

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - VII EXAMINATION - WINTER 2025

Subject Code: 3175106

Date: 20-11-2025

Subject Name: Processing Technology of Beverages

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) List three different types of sweeteners used in low-calorie beverages.	03
(b) What are sweet toddy ? List the sources of productions.	04
(c) Design a flowchart for the manufacturing of tea, highlighting the critical processing steps.	07
Q.2 (a) What are isotonic sports drinks?	03
(b) Discuss the nutritional compositions and health benefits of coconuts water.	04
(c) Design a flowchart for the manufacturing of cocoa powder, highlighting the critical processing steps.	07
OR	
(c) Discuss various non-calories sweeteners used in food industry.	07
Q.3 (a) Discuss the role of fermentation for flavour development in tea processing.	03
(b) State the significance of water treatment in beverages processing.	04
(c) Discuss various critical control points and critical limits in non-alcoholic beverages processing.	07
OR	
(a) Write the various quality control test performed in fruit beverages production.	03
(b) Differentiate between alcoholic and non-alcoholic beverages with examples.	04
(c) Discuss various fruit based non-alcoholic beverages in details.	07
Q.4 (a) Discuss the role of fermentation in cocoa processing.	03
(b) Discuss the process involved in yoghurt productions in details.	04
(c) Discuss the process involve for processing of coffee with flow diagram.	07
OR	
(a) State the role of carbon dioxide in carbonated drinks.	03
(b) What is the main objective of using clarifying agents in some beverages?	04

- (c) Discuss the FSSAI standards for various beverages. 07
- Q.5** (a) What are humectants ? Give two examples. 03
- (b) List various clarifications methods used in fruit juice industry. 04
- (c) Discuss various kinds of food additives used in beverages industry. 07

OR

- (a) What are sequestrants ? give two examples. 03
- (b) Explain the role of acidulants and colourants in enhancing the quality of fruit beverages. 04
- (c) Describes the significance of beverages in human health. 07
