

**B.Sc. Part-II Semester-IV Examination**  
**4S : FOOD SCIENCE**  
**(Food Preservation and Quality Control)**

Time : Three Hours]

[Maximum Marks : 80

**Note** :—(1) All questions are compulsory.

(2) Use diagram wherever necessary.

1. (A) Fill in the blanks :

- (i) Combination of taste, smell/aroma etc. is collectively known as \_\_\_\_\_.
- (ii) Among dry heat and moist heat, \_\_\_\_\_ is more lethal for microorganisms.
- (iii) The unit of measuring radiation is \_\_\_\_\_.
- (iv) The addition of inferior substances and removal of vital element is known as \_\_\_\_\_.

2

(B) Choose the correct alternative :

- (i) PET, a packing bottle material stands for :
  - (a) Polyenvlene Tetrachloride
  - (b) Polyether Terephthalate
  - (c) Polyethylene Terephthalate
  - (d) None of the above
- (ii) An example of thermal sanitizer is :
  - (a) Petrol
  - (b) Steam
  - (c) CO<sub>2</sub>
  - (d) Chlorine
- (iii) Browning of apple is due to :
  - (a) Microorganism
  - (b) Enzyme
  - (c) CO<sub>2</sub>
  - (d) None of the above
- (iv) Dehydration differs from drying as it uses :
  - (a) Solar energy
  - (b) Controlled conditions
  - (c) Radiation
  - (d) None of these

2

(C) Answer in **one** sentence each :

- (i) What is chemical spoilage ? Give an example.
- (ii) Define freezing.
- (iii) Define sanitization.
- (iv) What are anti-oxidants ?

4

- 2. (A) Explain the factors affecting food spoilage. 4
- (B) Discuss the sensory characteristics of food contributing to quality. 4
- (C) Explain types of spoilage. 4

**OR**

- (P) What is quality ? Explain the hidden factors contributing to quality. 4
- (Q) Discuss chemical and enzymatic food spoilage with examples. 4
- (R) Explain any four factors causing food spoilage. 4

3. (A) Explain the difference between refrigeration and freezing. 4  
(B) Differentiate between slow (sharp) freezing and quick freezing. 4  
(C) Discuss the principles of food preservation. 4
- OR**
- (P) Discuss preservation by removal of microorganism. 4  
(Q) Give the classification of all methods of food preservation. 4  
(R) Discuss the effect of freezing on food. 4
4. (A) Discuss the microbiology of dried foods. 4  
(B) Differentiate between open sun drying and solar air drying. 4  
(C) What is drying and dehydration ? Give the advantages. 4
- OR**
- (P) Discuss pasteurization. 4  
(Q) Discuss the factors affecting the effect of temperature on microorganisms. 4  
(R) Give introduction to various methods of food preservation above 100°C temp. 4
5. Discuss the construction of microwave oven with diagram, compare with conventional oven with its principle. 12
- OR**
- Classify preservatives with examples. Discuss class I preservatives. Explain pickeling. 12
6. Give the list of orders formulated under FCA (Essential Commodities Act). Give the salient features of PFA Act. 12
- OR**
- What is food safety ? Give the principles of HACCP with its need. 12
7. (A) Discuss the functions of packaging. 4  
(B) Give the properties of flexible films with its use. 4  
(C) Give an account of personal hygiene. 4
- OR**
- (P) Define sanitization. What are the types of sanitizers used in food industry ? 4  
(Q) Explain the sources of contamination. 4  
(R) Discuss mandatory labelling. 4