

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP/2024)

CLASS: BTECH
BRANCH: CSE/AI ML/ECE/EEE

SEMESTER : 2nd
SESSION : SP/2024

SUBJECT: BE101 BIOLOGICAL SCIENCE FOR ENGINEERS

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)	What are the characteristic feature of living organisms?	[2] 1	1
Q.1(b)	Describe Miller Urey experiment with suitable diagram.	[3] 3	3
Q.2(a)	What is cell theory?	[2] 2	2
Q.2(b)	Write the structure and function of Mitochondria.	[3] 2	4
Q.3(a)	Describe the classification of carbohydrates.	[2] 2	3
Q.3(b)	What is meiosis? Discuss the significance of meiosis.	[3] 3	4
Q.4(a)	What are the functions of proteins?	[2] 3	2
Q.4(b)	How glucose molecules are broken down into pyruvates? Give the metabolic steps involve in it.	[3] 3	6
Q.5(a)	State the first law of thermodynamics and give a suitable mathematical expression for it.	[2] 2	3
Q.5(b)	Distinguish between aerobic and <u>anaerobic</u> respiration with suitable examples.	[3] 3	2

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