Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET University)

B. Tech (Seventh Semester - Regular) Examinations, November – 2025

22BBTPE47001 – Food Biotechnology

(Biotechnology)

Time: 3 hrs Maximum: 70 Marks

Answer ALL questions

(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

		CO #	Blooms Level
Q.1.	Answer ***ALL*** questions		
a.	Write the causes and symptoms of Chinese Restaurant Syndrome.	CO1	K1
b.	What are the methods used in the analysis of food?	CO2	K2
c.	Define genetically modified (GM) crop-based food with some examples.	CO3	K2
d.	Define probiotics and sources of probiotic food.	CO2	K1
e.	What is Umami?	CO4	K2

PART – B **(15 x 4 = 60 Marks)**

	Answer ***all*** the questions	Marks	CO #	Blooms Level
2. a.	What are the major ingredients present in different food products?	8	CO1	K1
b.	Discuss the natural and synthetic food colouring with example.	7	CO1	K2
	(OR)			
c.	Describe the role of vitamin additives in food fortification and enrichment.	8	CO1	K1
d.	Explain the different parameters used to assess food quality	7	CO1	K1
3.a.	Explain the types and general steps involved in fermentative food production with suitable examples.	8	CO2	K2
b.	Explain the role of enzymes in bakery products and how they improve dough quality.	7	CO2	K2
	(OR)			
c.	Discuss the enzymatic changes during the fermentation of cereal products like idli, dosa, or boza.	8	CO2	K2
d.	Describe the role of phospholipases in the degumming of crude vegetable oils.	7	CO2	K2
4.a.	Write a note on preventive measures used to control food spoilage	8	CO3	K1
b.	Write short notes on natural vs. synthetic preservatives used in the food industry.	7	CO3	K2
	(OR)			
c.	Describe the microbiology of water, vegetables and control measures.	8	CO3	K2
d.	What are probiotics and prebiotics? Discuss their importance and role in human health.	7	CO3	K1
5.a.	Describe the cultivation process of mushrooms with special emphasis on spawn and substrate preparation.	8	CO4	K2
b.	Explain the microbiology of bread production, including the role of yeast and spoilage microbes.	7	CO4	K1
	(OR)			

c.	Describe the microbiology of cereals during storage and the major fungi and bacteria causing spoilage.	8	CO4	K2
d.	Write a short note on the microbiology of milk powder**,** preservation, spoilage mechanisms and indicators.	7	CO4	K2

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