



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.Tech(FT)/SEM-7/FT-702/2011-12  
2011**

**FOOD ADDITIVES & POST PROCESS HANDLING**

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 any *ten* of the following :

10 × 1 = 10

i) In the manufacturing of bread, the pH of the fermenting dough should be between

- |              |                 |
|--------------|-----------------|
| a) 4.5 – 5   | b) 2.5 – 3.5    |
| c) 5.5 – 6.5 | d) 7 and above. |

ii) Mannitol is used as anticaking agent in chewing gum to the extent

- |       |        |
|-------|--------|
| a) 3% | b) 1%  |
| c) 8% | d) 5%. |



iii) Methyl anthranilate ( synthetic flavour ) is used as flavouring agent for

- a) pineapple                      b) butter
- c) grapes                         d) strawberry.

iv) Sodium nitrite is used to stabilize the colour of meat to the extent of

- a) 100-200 ppm                  b) 50-100 ppm
- c) 10-20 ppm                    d) more than 200 ppm.

v) Sorbic acid is metabolized in the body giving rise to

- a) caproic acid                  b) butyric acid
- c) pyruvic acid                  d) hippuric acid.

vi) Form in which sulphur di oxide is employed as preservative include

- a) the gas sulphur dioxide
- b) sodium/potassium bisulphate
- c) sodium/potassium metabisulphite
- d) all of these.



vii) One of the primary acids formed during the natural fermentation process of sauerkraut is

- a) citric acid                      b) lactic acid
- c) tartaric acid                  d) propionic acid.

viii) BHA is used at the maximum level of

- a) 0.01%                          b) 0.02%
- c) 0.1%                           d) 0.2%.

ix) Sweet chocolate coating must contain chocolate liquor

- a) 10%                            b) 15%
- c) 35%                           d) none of these.

x) The acid found to be the most effective Salmonella inhibitor is

- a) citric acid                      b) acetic acid
- c) lactic acid                      d) sorbic acid.

xi) Synthetic colours are considered superior to many of the vegetable dyes for their

- a) better functional value
- b) uniformity
- c) stability
- d) all of these.

CS/B.Tech(FT)/SEM-7/FT-702/2011-12



xii) Annato ( natural colourant ) is used in

- a) butter
- b) cheese
- c) margarine
- d) all of these.

xiii) Gelatin is a

- a) synthetic resin
- b) carbohydrate
- c) pectin
- d) protein.

xiv) Silica gel is a

- a) foaming agent
- b) anti-foaming agent
- c) humectant
- d) none of these.

#### **GROUP – B**

##### **( Short Answer Type Questions )**

Answer any *three* of the following.  $3 \times 5 = 15$

2. Write short note on anticaking agents.
3. Which compounds are produced when sorbic acid and propionic acid are broken ? Explain synergistic effect with example. 2 + 3



4. What happened when glucose containing food is treated with sulphites ? What is the advantages of this treatment ? How one can get rid of this reaction. 2 + 2 + 1

5. What do you mean by stabilizers and thickeners ?

6. What is EDTA ? How it acts ? Explain with structure.

1 + 2 + 2

7. Write a note on leavening agents.

**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following. 3 × 15 = 45

8. a) Define non-nutritive sweeteners. Why such sweeteners are very popular nowadays ? Name and mention the merits and demerits of the non-nutritive sweeteners approved by FDA.
- b) How flavouring substances are classified ? Why synthetic flavours are used in preference to natural flavours ? Name the synthetic flavours used as a substitute for banana, grapes and bitter almond. 10 + 5



9. What is pan coating ? Name the different types of pan coating and describe each type separately.

10. a) Differentiate between synthetic and synthesized food colours. What are natural food colours ? How do they get extracted industrially ?

b) Briefly discuss about caramel/annatto colour and its food use.

c) Compare the maximum limit of natural and synthetic colours for food use ( choose any two for both the category ).

5 + 5 + 5

11. a) Describe the role of emulsifying agents in making mayonnaise and cake.

b) What is meant by the term synergism ? Describe the action of ascorbic acids/phosphoric acids in beverages with reference to synergism.



12. a) Write note on Enrobing.
- b) Discuss the importance of curing agent in food processing.
- c) What do you mean by ropiness in bread ?
- d) What is bixin ?
- e) What are the probiotics ?

5 + 4 + 2 + 2 + 2

