

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. **07**
- 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.
- (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 flavourings 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
