

# 22493

**22223**

**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 answers 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****
- a) Enlist any four constituents of food.
  - b) State two causes of canned food spoilage.
  - c) Enumerate methods of low temperature preservation.
  - d) Define the term chilling
  - e) State the meaning of alcoholic fermentation.
  - f) Enlist any four types of vinegar
  - g) Define Evaporation.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Classify foods according to case of spoilage.
  - b) Explain in details the enzymatic spoilage.
  - c) Explain the principles of food preservation.
  - d) Enumerate any three methods of thermal processing and Explain pasteurization in details.
- 3. Attempt any THREE of the following:** **12**
- a) Explain the process of canning.
  - b) Define Dehydration and explain basic drying theory.
  - c) Enlist low temperature preservation methods and explain any one in details.
  - d) Explain food preservation by use of chemicals.
- 4. Attempt any THREE of the following:** **12**
- a) Write down four example of food products preserved using salt.
  - b) Write notes on food additives highlights its.
    - i) function
    - ii) use
    - iii) class
    - iv) Tolerance level.
  - c) Classify food colorants and explain synthetic food colorants in details.
  - d) Enumerate and explain any four advantages of fermentation.
  - e) Explain vinegar and steps involved in vinegar production.

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

- a) Explain in details working of microwave heating with neat labeled sketch.
- b) Define osmotic pressure and explain all the factors affecting osmotic pressure in details.
- c) Explain in details the basic principles of materials and energy balance.

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

- a) Enlist types of flavors and explain all in details.
  - b) Explain the working principle of double pipe heat exchange with neat sketch.
  - c) Explain in details the process to design of Evaporation system.
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