

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI(NEW) – EXAMINATION – SUMMER 2019****Subject Code:2160408****Date:18/05/2019****Subject Name:Agriculture and Food Biotechnology****Time:10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
1. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Write a note on <i>Bacillus thuringensis</i> as a biopesticide.	3
	(b) Mention target genes that can be used to produce tomatoes with better shelf life and discuss the role of ethylene in the tomato ripening.	4
	(c) Define the term biopharming. Discuss the production of high value proteins and peptides.	7
Q.2	(a) What are edible vaccines? Mention the types of edible vaccines?	3
	(b) Distinguish between organic farming and traditional farming	4
	(c) Discuss in detail about Intrinsic parameter affecting food quality.	7
	OR	
	(c) Discuss in detail about extrinsic parameter affecting food quality.	7
Q.3	(a) What are the different types of biofertilizers that are available? Mention at least three types with an example each.	3
	(b) Discuss all targets for increasing the quantity of starch through genetic manipulation	4
	(c) Discuss the Principle underlying destruction of microorganism by radiation.	7
	OR	
Q.3	(a) What are IM food?	3
	(b) What are probiotics?	4
	(c) Highlight on the different unit operations involved in food processing.	7
Q.4	(a) Give radiation dose range of Radappertization, Radicidation, and Radurization	3
	(b) Discuss any type of food additive of your choice with three examples.	4
	(c) Describe in detail use of enzymes application in food industry with suitable example.	7
	OR	
Q.4	(a) What is botulism?	3
	(b) Give any four examples of biological toxins with source.	4
	(c) Explain in detail about mycotoxins.	7
Q.5	(a) What are deficiency diseases give examples.	3
	(b) Give amount of energy needs of human beings.	4
	(c) Discuss in detail health and disease in relation to food.	7
	OR	
Q.5	(a) What is HACCP?	3
	(b) Write aims of food science and technology.	4
	(c) Give detailed account on importance of yeast in food.	7