

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-III (NEW) EXAMINATION – WINTER 2024****Subject Code: 3135101****Date: 21-11-2024****Subject Name: Food Chemistry****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Differentiate between oils and fats	03
	(b) Explain the different types of food preservatives?	04
	(c) Describe the effect of chemical structure of water and ice molecule on their properties.	07
Q.2	(a) Describe about simple lipids?	03
	(b) Give the structure of D-glucose, D-fructose and maltose?	04
	(c) Write the functions of food additive and explain about antioxidants?	07
	OR	
	(c) Describe of following food additives I) Flavor enhancers II) Food colors III) Preservatives	07
Q.3	(a) Explain types of water in food?	03
	(b) What is fatty acid? Explain types of fatty acids.	04
	(c) Explain the type of Home polysaccharide?	07
	OR	
Q.3	(a) Explain about simple lipids?	03
	(b) What do you mean by shelf life of food? Also define drying and dehydration.	04
	(c) What do you mean by protein denaturation? Explain effects of protein denaturation and state various factors causing protein denaturation.	07
Q.4	(a) Give the difference between oil and fats?	03
	(b) Write the 2 type of polysaccharides based on their functions groups?	04
	(c) Give the detailed classification of food proteins.	07
	OR	
Q.4	(a) Write a note on applications of maltodextrin in processed foods.	03
	(b) What is rancidity in oils? Briefly explain the different types of rancidity.	04
	(c) Define carbohydrates and give the detail classification of carbohydrates with appropriate examples.	07
Q.5	(a) Explain “Primary level of protein structure.”	03
	(b) Write the properties of disaccharide?	04
	(c) What do you mean by water activity? Write in detail	07
	OR	
Q.5	(a) What is hexose sugar? State the properties of invert sugar.	03
	(b) Enlist and explain the types of water present in food system.	04
	(c) Write short notes on: 1. Role of invert sugar in processed products 2. Industrial utilization of starch	07
