

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2018

Subject Code: 2171407

Date: 03/12/2018

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.

		MARKS
Q.1	(a) Give flow diagram for manufacture of tomato ketchup with process parameters.	03
	(b) State different effects of respiration and explain any one effect.	04
	(c) Explain the fibril theory of gel formation and effect of heat on quality of pectin.	07
Q.2	(a) Differentiate between fruit jam and jelly.	03
	(b) What is importance of exhausting during canning?	04
	(c) Write a detailed note on post harvest losses and describe the measures taken to reduce post harvest losses.	07
	OR	
	(c) Describe how gas composition of surrounding atmosphere affects on respiration process of fruits and vegetables?	07
Q.3	(a) Write a short note on types of fruits.	03
	(b) Define 'respiratory quotient' and give it's relation with respiratory substrate	04
	(c) Give the principle of enzymatic clarification of fruit juices and describe the process of fruit juice clarification using physical fining agents.	07
	OR	
Q.3	(a) State the advantages of processing of horticultural crops.	03
	(b) Explain the role of chemical preservative in fruit juice preservation	04
	(c) Describe physical maturity indices used for fruits and vegetables.	07
Q.4	(a) Differentiate between respiration and photosynthesis process.	03
	(b) Write about metabolic pathways during dark respiration process	04
	(c) Write short notes: 1. Blanching of fruits 2. Sterilization of cans	07
	OR	
Q.4	(a) What is deaeration of juice? State the benefits of deaeration of juice.	03
	(b) Explain the effect of altitude on time and temperature of canned product.	04
	(c) State various changes taking place during ripening process and describe textural changes.	07
Q.5	(a) Write a short note on 'preservation of juice by germ proof filtration'	03
	(b) What is breather defect in canned product? Give it's causes and remedies	04
	(c) Explain various techniques used for measurement of respiratory gases	07
	OR	
Q.5	(a) Write a short note on respiratory patterns of fruits.	03
	(b) Explain how surface area to volume ratio affect on respiration in horticultural commodities?	04
	(c) Describe the basis used for sugar quantification and its requirement during jelly manufacture.	07
