare the differences between prokaryotic C and N terminal expression vectors?	[5]	2	II
Q.3(a)	Outline the criteria considered for designing PCR primers	[5]	3	II
Q.3(b)	Elaborate the two principles based on which RealTime PCR was developed.	[5]	3	III
Q.4(a)	Explain the biogenesis of microRNAs in plants and animals with diagrams.	[5]	4	II
Q.4(b)	Illustrate the various applications of RNAi.	[5]	4	III
Q.5(a)	Elaborate the process followed to develop Golden rice.	[5]	5	IV
Q.5(b)	Outline the working principle of Terminator Technology	[5]	5	II

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