Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – WINTER 2018

Subject Code: 2171402   **Date: 19/11/2018**

Subject Name: Food Rheology & Sensory Evaluation

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.**

Q.1	**(a)**	Explain Resilience? What is its significance in food development?	**03**
	(b)	Write a note on rupture point? Explain with sketch how it help in developing different texture in food material?	**04**
	(c)	Explain different methods of direct stress measurement in food?	**07**
Q.2	**(a)**	Explain the term true stress?	**03**
	(b)	Why electrical measuring systems in food are preferred over mechanical?	**04**
	(c)	With neat sketch explain plasticity and elasticity of food material? What is its significance in food development?	**07**
		OR	
	(c)	With sketch explain Tristimulus value of color is 5R +7Y+ 9G; what does it indicate?	**07**
Q.3	**(a)**	Differentiate Deviatric stress and Isotropic stress?	**03**
	(b)	Develop a consumer questionnaire for food evaluation?	**04**
	(c)	Draw an ideal layout for sensory evaluation laboratory and explain?	**07**
		OR	
Q.3	**(a)**	On force deformation curve explain stiffness of the product?	**03**
	(b)	Differentiate Adhesiveness and Springiness with sketch?	**04**
	(c)	What is the need of the training to panel members employing for descriptive type of tasting the food?	**07**
Q.4	**(a)**	Why it was necessary to develop an electronic nose?	**03**
	(b)	Differentiate the importance of chord modulus and secant modulus for fresh fruit rheology?	**04**
	(c)	Discuss different mechanisms for food emulsion destabilization?	**07**
		OR	
Q.4	**(a)**	Explain Lamberts' law and Beers' law?	**03**
	(b)	Explain the calibration process of an electronic nose?	**04**
	(c)	Explain Composite Scoring Test and Threshold Test with their applications?	**07**
Q.5	**(a)**	Explain Extinction and Absorbency index?	**03**
	(b)	Explain method of working of different reactive surfaces used in the e-nose?	**04**
	(c)	Explain the working of food texture measuring instrument?	**07**
		OR	
Q.5	**(a)**	Discuss limitations of the e-nose?	**03**

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(b) Differentiate with the example shear thinning and shear thickening of the visco-elastic material? **04**

(c) Explain the working of food color measuring instrument? **07**

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