Chapter 5: Food Safety

Question. 1. Complete the following statements by using the correct option from those given below:

(Calcium carbide, Irradiation, contamination, micro, dehydration, pasteurization, natural, chemical)

(1) Drying the food grains from farms under the hot sun is called **dehydration**
(2) Materials like milk are instantly cooled after heating up to a certain high temperature. This method of food preservation is called **pasteurization**
(3) Salt is a **natural** type of food preservative.
(4) Vinegar is a **chemical** type of food preservative.
(5) **Calcium carbide** and some other chemicals are used to make bananas look more bright yellow.

Question. 2. Whether following statements are true or false. Rewrite the false statements after correcting them:
(1) Some food stuffs are spoiled due to chemical reactions on contact with metals.
Answer: True.
(2) Many people in our country and all over the world never have a problem of hunger.
Answer: False. Many people in our country and all over the world still suffer from hunger.
(3) Much food is saved as a result of the custom of offering and serving food to guests at traditional feasts.
Answer: False. Much food is wasted as a result of the custom of offering and serving food to guests at traditional feasts.
(4) FDA is a private organization that controls production and distribution of food and drugs by their standardization.
Answer: False. FDA is a government organization that controls production and distribution of food and drugs by their standardization.

Question. 3. Find the odd-man-out:
(1) Salt, Vinegar, Citric Acid, Sodium benzoate. Salt
(2) Lakhi Dal, Brick dust, Metanyl yellow, Turmeric powder. Turmeric powder
(3) Banana, Apple, Guava, Almond. Almond
(4) Storing, Freezing, Settling, Drying. Storing

Question. 4. Complete the charts below:

[1] Food stuff	**Adulterant**
(1) Turmeric powder	**Metanyl yellow**
(2) Black pepper	Seeds of papaya
(3) Rava	**Iron filings**
(4) Honey	Water of jaggery

[2] Food stuff	Adulterant
(1) Milk	Water, Urea
(2) Red chilly powder	Brick Powder
(3) Black Pepper	**seeds of papaya**
(4) Ice cream	Washing powder, paper pulp

Question. 5. What shall we do? (HOTS)
(1) There are vendors selling uncovered sweetmeats in open places in the market.
Answer: We should avoid buying uncovered sweetmeats and report it to the local health authorities to ensure proper hygiene and food safety.
(2) A pani-puriwalla is serving the pani puri with dirty hands.
Answer: We should avoid eating from such vendors and inform them about the importance of cleanliness to prevent food contamination.
(3) We have purchased a large quantity of fruits and vegetables.
Answer: We should store the fruits and vegetables properly in a cool, dry place or refrigerate them to prevent spoilage and ensure they last longer.
(4) We need to protect foodstuffs from pests like rats, cockroaches, wall-lizards, etc.
Answer: We should store foodstuffs in airtight containers and keep the area clean to avoid attracting pests, and consider using safe pest control methods.

Question. 6. Answer the following questions in your own words:
(1) How is milk pasteurized?
Answer: Milk is pasteurized by heating it to a specific temperature, usually around 72°C (162°F) for 15 seconds, and then quickly cooling it. This process kills harmful bacteria without affecting the nutritional value of the milk.
(2) Why should we not consume adulterated food materials?
Answer: We should not consume adulterated food materials because they may contain harmful chemicals, contaminants, or inferior substances that can lead to serious health problems, including food poisoning and long-term diseases.
(3) What is the exact difference between food protection and food preservation?
Answer: Food protection involves safeguarding food from contamination by pests, bacteria, or environmental factors, while food preservation refers to methods like drying, freezing, or canning that extend the shelf life of food by preventing spoilage.
(4) What is meant by quantitative wastage of food? How does quantitative wastage of food take place?
Answer. Quantitative wastage of food refers to the loss of food in terms of its physical quantity. It occurs during harvesting, storage, and transportation due to improper handling, pests, or spoilage. This results in a reduction in the total amount of food available for consumption.
(5) What is meant by qualitative wastage of food? How does qualitative wastage of food take place?
Answer. Qualitative wastage of food refers to the loss of its quality, such as nutritional value, taste, or safety. It happens due to factors like contamination, poor storage, or overcooking, which reduce the food's appeal and nutritional benefits, even if the quantity remains unchanged.
(6) How does food spoilage occur? Which are the various factors spoiling the food? (Can you tell? Textbook page 35)

Answer. (1) Food spoilage occurs when microorganisms like bacteria, fungi, or mold grow on food. (2) Improper storage, such as exposure to moisture or air, accelerates spoilage. (3) High temperatures can speed up the breakdown of food, leading to spoilage. (4) Contamination from pests or unclean environments also contributes to food spoilage.

(7) What measures will you take for preventing food wastage?

Answer. (1) Store food in proper containers and refrigerate perishables to prevent spoilage. (2) Avoid buying more food than needed and cook in appropriate quantities. (3) Repurpose leftovers and ensure they are consumed in time. (4) Monitor expiration dates and practice portion control to minimize wastage.

Question. 7. Explain why this happens and suggest possible remedies:

(1) Qualitative wastage of food.

Answer.

Why it happens: Qualitative wastage occurs when food loses its nutritional value, taste, or safety due to factors like improper storage, contamination, or overcooking.

Remedies: Store food in clean, airtight containers, cook at appropriate temperatures, and avoid contamination to maintain food quality.

(2) The cooked rice is underdone.

Answer.

Why it happens: Rice may be undercooked if insufficient water is used, or if it is cooked for too short a time.

Remedies: Add more water and allow the rice to cook longer on low heat or steam it to ensure it is fully cooked and soft.

(3) The wheat that was bought is a bit moist.

Answer.

Why it happens: Moisture can be absorbed by wheat during storage or transport, leading to spoilage and mold growth.

Remedies: Dry the wheat in sunlight or store it in a cool, dry place in airtight containers to prevent moisture buildup.

4) The taste of yoghurt is too sour/slightly bitter.

Answer.

Why it happens: Yoghurt can become sour or bitter if it is over-fermented or stored for too long.

Remedies: Reduce fermentation time and store yoghurt in the refrigerator, consuming it within a short period for optimal taste.

(5) Cut fruits have turned black.

Answer.

Why it happens: Cut fruits turn black due to oxidation when exposed to air.

Remedies: Coat the fruits with lemon juice or keep them in airtight containers to slow down the oxidation process and maintain freshness.

Question. 8. Give reasons:

(1) Food remains safe at 5 °Celsius.

Answer. At 5°C, the growth of harmful bacteria and microorganisms is significantly slowed down, preventing spoilage and keeping the food safe for a longer period. This low temperature helps preserve the freshness and nutritional value of the food.

(2) Nowadays, food is served buffet style during large gatherings.

Answer. Buffet-style service is preferred at large gatherings because it allows guests to serve themselves according to their preferences, reduces the need for multiple servers, and ensures a more efficient and organized distribution of food to large crowds. It also helps in minimizing food wastage as people take only what they need.