

## 5. Food Safety

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

(Calcium, Melathion, Dehydration, Food adulteration, Pasteurization, 16 October, Natural, Chemical, food protection)

(1) Drying the food grains from farms under the hot sun is called.....

Ans: Dehydration

(2) Materials like milk are instantly cooled after heating up to a certain high temperature. This method of food preservation is called.....

Ans: Pasteurization

(3) Salt is a .....type of food preservative.

Ans: Natural

(4) Vinegar is a.....type of food preservative.

Ans: Chemical

(5) .....act was passed in 1954.

Ans: Food adulteration

(6) ..... is sprayed on the gunny bags containing food-grains.

Ans: Melathion

(7) World food day is celebrated on..... .

Ans: 16 October

(8) Prevention of food spoilage by microbial growth and infestation by pests is called ..... .

Ans: Food protection

Q.2. Find the odd- man-out :

(1) Salt, Vinegar, Citric Acid, Sodium benzoate

Ans: Salt

(2) Lakhi Dal, Brick dust, Methanyl yellow, Turmeric powder

Ans: Turmeric powder

(3) Banana, Apple, Guava, Almond

Ans: Almond

(4) Storing, Freezing, Settling, Drying

Ans: Storing

(5) Pickles, Milk, Murabba, Petha.

Ans: Milk

Q.3 Complete the chart below :

Food Stuff	Adulterant
(1) .....	Metanyl yellow
(2) Black pepper	.....
(3) .....	Iron filings
(4) Honey	.....

Answer :

Food Stuff	Adulterant	Answer
(1) .....	Methanyl yellow	Turmeric powder
(2) Black pepper	.....	Seeds of papaya
(3) .....	Iron filings	Rava
(4) Honey	.....	Water of jaggery

Q.4 Whether following statements are true or false. Rewrite the false statements after corrective them :

i) Milk is preserved by freezing method .

Ans: False (Milk is preserved by pasteurization method )

ii) Turmeric powder adulterant is Metanyl yellow

Ans: True

iii) Food is said to be spoiled if there is a change in its colour, odour, texture, quality, taste and there is a loss of its nutrient content.

Ans: True

iv) Foodstuffs may be spoiled due to by preservatives.

Ans: False (Foodstuffs may be spoiled due to by micro - organism.)

Q.5 Answer the following questions in your own word :

(1) How is milk pasteurized ?

Ans : Pasteurization method involves heating the milk or other similar foodstuffs up to a certain temperature, e.g., milk at 80°C for 15 minutes and cooling it quickly. This destroys the microbes present in the milk and it keeps for a longer duration.

(2) Why should we not consume adulterated food materials ?

Ans : Different types of adulterants affect our health in different ways. Some adulterants cause abdominal discomfort or poisoning, while some may affect the functioning of some organs if consumed over a long period of time, or even cause cancer. and The health of all people, young and old, poor or

rich is endangered by food adulteration. So, do not eat this food.

### (3) what is meant by adulteration of food ?

Ans : Adulteration of food : - i) Mixing of a low quality inedible or cheaper material or a harmful colour with food.

ii) Mixing of some harmful material like iron, filings, urea, small stones, dung etc.

i) Removal of some important components of food. e.g. removal of fat content of milk, essence of cloves, etc.

### (4) How does food spoilage occur ? Which are the various factors spoiling the food ?

Ans: Food spoilage occurs due to many reasons : (1) Some food stuffs have intrinsic factors which get spoiled soon. (2) The wrong and careless transportations of the food stuffs from the farm to the customer can cause food spoilage. (3) Chemical reactions occur in the food. Some are reactive to the metals and this results into production of harmful compounds. (4) Improper handling, storage and transportation leads to major spoilage. (5) Microorganisms from surrounding air, water and land enter the food and cause their deterioration. Insects also attack food and such infested food is bad for health.

**(5) Which methods of food preservation would you use ?**

**Ans : Freezing :** - Biological and chemical reactions in food materials are slowed down at low temperature.

**Smoking** :- Food is preserved with the help of smoke. Aluminum phosphate is used in this method.

**Use of insecticides** :- Melathion is sprayed on the gunny bags containing food grains.

**Use of insert gas** :- potato wafers and other food products packets are air tight filled with nitrogen gas . from preventing growth of fungus and insects in them.

**Pasteurization** :- Method involves heating the milk or other similar foodstuffs up to a certain temperature, e.g. Milk at 800 C for 15 minutes and cooling it quickly. This destroys the microbes present in the milk and it keeps for a longer duration.

**Q.6 What shall we do ?**

**(a) There are vendors selling uncovered sweetmeats in open places in the market.**

**Ans :** According to Food safety and Standardization Act-2006, Such vendors can be punished. Therefore, a complaint should be registered against such vendors with local Municipality. The

uncovered sweetmeats which are sold on the road should never be eaten. These are always infested with house-flies. Such food is contaminated and is bad for health. We must also persuade other people to avoid such uncovered food.

**(b) A 'pani-puriwalla' is serving the pani puri with dirty hands.**

Ans : We can perform following steps :-

- i) We should also tell the 'Pani-Puriwalla' to clean his hands as he may infect many people with such contamination.
- ii) should make other people aware about the possible effects of consuming dirty panipuri.

**(c) We have purchased a large quantity of fruits and vegetables.**

Ans : We have to preserve the large quantity of fruits and vegetables by following method :-

- i) Should be cleaned by thorough washing.
- ii) Then they should be wiped with a clean cloth.
- iii) If they are perishable they should be stored in refrigerator in a proper way.
- iv) If there is no refrigerator, then these should be kept in porous basket and covered over with paper or clean cloth.

(d) We need to protect foodstuffs from pests like rats, cockroaches, wall lizards, etc.

Ans : i) Keeping them in refrigerator or food- cupboard is a better way of protection.

ii) The food stuffs should be stored in a safe and clean place.

iii) The place of storage should be clean, protected and covered.

iv) Always keep kitchen and utensils clean and tidy.

Q.7 Explain why this happens and suggest possible remedies.

(a) Qualitative wastage of food.

Ans : (1) The deterioration of quality of the food results into qualitative wastage. Following are the reason of qualitative wastage of food. (2) Over- cooking of food, Washing the vegetable after cutting them. (3) Mishandling of fruits like grapes and mangoes. (4) Using wrong methods or protection of food. (5) Miscalculation of the time required to transport food from producers to consumers. (6) Excess use of food preservatives.

Remedies : (1) Proper handling of the fruits and vegetables while bringing them from market. (2) Finding out the factors



that are causing food spoilage. (3) The wrong practices in the kitchen about storage and cooking of food should be changed.

**(b) The cooked rice is underdone.**

**Ans :** The cooked rice is underdone is nothing but lack of water.

**Remedy :** Add some water to underdone cooked rice, steam it again and consume it .

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

**Ans :** It is due to following reason :-

i) During rainy season when there is humid atmosphere, the wheat becomes damp. ii) When the wheat is brought home, it may become damp due to faulty transportation. iii) The wheat bought from market may not have been stored properly.

**Remedy :** i) The wheat should not be touched by wet hand.

ii) It should be dried in sun for four to five times.

iii) The dried wheat should be placed in clean, dry and airtight containers

**(d) The taste of yoghurt is too sour/slightly bitter.**

**Ans :** If the yoghurt is stored for a long time, it may turn sour or bitter. Storing it at improper temperature also results into similar problem. Yoghurt is set by using the culture of previous curd. if this culture is bad, it may result into sour or bitter curd.

**Remedy :** If sour, it can be transformed into butter milk or add sugar to it.

**(e) Cut fruits have turned black.**

**Ans :** It is chemical reactions start in the cut fruits which make them black.

**Remedy :** i)Apply honey on the cut fruits for preventing them turned black.

ii)The pieces of cut fruits should be immediately stored in an air tight containers.

iii)Seasoning the fruits pieces with slight sugar or salt also prevents the blackening.

iv) Store in refrigerator of the cut fruits which turned black.

## Q.8 Give reasons.

(1) Food remains safe at 5<sup>0</sup> Celsius.

Ans : Bacteria, fungi which spoil the food are inactive at such less temperatures. In cold temperature of 5<sup>0</sup>C the reactions caused by micro-organisms do not take place. Therefore, food stuffs remain safe at this temperature. Biological and chemical reaction in food materials are slow down at the low temperature.

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

Ans : This prevent food from wasting due to following reason:-

i)The traditional method of serving the food results into wastage. ii) Buffet style is introduced to prevent the food wastage and save the food. iii )People are expected to take the amount of food that they can consume. Hence nowadays, food is served buffet style during large gatherings.

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