

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

CLASS: BTECH/IMSC
BRANCH: BT/CE/CHEMICAL/ME/PIE/FT/IPH

SEMESTER : I/ADD
SESSION : MO/2025

SUBJECT: BE24101 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 is the importance of biology to engineers?	[2] 1	1
Q.1(b)	Discuss any two inventions by engineers inspired by the biological world.	[3] 2	2
Q.2(a)	What do you mean by spontaneous generation? Who disapproved it?	[2] 1	1
Q.2(b)	With the help of a labelled diagram describe the Urey and Millers experiment?	[3] 3	3
Q.3(a)	What is cell theory? Who proposed it?	[2] 2	1
Q.3(b)	Draw the labelled diagram of a typical animal cell. Give the functions of at least 5 cell organelles.	[3] 3	2
Q.4(a)	Define central dogma of molecular biology.	[2] 2	1
Q.4(b)	Differentiate between DNA and RNA. Why is DNA called an acid?	[3] 4	3
Q.5(a)	Give the standard structure of an amino acid. Why the amino acids are amphoteric in nature?	[2] 1,2	2
Q.5(b)	What are proteins? Briefly describe the functions of proteins.	[3] 5	4

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