

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION MO/2025)

CLASS: B. Tech
BRANCH: Biotech

SEMESTER: VII
SESSION: MO/2025

SUBJECT: BE412 PROCESS BIOTECHNOLOGY

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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		CO	BL
Q.1(a)	Discuss the growth of an organism and correlate with product synthesis?	[2] 1	1
Q.1(b)	Examine the different techniques to measure cell growth?	[3] 2	2
Q.2(a)	Explain the Monod's model on growth of bacterium in batch culture?	[2] 1	1
Q.2(b)	Elucidate the role of carbon requirement on growth of living system?	[3] 2	2
Q.3(a)	Define the salient features of biocatalyst?	[2] 1	1
Q.3(b)	State the term productivity. Explain the parameters to enhance the productivity of a process?	[3] 2	3
Q.4(a)	State the significance of Michaelis-Menten constant?	[2] 2	2
Q.4(b)	Explain different physico-chemical variables influencing the biocatalysis?	[3] 1	3
Q.5(a)	Define the different functional groups of active sites involved in enzyme catalysis?	[2] 1	1
Q.5(b)	Illustrate the role of substrate concentration on biological catalyst?	[3] 2	3

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