

22493

24225

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Answer each next main Question on a new page.
(3) Illustrate your answer with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Assume suitable data, if necessary.
(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following: 10
- Define Enzymatic spoilage.
 - State any two principles of canning.
 - Define osmotic pressure.
 - Enumerate types of fermentation.
 - List different types of vinegar.
 - Enumerate types of evaporator.
 - Write four examples of food preserved using salt.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Explain the four principles of food preservation.
 - b) Enlist and explain any four cause of microbial spoilage.
 - c) State and explain scope of fruit and vegetable preservation in India.
 - d) Explain novel-thermal processing techniques.
- 3. Attempt any THREE of the following:** **12**
- a) Classify thermal processing and explain sterilization in details.
 - b) Explain the drying theory in details.
 - c) Enlist and explain factors affecting osmotic pressure of sugar solution.
 - d) Explain the factors affecting antimicrobial activity of preservatives.
- 4. Attempt any THREE of the following:** **12**
- a) Write notes on low temperature preservation highlighting –
 - i) Chilling
 - ii) Refrigeration
 - iii) Cold storage
 - b) Define food additives and explain its advantages.
 - c) Differentiate natural and synthetic food colorants. (Any four points)
 - d) Classify fermentation and explain any one in details.
 - e) Explain the process of vinegar production in details.

5. Attempt any TWO of the following:**12**

- a) Enlist the types of Non-thermal technologies and explain high pressure processing in details.
- b) Write notes on preservation highlighting –
 - i) Sugar
 - ii) Salt
 - iii) Acid.
- c) Define food process Engineering and explain the unit operations in food process.

6. Attempt any TWO of the following:**12**

- a) Define flavour and explain flavour compounds in details.
 - b) Enlist types of heat exchanger and explain shell and tube heat exchanger with neat sketch.
 - c) Define evaporation and explain feeding methods of multiple effect evaporation systems.
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