

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER- VII EXAMINATION-SUMMER 2023

Subject Code: 3171407

Date: 19/06/2023

Subject Name: Horticultural Produce Processing

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) State the advantages of horticultural crop processing.	03
	(b) Describe the manufacturing process of preparation of ripened mango powder.	04
	(c) Explain the causes of metal discoloration in canned products.	07
Q.2	(a) What do you mean by Physiological maturity and Commercial maturity?	03
	(b) Write a note on post harvest losses and state the important remedies to reduce post harvest losses of fruits and vegetables.	04
	(c) Enlist different changes takes place during ripening of fruit and explain any one change.	07
	OR	
	(c) State the importance of maturity indices. Enlist various types of maturity indices for fruits and explain any one in detail.	07
Q.3	(a) What is respiratory quotient?	03
	(b) Distinguish between climacteric and non climacteric fruits.	04
	(c) Define canning and briefly explain the unit operation of okra canning.	07
	OR	
Q.3	(a) Write a note on selection criteria of fruits for canning.	03
	(b) Briefly explain the process of banana juice preparation using suitable enzymes.	04
	(c) Explain the critical points to be considered while manufacturing the tomato ketchup.	07

- Q.4** (a) Why Potassium meta bisulphite should not be used for preservation of pomegranate juice? **03**
- (b) Define fruit jelly. Explain the role of sugar and pectin in fruit jelly making. **04**
- (c) Enlist the chemical clarifying agents. How juice clarification is carried out using chemical clarifying agents? **07**
- OR**
- Q.4** (a) State the industrial importance of deaeration of juices. **03**
- (b) Define fruit beverage. Enlist the different types of fruit beverage and also state the FPO specifications any two fruit beverages. **04**
- (c) Enlist the spoilage indicators for canned products and explain the indicator for low acid canned product. **07**
- Q.5** (a) Briefly explain the cold break extraction of tomato juice. **03**
- (b) What are the ideal storage conditions for jam and explain the various methods to judge the end point of jam. **04**
- (c) Describe the factors which are responsible for the formation of H₂ gas in the can. **07**
- OR**
- Q.5** (a) Write a note on good manufacturing practices followed in tomato processing. **03**
- (b) “Exhausting is called as heart of canning process”. Justify the statement with valid scientific reasons. **04**
- (c) Distinguish between: **07**
1. Jam and jelly
 2. Type I and type II jam
