

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

CLASS: BTECH  
BRANCH: BIOTECH

SEMESTER : VI  
SESSION : SP/2025

SUBJECT: BE315 FOOD SCIENCE AND TECHNOLOGY

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)	Define a balanced diet and list the four basic food groups	[2] 1	1
Q.1(b)	Design a one-day balanced diet plan for a school-going child, considering nutritional requirements and food availability in Jharkhand State. Justify your choices.	[3] 1	6
Q.2(a)	List different factors responsible for growth of Microorganism in food.	[2] 2	2
Q.2(b)	Discuss role of cellulase, sources, and specific food products they are used in.	[3] 2	4
Q.3(a)	Explain food fermentation and list three key benefits of fermenting foods.	[2] 3	1
Q.3(b)	Identify three common microorganisms involved in food fermentation and mention the types of foods they are associated with.	[3] 3	3
Q.4(a)	List three common artificial food colors and analyze their potential health risks.	[2] 3	5
Q.4(b)	Summarize the advantages of using natural food colors over artificial food colors in the food industry.	[3] 3	2
Q.5(a)	Define RDA. A 30-year-old moderately active male requires 3000 kcal/day according to RDA guidelines. If his diet consists of 50% carbohydrates, how many grams of carbohydrates should he consume daily?	[2] 1	1
Q.5(b)	Compare the industrial applications of proteases and amylases in the food industry.	[3] 2	4

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