

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

CLASS: B.TECH/HMCT  
BRANCH: BT/CHEM/CIVIL/PROD/MECH/HMCT

SEMESTER: 1st  
SESSION:MO/2022

SUBJECT: BE101/BER101 BIOLOGICAL SCIENCE FOR ENGINEERS

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.
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		CO	BL
Q.1(a)	Describe Miller's experiment with suitable diagram.	[5]	1 1
Q.1(b)	Explain different level of biological organization.	[5]	1 1
Q.2(a)	Illustrate the process of photosynthesis.	[5]	2 1
Q.2(b)	Summarize the different steps and outcomes of Krebs's cycle.	[5]	2 2
Q.3(a)	Draw and differentiate the two models of enzyme-substrate complex formation.	[5]	3 2
Q.3(b)	What do you understand by enzyme immobilization? Give a brief note on any two techniques of enzyme immobilization.	[5]	1 3
Q.4(a)	Write a note on any two factors that are known to affect the activity of enzymes.	[5]	2 1
Q.4(b)	Discuss the different types of cell signalling.	[5]	4 2
Q.5(a)	What is central dogma of molecular biology? Why it is important to understand?	[5]	2 2
Q.5(b)	Write any five applications of PCR.	[5]	1 2

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