

Food Nutrition & Dietetics 2025 Solved Paper

Time allowed: 2 hours

Maximum Marks: 70

Section A

(Objective Type Questions)

1. Answer any 4 out of the given 6 questions on Employability Skills. $4 \times 1 = 4$

(i) What is Communication?

Ans: Communication is a two-way process through which information or message is exchanged between individuals using language, signs, symbols, or behaviour.

(ii) Rohit does not easily trust others, even the family members, and holds grudges against others. Identify the personality disorder he has.

Ans: Paranoid personality disorder.

(iii) What is a spreadsheet?

Ans: A spreadsheet is an electronic document which has rows and columns. It is used to store data in a systematic way and do calculations.

(iv) Define the term Entrepreneurship.

Ans: Entrepreneurship is the act of setting up and running a business and taking risks in order to earn profits.

(v) Who is a green-collar worker?

Ans: A green collar worker is one who is employed in the environmental sectors of the economy.

(vi) Write the shortcut keys to cut and paste any text on spreadsheet.

Ans: For Cut – Ctrl + X

Paste – Ctrl + V

2. Answer any 5 out of the given 7 questions. $5 \times 1 = 5$

(i) What are the two special feeding methods that can be used when oral feeding is not possible?

Ans: Two special feeding methods are:

- Enteral feeding
- Parenteral feeding

(ii) Write the simple method commonly used to classify overweight and obesity for all ages.

Ans: BMI (Body Mass Index)

(iii) Give two examples of food-based solutions to overcome dehydration.

Ans: Two examples of food-based solutions are:

- Rice water with salt & Lassi with salt
- Dal water with salt

(iv) List any two non-modifiable risk factors for hypertension.

Ans: Non-modifiable risk factors for hypertension:

- (a) Family history
- (b) Aging/Increased age

(v) Why is hemolytic jaundice also called as neonatal jaundice?

Ans: Hemolytic jaundice is also called as neonatal jaundice as it is common in newborn babies.

(vi) How food borne diseases can be prevented?

Ans: Hygiene is the most important factor to prevent foodborne illness. So, it is very important for food handlers to follow the high standards of food hygiene.

(vii) Write two precautions should be taken to prevent typhoid.

Ans: (a) Strict domestic and personal hygiene.

(b) Vaccine is available for immunization against typhoid.

3. Answer any 6 out of the given 7 questions. 6x1 = 6

State whether the following statements are True or False. In case a statement is false, write the corrected statement.

(i) Dietary recommendations are given by CSIR.

Ans: False, Dietary recommendations are given by ICMR.

(ii) According to WHO, overweight is a BMI greater than or equal to 25.

Ans: True, Overweight is a BMI greater than or equal to 25.

(iii) IPM is the food safety management system to determine significant hazards pertaining to specific products & processes.

Ans: False, HACCP is the food safety management system to determine significant hazards.

(iv) Diastolic pressure is the peak pressure in the arteries.

Ans: False, Diastolic pressure is the minimum pressure in the arteries.

(v) Pesticides on fruits and vegetables are examples of biological hazards.

Ans: False, Pesticides on fruits and vegetables are examples of chemical hazards.

(vi) Type II diabetes is an autoimmune disease. 1

Ans: False, Type I diabetes is an autoimmune disease.

(vii) Hygiene is the most important factor in order to prevent food illnesses.

Ans: True, Hygiene is the most important factor to prevent foodborne illness.

4. Answer any 5 out of the given 6 questions. 5 × 1 = 5

(i) What is a therapeutic diet?

Ans: A therapeutic diet is a qualitative/quantitative modification of a normal, regular diet to suit the changing nutritional needs of patient.

(ii) Define the term blanching.

Ans: Blanching is usually done in fruits and vegetables, is scalded in boiling water or oil, and removed after a brief time interval, and finally plunged into ice water.

(iii) List any two dietary considerations for tuberculosis.

Ans: (a) Encourage to take healthy, nourished, and balanced diet.

(b) Ensure patients to consume six smaller meals per day.

(iv) Write two characteristics of potable water.

Ans: (a) Free from pathogenic bacteria

(b) Contains dissolved salts and minerals.

(v) List two features characteristics of patients suffering from anorexia nervosa.

Ans: (a) Strange eating habits such as avoiding meals, monitoring every bite of food.

(b) Delayed puberty or amenorrhoea.

(vi) What is meant by Insulin resistance?

Ans: The condition when insulin is not efficiently used by the body is called insulin resistance.

5. Answer any 5 out of the given 6 questions. 5 × 1 = 5

The following questions consist of two Statements – assertion (A) and reason (R).

Answer these questions selecting appropriate option given below :

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(B) Both (A) and (R) are true, and (R) is not correct explanation of (A).

(C) (A) is true, but (R) is false.

(D) (A) is false, but (R) is true.

(i) (A): Leaching is recommended for cooking vegetables for people with chronic kidney disease.

(R): Leaching drains out excessive potassium and phosphorus from the vegetables.

Ans: (A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(ii) (A): Typhoid is caused by *Staphylococcus* bacteria.

(R): The mode of spread of this infection is through the fecal-oral route.

Ans: (D) (A) is false, but (R) is true.

(iii) (A): People suffering from eating disorders typically become preoccupied with food and their body weight. 1

(R): Adults are commonly suffering from these eating disorders.

Ans: (C) (A) is true, but (R) is false.

(iv) (A): Insulin is released by pancreas.

(R): It helps to utilize glucose.

Ans: (A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(v) (A): Fever is the abnormal condition of the body characterized by an excessive rise in body temperature.

(R): It is not a disease but a symptom or adaptive response of our body to a variety of conditions.

Ans: (A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(vi) (A): To prevent salmonellosis, it is important to cook food thoroughly and refrigerate or freeze food promptly. 1

(R): Salmonella bacteria stay in the intestine of people, animals, and birds.

Ans: (B) Both (A) and (R) are true and (R) is not correct explanation of (A).

6. Answer any 5 out of the given 6 questions. $5 \times 1 = 5$

Multiple Choice Questions (MCQs) :

(i) Patients with kidney diseases and liver diseases require _____ diet.

(A) High fibre diet

(B) Sodium-restricted diet

(C) Low protein diet

(D) High-calorie diet

(ii) Poaching method is generally used for cooking _____.

(A) Fruits and vegetables

(B) Eggs

(C) Bread slices

(D) Milk

(iii) Fasting glucose level for a non-diabetic person should be _____.

- (A) less than 110 mg/dl**
- (B) less than 140 mg/dl
- (C) less than 80 mg/dl
- (D) less than 180 mg/dl

(iv) A diet which is made of foods that are soft, no spices, and low in fiber is called

- (A) Soft diet
- (B) Liquid diet
- (C) Bland diet**
- (D) Semi-solid diet

(v) FSSAI Act was established in the year

- (A) 2005
- (B) 2006**
- (C) 2009
- (D) 2016

(vi) Which one of the following is not a principle of food hygiene?

- (A) Choosing food ingredients carefully.
- (B) Preventing bacteria from entering food.
- (C) Make food appealing.**
- (D) Inhibition of bacterial growth and development.

Section B

(Subjective Type Questions)

Answer any 3 out of the given 5 questions on Employability skills. $3 \times 2 = 6$. Answer each question in 20 to 30 words.

7. Write the five stages of active listening.

Ans: Receiving, Understanding, Remembering, Evaluating, Responding

8. Enlist the four ways to manage stress.

Ans:

- Stay positive
- Talk to friends and family for comfort
- Practice meditation and yoga
- Maintain an accomplishment sheet and enter even small achievements.

9. Write the steps to insert an image in a presentation.

Ans: Click on insert → Select image → An insert image dialog box appears → Browse through folders and select the image you want to use → Click on open.

10. Write any four benefits of green jobs.

Ans:

- Increase the efficiency of energy and materials.
- • Reduce greenhouse gas emissions.
- • Control waste and pollution.
- • Protect and restore ecosystems.

11. Write any two barriers related to becoming an entrepreneur.

Ans: Environmental barriers:

- • Lack of adequate resources or raw materials.
- • Non-availability of skilled labour.

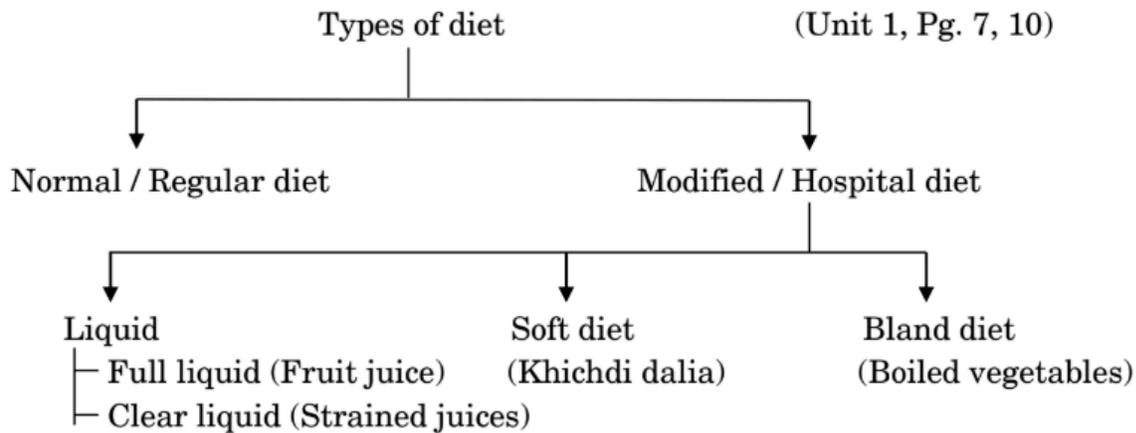
Personal barriers :

- • Self-doubt
- • Finding a suitable team

Answer any 3 out of the given 5 questions in 20 to 30 words each. 3x2 = 6

12. Draw a flow chart to show the types of diets along with the examples of each diet. 2

Ans:



13. Outline any four metabolic changes that occur during fever.

Ans:

- Increase in the basal metabolic rate (BMR).
- • Decreased stores of adipose (fat) tissue and decreased glycogen stores.
- • Increased catabolism.
- • Accelerated loss of fluid from the body.

14. Write two differences between Anorexia nervosa and Bulimia nervosa.

Ans: Anorexia Nervosa :

- An intense fear of weight gain or becoming fat despite the individual's underweight status.
- Profound weight loss
- Dieting and avoiding meals

Bulimia Nervosa :

- Purging (self-induced vomiting) after meals.
- Frequent fluctuations in weight.
- Eating a large amount of food in a short time.

15. Write any two consequences of hypertension.

Ans: (a) Damage to heart: High blood pressure affects the arteries that supply blood to the heart muscles, as a result, blood cannot flow freely to the heart, and the individual can experience chest pain and a heart attack. High BP can cause the heart muscle to weaken and work less efficiently.

(b) Brain damage: The Brain requires a constant supply of blood as it carries nourishing food to the brain. There can be a temporary disruption of blood supply to the brain, caused by artery blockage or a blood clot, which can arise from high blood pressure.

16. Explain briefly about Diabetic Education.

Ans: Medication alone cannot treat diabetes. Diabetics require day-to-day knowledge of nutrition, exercise, medication, glucose monitoring, etc.

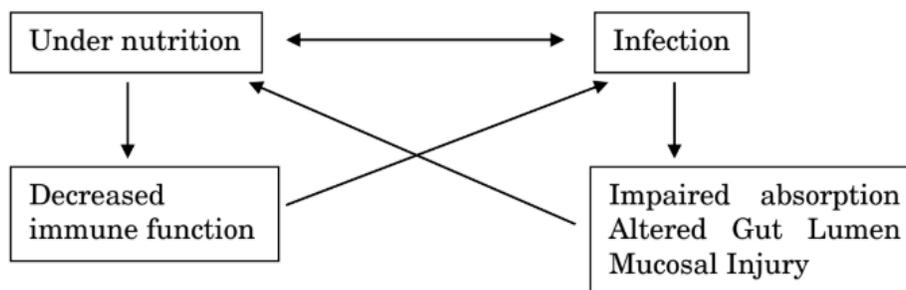
Diabetes education means enriching people with knowledge and providing tools crucial for making them active partners in the diabetes management team.

People with diabetes need to be educated regarding the nature of the disease, the possibility of developing short-term and long-term complications.

Answer any 2 out of the given 3 questions in 30 to 50 words each. 2x3 = 6

17. Define the term malnutrition. Discuss the interaction between malnutrition and infection with the help of a flow chart.

Ans: Malnutrition is an impairment of health resulting from a deficiency or lack of food/nutrients or an imbalance of nutrients in the diet.



18. Prepare a list of food items that may be included liberally or avoided in the diet of a 35-year-old woman who is suffering from Tuberculosis.

Ans: Dietary recommendation or counselling for a TB patient

Do's :

- (i) Include whole cereals and millets.
- (ii) High-energy, protein drinks and beverages.
- (iii) Food providing proteins of high biological value: eggs, cheese, meat, or fish.
- (iv) Nuts and oil seeds
- (v) Seasonal fruits and vegetables (like citrus fruits and green leafy vegetables)

Don'ts

- (i) Limit refined foods.
- (ii) Strongly flavored vegetables.
- (iii) Excess fat.
- (iv) Acidic and spicy food such as pickles.

19. “Diarrhea can be life-threatening”. Explain.

Ans: Diarrhea can be life-threatening because if a person is suffering from diarrhea, the stool will have high water content. It results in loss of a large amount of fluid and a large amount of electrolytes (sodium, potassium); this is called dehydration.

The consequences of diarrhea/dehydration are the highest cause of illness and death, especially in children.

Answer any 3 out of the given 5 questions in 50 to 80 words each. 3 x 4 = 12

20. What are the benefits of cooking the food before eating? Classify the cooking methods with the help of a flow chart and explain any two methods of cooking in detail.

Ans:

- Cooking enhances the taste.
- It kills many microorganisms and makes the food safe to be consumed.
- Destroy anti-nutritional factors and enhance the availability of nutrients.
- Cooking makes food palatable, attractive, and colourful.

(i) Pressure cooking: In this method, food is cooked under pressure, and with the increase in pressure, the temperature also increases. Thus, the food is cooked fast. Pressure cooking is a type of steaming in which water is boiled under high pressure.

Advantages :

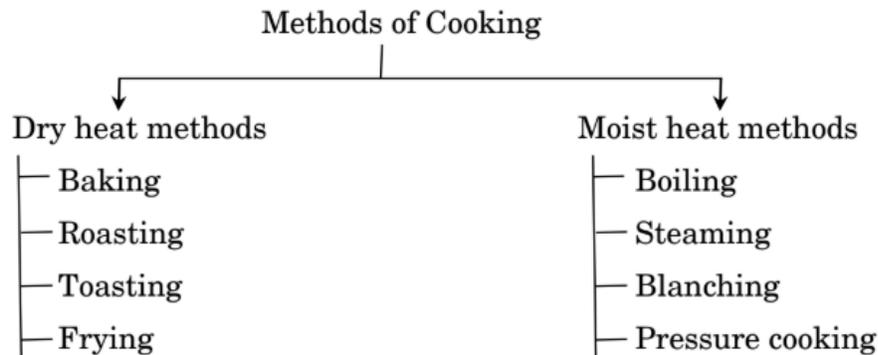
- It reduces cooking time
- Fuel efficiency increases
- Nutrient loss is less
- Flavor and aroma of the food are retained

(ii) Baking: The medium of cooking is hot air. A dry method of cooking, it combines steam, which is generated while the food is being cooked. Cake, bread, biscuits, and pizza are all baked foods.

Advantages :

- The texture and flavour of food are improved.
- Food items are cooked uniformly in an oven.

Disadvantages of baking: an oven is required.



21. (a) Define diabetes.

(b) How does obesity increase the risk of diabetes?

(c) Discuss the symptoms and laboratory investigations required to be done to diagnose diabetes.

Ans:

(a) Diabetes Mellitus is a condition where the blood glucose level is higher than the normal level (fasting < 110 mg/dl and PP < 140 mg/dl).

(b) Obesity reduces the sensitivity of tissues to insulin action in the utilization of glucose. Central obesity is known to increase insulin resistance.

(c) Symptoms :

- Polydipsia (Increased thirst)
- Polyuria (Frequent urination)
- Polyphagia (Increased hunger)
- Extreme fatigue
- Weight loss

Laboratory Investigations:

(i) Blood Plasma Glucose test during fasting and after 2 hours of a meal. Fasting Plasma Glucose value more than or equal to 126 mg/dl and Plasma Glucose level 2-hours post-meal more than or equal to 200 mg/dl is diagnosed as diabetes.

(ii) HbA1c (Glycosylated Haemoglobin) In case of diabetics, HbA1c value increases over 6% of the total haemoglobin.

22. (a) What do you understand by the term central obesity?

(b) What behavioural modifications would you suggest for achieving weight loss to prevent obesity in children and adolescents?

Ans:(a) Accumulation of fat around the abdomen is indicated by a higher waist circumference and is classified as central obesity.

(b) The prevention of overweight and obesity in children and adolescents should be considered a high priority. It is a serious problem, and has to be a multifaceted approach to create an environment that supports a healthy lifestyle.

Behavioural modifications to prevent obesity:

- Promote an active lifestyle
- Limit television viewing
- Restrict the intake of unhealthy, energy-dense, packed, or processed snacks, refined foods
- Restrict the intake of sugar-sweetened soft drinks, fruit juice, or carbonated drinks
- Promote the intake of fruits and vegetables
- Improving sleep
- Reducing stress

The home environment is another important setting in preventing obesity. Parents can play a crucial role.

23. Mrs. Gupta, 55 years old, is the wife of a shopkeeper. Her blood pressure is 150/95 mmHg. She has been advised by a doctor, to reduce weight and follow a salt-free diet. Plan a sample menu for her.

Ans:

A sample menu (providing 1700 – 1800 kcal) for a hypertensive patient.

- Early morning: 1 cup tea/coffee (prepared with skim milk and 1 tsp sugar only) or Lime Juice (in water with honey) / Coconut water + 2 biscuits
- Breakfast: Toned milk (1 glass), Poha / Upma Dalia (1 Bowl) or Bread with Egg or Ragi idli (2 pieces) or Chapati (1) with vegetables and fruit
- Mid-Morning: Fruit chaat (1 Bowl) or Coconut water / Lime juice or soup (mix veg/tomato)
- Lunch: Chapati (1) + Rice (1 Bowl) + Dal (1 Bowl) or 1 medium-sized piece of Chicken or fish in gravy. Salad with sprouts.
- Evening Snack: 1 cup tea/coffee (prepared with skim milk and 1 tsp sugar) or Lime Juice (1 glass). High fiber biscuits (2) or Roasted Channa / Sprouts Salad.
- Dinner: Chapati (1) + Rice (1 Bowl) + Dal (1 Bowl) or (Paneer 150 gm/meat / Chicken gravy) Veg (1 Bowl), Card (1 Bowl), Veg Salad with sprouts
- Bedtime: Milk (1 cup) without sugar

Note: Use minimum salt in cooking and avoid table salt.

24. (a) What is Cholera?

(b) Name the causative agent of Cholera.

(c) How does it affect and spread in the body?

Ans:

- (a) Cholera is referred to as an acute infection of the small intestine that causes severe watery diarrhea, which can lead to dehydration.
- (b) Causative agent of Cholera – *Vibrio Cholerae*.
- (c) Cholera spreads through contaminated food and water, and feces of a diseased person is also the source of contamination.

Dehydration is the most common manifestation of cholera. Bacteria multiply rapidly in the large intestine. Bacterial toxin penetrates the intestinal wall and prevents the intestine from absorbing water and food.

BioSmartNotes