Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VIII • EXAMINATION – WINTER • 2014

Subject Code: 181405 **Date: 25-11-2014**

Subject Name: Food Ingredients and Flavour Technology

Time: 02:30 pm - 05:00 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)**	Answer the following questions in brief. i) Name any two class of food additives with one example. ii) State the classification of preservatives as per PFA. iii) Introduce Parabens as antimicrobial agent. iv) What is the principle involved in food preservation by salt? v) What is the significance of HLB index? vi) State Additivity law for color matching. vii) Define chelating agent.	**07**
	(b)	Explain the mechanism for identification of salty taste.	**07**
Q.2	**(a)**	Discuss food emulsion destabilization phenomena in detail.	**07**
	(b)	Introduce briefly leavening agent. Explain different types of baking powder.	**07**
		OR	
	(b)	Define antioxidant. Explain BHA and BHT with respect to its properties.	**07**
Q.3	**(a)**	Explain Nisin as antimicrobial agent with respect to properties, mode of action and usage.	**07**
	(b)	What are primary tastes? Enlist their identification site on tongue.	**04**
	(c)	Write short notes on acetic acid as preservative.	**03**
		OR	
Q.3	**(a)**	Discuss the properties, mode of action and toxicity of nitrites and nitrates as food preservatives.	**07**
	(b)	What are limitations of E-nose?	**04**
	(c)	Write short notes on food preservation by sugar.	**03**
Q.4	**(a)**	What do you understand by supercritical fluid? Explain the supercritical fluid extraction process.	**07**
	(b)	Introduce briefly alliaceous flavours.	**04**
	(c)	Define flavour potentiator. Comment on its stability.	**03**
		OR	
Q.4	**(a)**	Compare the advantages and limitations of oleoresins with essential oils.	**07**
	(b)	Explain briefly deep fat fried flavours.	**04**
	(c)	Differentiate between natural falvourings and nature identical flavours.	**03**
Q.5	**(a)**	Explain the problems encountered in analysis of flavouring compounds.	**07**
	(b)	Discuss in brief about the anatomical parts involved in perception of odor.	**04**
	(c)	Define : i) Hue ii) Value iii) Chroma	**03**
		OR	
Q.5	**(a)**	Discuss AH-B theory for detection of sweet taste. State the effect of chemical structure of compound on its sweetness perception.	**07**

(b) State the principles of volatility in detection of aroma compounds. **04**

(c) Introduce briefly Bixin – a carotene pigment as coloring agent. **03**

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