Frequently asked question/FAQ

1. What are the aims of food preservation?

The major aims of food preservations are

a. Extending the shelf life during which food remains good both in terms of microbial and biochemical characters

b. Providing or supplementing nutrients required for health

c. Providing variety and convenience in diet

d. Value addition to food.

2. What are the fundamental principles of food preservation?

The fundamental principles of food preservation are

- **Inhibiting the growth and activity of microorganism**
- **Inhibiting the activity of endogenous enzymes**
- **Inhibiting the chemical reactions which may deteriorate the quality of food**
- **Inhibiting the invasion and spoilage by insects and rodents**

3. Name the low temperature food storage systems?

Low temperatures food storage systems are

- **Cellar storage (about 150C)**

- **Refrigeration or chilling (0 to 50C)**
- **Freezing (-18 to -400C).**

4. What are the preservative actions of salt?

Salt exerts its preservative action by

a. Causing high osmotic pressure resulting in the plasmolysis of microbial cells.

b. Dehydrating food as well as microorganisms by drawing out and tying up the moisture by ion hydration.

c. Ionizing to yield the chloride ion which is harmful to microorganisms

d. Reducing the solubility of oxygen in water, sensitizing the cells against carbon dioxide, and interfering with the action to proteolytic enzymes

5. Mention the steps of food processing?

Steps of food processing are

Raw material handling, Cleaning and sanitation, Understanding the Engineering properties of food, biological, and packaging material,

Microbiological considerations, Role of acidity and water activity in food safety and quality and Understanding the Reaction kinetics

6. Why government should promote small scale industries?

Governments should promote the development of small-scale food processing industries because- It has the potential to generate employment. This increases food security for

growing populations. The products from small scale units can reduce imports or have export potential. Overall prosperity of the country can be improved by promoting small scale industries.

7. List the common methods employed in food preservation?

- **Drying**
- **Chemical Preservation**
- **Smoking**
- **Salting**
- **Preservation by Sugar**
- **Freezing**
- **Preservation by Carbonation**
- **Pickling**
- **Preservation by Acids**
- **Preservation by oil and spices**
- **Preservation by antibiotics**
- **Preservation by Irradiation**
- **Vacuum packing**

8. Explain advantages of home scale food processing?
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Home processors or the micro-scale units produce unique products mainly at low cost. This may include speciality items of the region. They may provide market for their products to nearby population as well as locals. Also, it generates the employment locally

9. Explain primary food processing?

Primary processing is the processing of food that is carried out soon after harvesting or slaughter. Primary processing ensures that foods can easily be transported and are ready to be sold, eaten or processed into other products

10. What is Secondary food processing?

Secondary processing turns the primary processed food or ingredient into other food products. It ensures that food can be used for a number of purposes, without the spoilage, and keeps food healthy, wholesome to eat and makes them available throughout the year.

11. Name the commonly used materials for pickling at industrial scale?

The commonly used materials for pickling at industrial scale are brine, vinegar, ethanol and oils.

12. Name the agricultural produces that India leads in world production?

India is ranked number one in the world in terms of production of areca nut, banana, castor oil seed, chick peas, chillies and peppers dry, ginger, lemons and limes, mangoes, mangosteens, guavas, millet, okra, papayas, pigeon peas, meat-buffalo, milk-whole fresh buffalo and goat, ghee, butter oil of cow milk, ghee of buffalo milk, sesame seed.

13. Why Preservation by Irradiation is known as cold sterilization?

Gamma rays or electron beams when made to pass through food, their collisions between the ionizing radiation and food particles at atomic and molecular levels, results in

the production of ion pairs and free radicals. The reactions of these products among themselves and with other molecules result in physical and chemical reaction resulting in inactivation of microorganisms in the food without generating heat. Thus, irradiation of food can be considered to be a method of cold sterilization.

14. Based on the types of commercial scale in food processing how they are classified?

Commercial scale in food processing are classified as

a)Home- scale: No employees, little or no capital investment

b)Micro or cottage scale : Less than 5 employees, capital investment less than Rs 50,000

c)Small-scale: 5-15 employees, capital investment Rs 50,000-5,00,000

d)Medium-scale: 16-50 employees, capital investment Rs.5,00,000 – 5,00,00,000

e)Large-scale: More than 50 employees, capital investment over Rs 5,00,00,000

15. What are the different methods of removing water from the food?

The different methods of removing water from the food

- **Drying**
- **concentrating by boiling**
- **filtering**
- **pressing**