

Home Science

Question Paper 2017

Maximum Marks: 70
Time allowed: Three hours

- Candidates are allowed additional 15 minutes for only reading the paper. They must NOT start writing during this time.
 - Answer Question 1 from Part I and five questions from Part II,
 - The intended marks for questions or parts of questions are given in brackets [].
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Part-I (20 Marks) **Answer all questions.**

Question 1. [10 x 2]

- (i) State two reasons why frying is not recommended as a method of cooking for people recovering from illness.
- (ii) Explain the term special diet.
- (iii) State any two health hazards due to bacterial contamination of food.
- (iv) Mention the importance of vinegar in food preservation industry.
- (v) State any two advantages of dry cleaning of clothes.
- (vi) Name two foods that should be avoided during diarrhea.
- (vii) Differentiate between incidental adulteration and intentional adulteration.
- (viii) List two common symptoms of drug abuse.
- (ix) State the role of liming in increasing the nutritive value of food.
- (x) State two factors to be kept in mind while choosing clothes for the rainy season.

Answer:

(i) Frying is not recommended as a method of cooking for people recovering from illness as:

1. It is not easily digestible.
2. Fried food is laden with oil, hence not recommended for ill people.

(ii) Special diets are prescribed for treatments, or prevention of diseases. These diets are planned by specialists having knowledge of nutrition, who plan it after assessing many factors. These diets are also referred to as therapeutic diets.

(iii) Cholera and dysentery are two health hazards caused due to bacterial contamination of food.

(iv) Vinegar is dilute acetic acid which is important in food preservation industry. Its acidic nature helps in preservation of meats, fruits and vegetables by pickling. This acid is generally supplemented by relatively large amount of salt and sugar.

(v) Two advantages of dry cleaning of clothes are:

1. Dry cleaning does not flatten the pile of velvet or velveteen.
2. Colour of the fabrics does not get effected or damaged by dry cleaning.

(vi) Fiber rich and spicy foods should be avoided during diarrhea.

(vii) Adulteration of food substances caused by negligence, ignorance or lack of proper facilities for e.g., pesticide residues, zinc from can, droppings of indents, larvae in food and metallic contaminants etc., is called incidental adulteration.

A deliberate act of adulteration with the intention to increase the margin of profit, adding inferior or cheaper substances, abstracting any constituent partially or wholly is termed as intentional adulteration,

(viii) The two common symptoms of drug abuse are :

1. A stronger desire to retake the drug, giving it higher priority than other activities.
2. Physical dysfunctioning and wild behavior when you attempt to stop taking drug.

(ix) In addition to adding a bit of calcium, liming process releases niacin and makes it available to the body.

(x) Two functions to consider while choosing clothes for rainy season are :

1. They should dry up soon.
2. They should be light weight.

Part-II (50 Marks)
Answer any five questions.

Question 2.

Cooking brings about physical and chemical changes in food. In this context, discuss:

(a) Advantages and disadvantages of boiling, as a method of cooking. [5]

(b) Changes in nutritive value during cooking. [5]

Answer:

(a)

Advantages of Boding	Disadvantages of Boiling
1. Simple method of cooking which does not require any special equipment or skill.	1. Slow method- time consuming and costly due to much fuel consumption.
2. Uniform cooking can be achieved.	2. Loss of Vitamin B and Vitamin C if water is discarded.
3. Easily digestible.	3. Continuous and excessive boiling may damage the texture and structure of food.
4. Can be cooked easily without the use of fat.	4. Loss of colour as water soluble pigments can get lost.

(b) Cooking brings about many desirable and non desirable changes in the nutritive value of food. To prevent or avoid non-desirable changes such as loss of vitamins and minerals, water should not be discarded while the food is cooked. Collagen and elastic proteins present in animal foods toughen and become chewy on being roasted at high temperature.

Desirable changes in the nutritive value can be brought by proper cooking and using correct methods. The nutritive value of most foods can be improved by careful consideration and acceptance of slight variations in the taste, appearance and texture of the dish. The nutritive value of foods can be enhanced by using methods like- sprouting, fermentation, combination, etc.

Question 3.

(a) Discuss the importance of food preservation. [5]

(b) Explain the use of low temperature in the preservation of food. [5]

Answer:

(a) Food preservation is keeping the food in such a state where it does not get spoilt for a long period of time and also retains its color, flavor, texture and nutrients.

The underlying principle of all preservation techniques is to restrict the spoilage of food so that it can be consumed safely in a palatable form at a later time.

Preservation of food has the following benefits :

1. They are easy to store.

2. Controls the wastage of food.
3. Add variety to meals.
4. Easy to transport.
5. Provide nutritionally adequate meals to the family.
6. Learning to preserve food is a skill. It is a good way of making use of one's leisure time.
7. One can even earn money by selling preserved products from home.
8. They come in handy and save a lot of time, money and energy.

(b) Storing of food items at a temperature below normal room temperature slows down the growth and so the chemical activity of microorganisms, and food items can be preserved for a longer period of time. There are two methods of preservation:

1. Home refrigeration : It can be done by using refrigerator, icebox, etc. The perishable foods like – fruits, vegetables, fish, meat, egg, milk, curd and left over food can be preserved for some additional period in this way.

2. Freezing : It can be done at home using the freezer part of the refrigerator or a separate ice box for storing the food items at a temperature below freezing point of water. The growth of micro-organisms, enzymatic activity and chemical reactions are minimal or nil and food can be preserved for a much longer period of time.

Question 4.

Adequate nutrition and a well-balanced diet is of vital importance. In this context, explain:

- (a) Importance of a good breakfast. [5]
- (b) Objectives of planning family meals. [5]

Answer:

(a) Breakfast is considered to be the most important meal of the day because:

1. Efficiency in physiological performance decreases in late morning hours when breakfast is omitted.
2. Breakfast not only provides us energy, but it is also a good source of important nutrients like calcium, iron, fibres and proteins.
3. A breakfast must be adequate to provide one-fourth of daily protein requirements and one fourth of the daily calorie requirement; for maintaining better efficiency in the late morning hours.

(b) Objectives of planning family meals are :

1. To satisfy the nutritional needs of all the members according to their age and occupation.
2. To save time, energy and money.

3. To keep in mind the likes and dislikes of family members.
4. To provide balanced diet to all the family members.
5. To provide variety in meals.

Question 5.

- (a) Enumerate measures to prevent fire accidents at home. [5]
(b) Discuss ways in which argemone is used as an adulterant in food. Mention its health hazards. [5]

Answer 5.

- (a) To prevent fire accidents at home, the following measures should be taken :

Do not leave the kitchen unattended while cooking food, specially gas stoves.

Avoid long flowing or synthetic clothes while cooking as they may catch fire. Wearing cotton clothes which are well fitted provide safety.

Give heaters space. It should be at least 3 feet away from curtain, draperies, furniture, bedspreads, etc.

If you have a smoker in the house, the best way to prevent cigarette-related home fires is to institute a policy of 'no smoking indoors'.

Instead of using traditional, open-flame candles, consider switching to battery- operated candles that look and perform like real ones. If you use traditional candles, make sure there is always an adult paying attention in the room when one is burning.

- (b) Mustard oil is adulterated with argemone seeds which are obtained from Mexicans poppy (a yellow flowered poppy plant, with bluish silver-veined leaves). The seeds closely resemble mustard seeds in appearance, although their surface is rough and uneven. The only difference is that argemone seeds have a little tail at the end.

Argemone seeds have proved to be dangerously toxic in the form of oil and seeds. Regular consumption of this oil gives rise to epidemic dropsy (resembling wet beri-beri). Watery fluid is collected in the tissues of the . body causing swelling, it starts with gastro intestinal disturbances, irregular fever with rashes on exposed parts. Swelling of feet and legs follow leading to oedema of thighs, hand and face. As the disease progresses, glaucoma leads to blindness, enlargement of the liver, and even lead to cancer and respiratory diseases. It may even be fatal due to cardiac – arrest.

Question 6.

- (a) What is the role of advertisement and its impact on consumers ? [5]
- (b) Enumerate the reasons for variation in prices of commodities in the market. [5]

Answer:

(a) Advertisements inform the consumers about the availability, use and special features of a particular brand of a product. A good advertisement gives correct information about a product and does not mislead you. However, advertisements sometimes persuade the customers to buy things which are otherwise not required. Consumers often get misled when the product does not match or measure up to the qualities advertised. Advertisements lure the customer and play with their psyche. For example, fairness creams, detergents, etc.

(b) At times, the prices of commodities are higher at a certain shop due to the factors like high operational costs, high marketing and advertisement costs, the shop being a prestigious departmental store, availability of goods that are otherwise not easily available and involvement of middlemen in their distribution channel.

Question 7.

- (a) Discuss any five problems faced by adolescents. [5]
- (b) What is the role of peers during adolescence ? [5]

Answer:

(a) The areas in which problems arise during adolescence are:

1. The establishment of heterosexual interests
2. Physical changes.
3. Emotional changes.
4. Social phobia.
5. Psychological problems.

(b) During adolescent years, peer group becomes increasingly important. Adolescents experience more closeness in their friendship and turn to each other, instead of their families. They modify their speech, dressing style, choices, activities and behavior in order to become more similar to their peers. This provides them a sense of security and confirms acceptance in the peer group. At times, this increased cohesion and loyalty also leads to various problems like- negative labeling, formation of cliques, rejection in any form which can be painful or create tension and conflict.

Question 8.

- (a) Explain the steps involved in washing of table linen. [5]
- (b) State the procedure to be followed for the storage of woollen garments at home. [5]

Answer 8.

(a) The steps involved in washing a table linen are:

1. Preparation : Examine for stains and remove them as soon as possible.
2. Steeping : Soak in detergent-water for about an hour. If heavily soiled, it can be soaked for longer.
3. Washing : It can be washed using friction or scrubbing method.
4. Rinsing : Rinse two to three times in clean tap water to ensure removal of soap or detergent.
5. Starching : To give a fresh and crisp look, linen should be starched. In case of white line, blue can be added instead of starch in stead of save time and energy.
6. Drying : Drying in sun is preferable for table linen, as sunlight will help in removing curry stains, if any. In case of coloured table linen, it can be dried in shade if the colour is not fast.
7. Ironing : Hot iron it when damp or sprinkle some water, if fully dry to ensure removal of wrinkles.

(b) The procedure to be followed for the storage of woollen garments at home :

1. Dirty clothes should not be stored.
2. Clothes to be stored must be fully dry. Moisture left in clothes will promote moths and mildew. Just before storing, clothes should be exposed to the strong sun light.
3. Closet or box where clothes are to be stored should also be exposed to the sun for sometime.
4. Closet or box where clothes are to be stored should be moisture free.
5. Some protective products should be used to repel insects e.g.,
 1. Use of newspaper
 2. Use of dry neem leaves and
 3. Use of naphthalene balls.

Question 9.

Write short notes on any two of the following :

- (a) Microwave cooking. [5]
- (b) Storage of perishable goods. [5]
- (c) Safety measures for the elderly. [5]

Answer 9.

(a) Microwave cooking is of recent origin, where foods is quickly cooked by electromagnetic waves. It can be used to cook rice, vegetables, meat, etc., and can be used effectively for reheating of food, however there is a limitation to use of microwave ovens food items like cakes and biscuits do not get browned easily as in ordinary ovens. Microwave cooking cannot be used for stewing or deep frying.

(b) Storage of perishable goods is not possible for more than 2-3 days under normal conditions. Hence, care should be taken while storing them in the following ways :

1. Vegetables should be stored at a temperature around 15°C. Cabbage and cucumber should be kept in 2-3 folds of brown paper.
2. Fruits should not be washed before storing, as they spoil faster.
3. Fresh fruits should be stored separately as they absorb odours.
4. Eggs should not be washed before storing. They should be kept with broad portion upwards.
5. Milk should be capped and covered to prevent dust, bacteria and undesirable flavours and odours.
6. Meat should be stored at a temperature just above freezing point to inhibit the growth of micro-organisms.

(c) Safety measures for the elderly are :

1. As the vision depletes in old age, the house should be well lit to prevent accidents.
2. Grab bars and railings for support while climbing stairs. If possible, install a lift or a ramp as climbing is difficult.
3. Do not leave them unattended or alone outside the house, as they can stumble on uneven footpaths or loose pavements.
4. Ensure that washrooms are dry so that they do not slip and fall.
5. Keep things they require at fixed places.
6. Be a part of their financial world, as they might be cheated or at a risk of fraud.
7. Ensure medical insurance for them.