

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-III • EXAMINATION – WINTER • 2014**

**Subject Code: 2131408**

**Date: 26-12-2014**

**Subject Name: Basic of Food Engineering**

**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)** 1. How much water must be added to 200 kg of concentrated juice with 65% solids to produce orange juice with 12% solid. **07**  
2. How much water should be evaporated from 5% salt solution in order to form a 20% salt solution
- (b)** Describe present status of food processing in India. Also discuss future scope of it. **07**
- Q.2 (a)** Explain importance of food and discuss classification of food. **07**
- (b)** Write short notes on nutritional content of cereals, fruits, vegetables and pulses. **07**
- OR**
- (b)** The temperature of three different liquid A, B and C of equal mass are 12, 19 and 28<sup>0</sup>C respectively. The temperature when A and B are mixed is 16<sup>0</sup>C and B and C are mixed is 23<sup>0</sup>C, what would be the temperature when A and C are mixed. **07**
- Q.3 (a)** What do you mean by deterioration of food quality? Discuss the causes of spoilage in detail. **07**
- (b)** Write short note **07**
1. Entrepreneurship
  2. Industrial training
  3. Cooling method of preservation
- OR**
- Q.3 (a)** Write the followings in brief **07**
1. Specific volume
  2. Dry bulb temperature
  3. Specific heat
  4. Latent heat
  5. Uses of psychrometric chart
- (b)** Answer the following **07**
1. What is food composition?
  2. Give advantages of entrepreneurship.
  3. What is design of food?
  4. What is radiation method of preservation?
- Q.4 (a)** Answer the followings: **07**
1. Give importance of condiments and spices.
  2. Give uses of nuts and oil seeds.
  3. Discuss the role of egg in human diet.
- (b)** Discuss the followings **07**
1. Steam blancher
  2. Activity of microorganisms
  3. Conduction and Convection
  4. Filtration and Centrifugation

**OR**

**Q.4 (a)** What are different criteria based on which, cleaning and grading equipments are classified? Discuss any one cleaning or grading equipment with diagram. **07**

**(b)** Why instrumentations and control is important in food industry? Give the name of any one instrument which measure temperature, relative humidity, pressure respectively **07**

**Q.5 (a)** Define the followings; **07**

1. Cleaning
2. Grading
3. Sorting
4. Blanching
5. Peeling
6. PFA, FPO

**(b)** What is food quality? Discuss food quality evaluation method. **07**

**OR**

**Q.5 (a)** Write short notes on: **07**

1. Cereals and Millets
2. Milk and milk products
3. Ready to eat food
4. Soft drink

**(b)** Write short notes on recommended daily allowances for nutrients. What is food preservation? **07**

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