



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.Tech(FT)/SEM-6/FT-603/2010  
2010**

**BAKERY, CONFECTIONERY &  
EXTRUDED FOODS**

Time Allotted : 3 Hours

Full Marks : 70

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

**GROUP – A  
( Multiple Choice Type Questions )**

1. Choose the correct alternatives for the following :  $10 \times 1 = 10$ 
  - i) Durum wheat flour is used for the production of
    - a) bread
    - b) cake
    - c) biscuit
    - d) pasta.
  - ii) Protein which is responsible for the quality of baked products is
    - a) Casein
    - b) Albumin
    - c) Gluten
    - d) Globulin.
  - iii) Farinigraph, Extensograph, Amylograph are examples of ..... testing equipment.
    - a) water
    - b) milk
    - c) flour
    - d) food colour.



- iv) Select the natural antioxidant.
- a) BHA      b) BHT  
c) TBHQ      d) Ascorbic acid.
- v) Select the nutritive sweetener.
- a) Glucose      b) Acesulfame K  
c) Aspartame      d) Saccharine.
- vi) The emulsifying agent is
- a) Lecithin      b) Monoglyceride  
c) Polyglycerol ester      d) all of these.
- vii) Oleic acid is an example of
- a) unsaturated fatty acid      b) saturated fatty acid  
c) leavening agent      d) none of these.
- viii) The humidity inside the oven is best controlled by
- a) multiburner ovens  
b) indirectly fired radiant ovens  
c) forced convection ovens  
d) none of these.
- ix) Lack of volume of bread is due to
- a) excess diastatic action  
b) not enough salt in the dough  
c) dough is underbaked  
d) flour too strong.
- x) Yeast contains the enzyme
- a) invertase      b) maltase  
c) zymase      d) all of these.



**GROUP – B**

**( Short Answer Type Questions )**

Answer any *three* of the following.

$3 \times 5 = 15$

2. What is baking powder ? What is the difference between the fast acting, double acting and slow acting baking powders ?  $2 + 3$
3. What are the functions of shortening agent and emulsifying agent ?  $2\frac{1}{2} + 2\frac{1}{2}$
4. What are different dough mixing methods ? Mention the differences of these methods.  $1 + 4$
5. What are cookies ? Why is Hydrogenated Vegetable Oil ( HVO ) added in cookies ? Why is lecithin added ? What are the types of cookies generally used ?  $1 + 1\frac{1}{2} + 1\frac{1}{2} + 1$
6. What are 'essential' and 'optional' ingredients in making a cake ? Why flour from soft wheat is used in making a cake ? What may happen if a flour from hard wheat is used ? Explain with example.

**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following.

$3 \times 15 = 45$

7. a) Why is yeast used as a leavening agent in the production of bread ? Explain the functions of salt in the yeast fermentation of bread. Mention also how hardness of water is related to the said fermentation. 10
- b) Name the different bread making methods. What method will you suggest for making bread from wheat flour and why ? Describe the method you suggest. 5



8. Explain the operating principle of high speed mixer. With the flow diagram explain the biscuit manufacturing process. 8 + 7
9. What are the components of an extruder ? Write down the functions of the components of an extruder. What are the pre- and post-extrusion treatments ? 2 + 8 + 5
10. Cookie travelling on a conveyor belt inside a continuous baking oven occupies most of area on the surface of the conveyor. The top wall of the oven directly above the conveyor has an emissivity of 0.94 and cookies have an emissivity of 0.82. If the top wall of the oven has a temperature 185°C and air temperature in the oven is 160°C, the average value of heat transfer coefficient is 38.5 W/m<sup>2</sup> K. Calculate the average rate of heat transfer between cookies per unit area on the side which faces the top wall of the oven, when cookies surface temperature is 68°C.
11. Write short notes on any *three* of the following : 3 × 5
- a) Chocolate manufacture
  - b) Manufacture of bread rolls
  - c) Manufacture of pastries
  - d) Manufacture of cookie
  - e) Manufacture of cracker
  - f) Manufacture of dough nuts.