

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

**CLASS: BTECH
BRANCH: BIOTECHNOLOGY**

**SEMESTER : III
SESSION : MO/2024**

SUBJECT: BE202 CELL AND MOLECULAR BIOLOGY

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.

NIL-----			
		CO	BL
Q.1(a)	Explain about fluorescence recovery after photobleaching technique and its importance in cell biology.	[5] 1	5
Q.1(b)	Give a diagrammatic sketch of Electron micrograph of cell membranes and its applications.	[5] 3	6
Q.2(a)	Write the detailed steps of signaling via enzyme- linked cell-surface receptors as well as its importance.	[5] 1	5
Q.2(b)	Explain about the types and importance of target cell adaptation in a cell.	[5] 3	6
Q.3(a)	Explain about regulation of cell cycle progression and its importance.	[5] 3	4
Q.3(b)	Describe about extracellular control of cell division and its role in cell cycle.	[5] 3	6
Q.4(a)	Describe the detailed mechanism of RNA splicing and its usefulness.	[5] 6	4
Q.4(b)	Explain about membrane transport mechanism and its importance in performing the normal activity of the cell.	[5] 2,4	6
Q.5(a)	Describe the mechanism and importance of co-translational transport of protein.	[5] 4	4
Q.5(b)	Explain about protein targeting and its importance in a cell.	[5] 2	6

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