Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII(NEW) • EXAMINATION – WINTER 2016

Subject Code:2171402 Date:21/			Date:21/11/2	11/2016	
Time Instru	:10.3 uctio Atte	ame:Food Rheology & Sensory Evaluation 0 AM to 1.00 PM ns: empt all questions. ke suitable assumptions wherever necessary.	Total Marks	: 70	
		res to the right indicate full marks.			
Q.1	(a)	Write short notes on the following (ANY SEVEN) (i) Bio-yield point; (ii) True stress; (iii) Stiffness; (iv) Lig (v) Hue; (vi) Beer's law; (vii) Optical density, (viii) Isotr (ix) Visco-plastic material and (x) Non-Bingham Flow		2 x7 =14	
Q.2	(a) (b)	Explain CIE System of color measurement with suitable ex What is the significance of stress relaxation time? In a M prove that stress at the time of relaxation is 36.8% of the into OR	Maxwell model	07 02+05	
	(b)	Develop a relationship to prove that at the time of retardation substance is only 63.2% of the initial strain. What is its food processing?		05+02	
Q.3	(a)	i. What is Rehology?		02	
	(b)	ii. Classify Rehology with deformation and flow behavior? A blended spices industry wishes to setup a food sensor laboratory in its premises. Discuss its requirements? OR	ry evaluation	05 07	
Q.3	(a)	i. What are different electrical analogs are equivalent to models?	mechanical	02	
		ii. Why electrical analogs are preferred over the mechanic measure the rheological properties of food?	al analogs to	05	
	(b)	What are the different factors affecting sensory panel judging the quality of the newly developed product? Explain		07	
Q.4	(a)	i. What are the different types of reactive surfaces used in	the e-nose?	03	
	(b)	ii. Discuss e-nose uses and limitations for food industry? What is the significance of texture in food?		04 02	

		Explain any one texture measuring instrument?	05
		OR	
Q.4	(a)	What is the necessity of dynamic mechanical tests?	03
		In a resonance technique a potato finger 65 mm long and 12 mm in diameter was tested under compression. The recorded resonant	04
		frequency obtained was 40 Hz. If the mass density of the sample is 2.53	
	(b)		02
		ii. Explained properties which are influenced by the plasticity of the food?	05
Q.5	(a)	With the help of force v/s time curve explain the following terms: Brittleness, Hardness, Adhesiveness and Stringiness	07
	(b)	Discuss the effect of particle size, fat content and moisture content on chocolate.	07
		OR	
Q.5	(a)	With the help of force v/s deformation curve explain the chord modulus and tangent modulus. What is their significance?	07
	(b)	Design a consumer questionnaire to evaluate the new food product?	07

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