

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

**CLASS: BTECH
BRANCH: BIOTECH**

**SEMESTER : VI
SESSION : SP/2025**

SUBJECT: BE315 FOOD SCIENCE AND TECHNOLOGY

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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Q.1(a)	Differentiate between natural and synthetic food colorants with examples.	[5] 3	3
Q.1(b)	Explain the key parameters measured in Texture Profile Analysis.	[5] 4	1
Q.2(a)	Describe any two common foodborne illnesses and their causative agents.	[5] 2	1
Q.2(b)	Explain perishable, semi-perishable, and non-perishable food with suitable examples.	[5] 2	2
Q.3(a)	Compare and contrast baking and frying in terms of nutritional, sensory, and shelf-life impacts.	[5] 3	5
Q.3(b)	Define protein engineering. Mention any two key objectives of protein engineering.	[5] 6	2
Q.4(a)	List the six major components estimated during proximate analysis and what are the method used for each components?	[5] 6	3
Q.4(b)	Create an infographic layout for educating farmers about pre-harvest factors influencing food quality.	[5] 5	6
Q.5(a)	A milk processing unit wants to reduce energy usage during milk evaporation. Which material would you recommend, Copper or Steel and why?	[5] 4	3
Q.5(b)	Sketch a comprehensive plan for launching a new fruit juice product in a canned format.	[5] 6	5

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