

9. Dietary Considerations and Food Quality

Exercise–

Q1) Solve this Nutritional Puzzle –

Horizontal

- 1) Which nutrient is the main source of energy for sport person?
- 2) This is one of the factors affecting meal planning.
- 3) The practice of adding unwanted materials in food.
- 4) Emissions of intense energy capable of penetrating tissues.

Vertical

- 1) In India this authority certifies food for safe consumption.
- 2) Milk and meat help to build the body because these contain this nutrient.
- 3) The branch of study deals with food composition and its effect on the body.
- 4) Which compounds are used for food crops but can be injurious to health

Answers :-

Sr. No	Horizontal	Vertical
1)	Carbohydrates	Food Safety and Standards Authority of India (FSSAI)
2)		Protein
3)	Adulteration	Nutrition
4)	Radiations	Pesticides

Q2) Answer the following Questions :-

- 1) 'Without dietary planning it is difficult to meet the requirements of people' – discuss this statement giving suitable reasons and examples.

Ans :- Do it yourself

2) In a group there is a male teacher, a female doctor, a 15- year old girl playing tennis and a man aged 68 years. List the factors that will be applicable for dietary planning of this group.

Ans :- The factors that will be applicable for dietary planning of the groups such as 15- year old girl playing tennis and a man aged 68 years are :-

The 15 year old girl will grow fastly and is active. So she will require extra nourishment as compared with the 68 year old man as if he is already grown up, he may have chewing/digestion problem. The dietary plan for the 15 year old girl is she can intake the nutritious diet such as spinach paratha or spinach, carrot and potato soup instead of having spinach vegetable where the 68 year old man will have the diet which will not require to be chewed (swallowed) and easily digested are well cooked vegetables, idli etc.

3) What kind of diet do sportspersons need? Substantiate your answer giving reasons.

Ans :- As we know the sports is a physical activity and sportsperson requires lots of energy for playing sports. Lots of energy can be gained by consumed nutritious food/diet which contains Vitamin B by including the whole food in the diet chart that are been prepared from nuts, oilseeds, dairy foods, egg, fish which can complete the requirements of nutrients and energy. The sportsperson must keep in mind they must completely avoid the fried food/ junk food like wafers, samosas, vada pavs etc.

4) Write notes on

a) Food quality :- Food quality includes nutritious food. If there is any adulterated/contaminated/mixed in the food, then it may be injurious to our health as if we may suffer from any infection or disease. It is much important for us to understand in improving the food quality. Food quality determines the acceptance or rejection of any food item. It is an important stage for the human where the food is brought from farm to the table. If the quality of the food is good, then it will make us healthy whereas if the quality of the food is dull/poor it will make us sick and the poor quality food will be rejected by everyone in the market too. The foods quality is always checked by the microbiological loads, changes in the physical health of person, and chemicals used for its growth/production/preparation. Food quality risks food adulteration (the changes in the food quality with an intention/purposefully). To maintain a good quality food, and protection of good health of the people, there are certain rules and regulations that are formed by each and every countries The authority

named as Food Safety and Standard Authority of India (FSSAI), is responsible to check the safety and food quality in India.

FSSAI is the statutory body that works under Indian government and acts as per the guidelines given of Food Safety and Standard Act 2006. There are eight acts in Food Safety and Standard Act 2006 which were implemented in the interest of the consumer and food operators. They make sure that the food quality is good. The updation in the act or changes in the rules and regulation are made from time to time. If the quality of the food is good, then FSSAI gives the code to each and every food items after its successfully checking completion. Nowadays you can see codes on different food products. The food items are manually examined/tested on the basis of size, shape, colour etc. the food item should be free from bacteria, dirt, cracks, virus, nibble free from insects, pests, rice, flies, cockroaches etc. that makes the food spoiled and not healthy for human. The food can be hampered by the factors like heat (temperature), air (oxygen), moisture content of food, depends upon the treatment that is given during the processing of food, storage and handling method etc. while purchasing any food from the market, it is much necessary to the to see some marks on the food products like ISI, AGMARK, FSSAI. This marks are been printed on the food products after making successfully finally examination. There are some food items due to over ripening of it they get spoiled.

Points to remembered while making sure about the food quality

- a) Before purchasing any food product from the market, handling them, or having them (intaking them), the food must be checked for bad smell, cuts, wrinkles on the fruits and
- b) Make sure about the inclusion of any foreign material or food
- c) Make sure the lid of the container or seal of the package is not broken before purchasing it or at the time of
- d) Before purchasing or consuming, do not forget to check the mark of safety, color, ingredients that is used in the food product/item, how to use it guidelines/directions/steps, FSSAI code, manufacturing date or expiry/best before date/months.
- e) Do not buy the loose food items like flour, oil, spice powders

b) Food preservation method :- It is a method/ techniques used to control/to stop the food spoilage or extend the life of the food. It is helpful in removing the moisture contents from the food items which helps in destroying the

microorganisms going, and hence reduces food spoilage. Some techniques that are used for food preservation are listed below :-

i) Heat treatment :- By heating the food items will help in reducing/destroying the growing harmful microorganisms. Ex – pasteurization of milk, sterilization of bottles

ii) Refrigeration and freezing :- The chilling/cooling temperature helps in keeping the food protected for the long life/period of time by controlling the enzymatic and microbial

iii) Drying :- Drying will help to absorb the moisture/water from the food products and destroys/reduces the growth of microbes.

iv) Addition of Preservatives :- Preservatives are the chemical or natural ingredients that are used to reduce the growth of microorganisms and enzymes in food, which helps in avoiding food spoilage. Sugar is used as preservative in jams and jellies whereas salt, oil and spices in pickles. Acids are used to reduce the growth of bacteria. Sodium benzoate and Potassium Meta bisulphate (KMS) are some chemical preservatives which are used in ketchups and Preservatives are used in less quantity and if its is sued in excess quantity and it is harmful, its punishable and against the law.

5) 'Even the most nutritious food may not be safe to eat if adulterated ' discuss the statement giving cases/ examples in the light of what you now about food adulteration?

Ans :- Do it yourself

6) Suggest a method to detect :

a) Metanil yellow adulteration in arhar

Ans :- The method to detect Metanil yellow adulteration in arhar dal is

- From the sample of the pulse (arhar dal) remove the color with the help of lukewarm
- Add few drops of HCL where a pink color appears showing/ indicating presence of metanil yellow

b) Papaya seeds adulteration in peppercorns.

Ans :- The method for Papaya seeds adulteration in pepper corns is Pure pepper corns settles down at the bottom of water where as papaya seeds floats above the water.

7) What are the various ways of protection from harmful effects of pesticides.

Ans :- There are some actions to be taken for protection from harmful effects of pesticides area as follows :-

- a) Pesticides are very harmful for young childrens, pregnant womens, weak and sick persons etc and they should be mostly protected from
- b) Make use of herbal
- c) Usage of organic
- d) Under clean running water, clean/wash the fruits and
- e) Away from the kitchen and bathroom, keep the pesticides in a locked
- f) Before making use of pesticides read the warnings and labels

8) Which of the following is food adulteration?

- a) Adding a preservative
- b) Abstraction of a constituent of food
- c) Using a food
- d) Splitting of a food article in small

9) Match the following :-

- a) Turmeric ---- i) Caution
- b) Microbial load --- ii) Anti inflammatory
- c) Pesticides --- iii) Shelf life
- d) Semi- perishable --- iv) Food Quality