

Total number of printed pages:2

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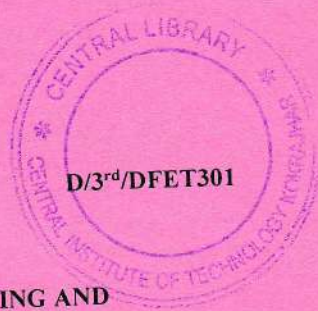
**INTRODUCTION TO FOOD PROCESSING AND  
PRESERVATION TECHNOLOGY**

Full Marks: 100

Time: Three hours

*The figures in the margin indicate full marks for the questions.*

*Answer any five questions.*



Q.1 a.) Match the following with correct connections: 5

- |               |                 |
|---------------|-----------------|
| 1.) Enzyme    | a.)Vitamin      |
| 2.) Roentgen  | b.)Protein      |
| 3.) Cellulose | c.)Mineral      |
| 4.) Manganese | d.)Irradiation  |
| 5.) Niacin    | e.)Carbohydrate |

1. b.) Write True or False: 5

- i.) Fructose is a disaccharide.
- ii.) Albumin is a water-insoluble protein.
- iii.) Lycine is an essential amino acid.
- iv.) Potato is a semi-perishable food.
- v.) Some foods stored in frozen condition have a shelf-life of months or even years.

1.c.) Fill in the blanks: 5

- i.) Fine thread-like filaments appearing as cottony growth on the surface of foods are known as \_\_\_\_\_.
- ii.) Denaturation of \_\_\_\_\_ takes place when exposed to high temperatures.
- iii.) An intrinsic factor effecting the growth and activity of micro-organisms is \_\_\_\_\_.
- iv.) An extrinsic factor effecting the growth and activity of micro-organisms is \_\_\_\_\_.
- v.) \_\_\_\_\_ is one of the most radiation resistant micro-organisms.

- 1.d.) Choose the correct answer or option: 5
- i.) Gelatinization is a property of : Proteins/Vitamins/Fats /Starch
  - ii.) Biological catalysts are : Carbohydrates/ Fats/Cellulose/Proteins
  - iii.) Caramelization is a property of : Fats/Sugars/Proteins/Vitamin
  - iv.) Rancidity is a phenomenon of: Fats /Sugars/Vitamins/Minerals
  - v.) The Vitamin which is generally known for providing a good vision is:  
Vitamin B1 /Vitamin A /Vitamin C / Vitamin D
- 2.
- a.) Classify proteins on the basis of their functional role in biological systems. 5
  - b.) Mention any 3 points of functions/uses of Fats in foods. 5
  - c.) Write a note on Rancidity. 3
  - d.) Mention 5 benefits of low temperature preservation of foods. 7
- 3.
- a.) What is the mechanism of action of Radiations? 4
  - b.) What are the factors on which the bactericidal efficiency of a given dose of irradiation depends on? 4
  - c.) Explain any 2(two) types of irradiation treatment given to foods with examples of foods. 5
  - d.) What are the types of Foods on the basis of their stability or perishability? Explain by giving examples of foods for each category. 7
4. a.) Explain how Microbial Spoilage takes place in Meat,Fish and Poultry OR Dairy products. Give names of at least 2 micro-organisms that grow on them. 10
- b.) What is Fermentation of foods? Give examples of some Fermented foods. 4
- c.) Write 2 properties each for sugar, starches and pectins.  $2 \times 3 = 6$
5. a.) Explain the preservative action of i.) salt and sugar in foods.  $4+2+2=8$
- ii.) spices in foods iii.) oils in foods.
- b.) Write the names, functions(what it does), sources(where they are found) and recommended daily value of 3(three) different Vitamins found in foods.  $4 \times 3 = 12$
6. a.) Write the names, functions(what it does), sources(where they are found) and recommended daily value of 3 different Minerals found in foods.  $4 \times 3 = 12$
- b.) What are the major causes of Food Spoilage? Explain any 3 causes in details. 8
7. Write a detailed note on the hygienic aspects in food handling and processing. 20

