

Food Nutrition & Dietetics 2023 Solved Paper

Time allowed : 3 hours

Maximum Marks: 60

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 a Worksheet?

Ans: A worksheet is a collection of cells in the form of a grid (a network of lines that intersect each other, making rectangles).

(ii) To manage oneself well, write two essential qualities.

Ans: To manage oneself well, a person needs to develop the following. (any two)

- Positive thinking: to think that one can get things done and be happy.
- Result orientation: to dream big and achieve the desired or set results.
- Self-awareness: to be aware of one's personality traits and make the best out of one's strengths.

(iii) What is intrinsic motivation?

Ans: An individual's motivation that comes from within is called intrinsic motivation.

(iv) What is a Cell?

Ans: A cell is a rectangular-shaped box where the row and column meet.

(v) Write two qualities which motivate an entrepreneur.

Ans: Standard of excellence: An entrepreneur constantly sets high standards and strives to attain the standard of excellence by working hard and showing innovativeness.

Uniqueness: For an entrepreneur, one of the most important qualities is to remain unique in everything the person does and the way it is done.

(vi) Define entrepreneurship.

Ans: The process by which individuals pursue opportunities without regard to the resources they currently control.

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

(i) Define dietetics.

Ans: Dietetics is the science and art of human nutritional care that deals with feeding individuals based on the principles of nutrition.

(ii) Give two examples of clear liquid diet.

Ans: Water and coconut water.

(iii) What is the full form of GERD?

Ans: GERD- Gastro-Esophageal Reflux Disease.

(iv) What type of modified diet is required by heart disease patients?

Ans: Patients with heart diseases require a fat-controlled, low-cholesterol diet.

(v) What is parenteral feeding?

Ans: Parenteral feeding contains fluids containing water, glucose, amino acids, minerals, and vitamins given through the peripheral and central veins.

(vi) Why leaching of vegetables is done?

Ans: Leaching is indicated for cooking vegetables for people with chronic kidney disease because the kidneys no longer maintain the ideal level of potassium necessary for optimum health. Leaching (soaking in water) drains out excessive potassium and phosphorus from the vegetables.

(vii) What type of diet is recommended for a diabetic patient?

Ans: Diabetic patients with high blood sugar levels are prescribed a diabetic diet, which requires changes in the quantity and type of carbohydrates included in each meal.

3. Answer any 6 out of the given 7 questions. $6 \times 1 = 6$

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

(i) Salmonella bacteria live in the intestines of people, animals, and birds.

- **Ans:** True

(ii) Water is potable if it is free from pathogenic and harmful bacteria.

- **Ans:** True

(iii) Contamination can also occur in the kitchen when juices from raw meat, poultry, and fish come into contact with uncooked foods such as salads.

- **Ans:** True

(iv) Food hygiene is the conditions and measures necessary to ensure the safety of food from production to consumption.

- **Ans:** True

(v) IPM is an ecological approach to pest suppression.

- **Ans:** True

(vi) Dysentery is not a foodborne disease.

- **Ans:** False. Dysentery is a foodborne disease.

(vii) A bland diet is made of very spicy and fibre-rich foods.

- **Ans:** False. A bland diet is made of not very spicy and low in fiber.

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

(i) List two chronic diseases associated with excessive body weight.

- **Ans:** Hypertension and Diabetes mellitus.

(ii) Define acute fever.

Ans: Acute fevers are those that last for less than 7 days in duration and are characteristic of Infectious diseases, such as malaria and viral-related upper respiratory tract infections.

(iii) Give the full form of BMI.

- **Ans:** Body Mass Index

(iv) What is diarrhoea?

- **Ans:** Diarrhea is an infection and an important public health problem among children under the age of 5 years in most developing countries.

(v) Suggest two food-based solutions for ORT.

Ans: Any two:

- Rice water with salt
- Dal or dal water with salt
- Buttermilk (Lassi) with salt
- Soups with salt

(vi) What is the formula of IBW?

- **Ans:** $BMI = \text{Weight (kg)} / \text{Height (m)}^2$

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

The following questions consist of 2 statements. Assertion (A) and Reason (R). Answer these questions selecting appropriate options given below :

(a) Both (A) and (R) are true, and (R) is 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): Eating unhealthy or junk food with low physical activity promotes weight gain.
(R) When food is abundant and the physical activity level decreases, resulting in fat deposition.

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

(ii) (A): HACCP is a food safety system that is recognised worldwide.
(R): It is used to determine significant hazards pertaining to specific products and processes.

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

(iii) (A): Chemical contamination can take place at any stage in food production and processing.

(R) Chemicals can be helpful and are deliberately used with some foods, such as pesticides on fruits and vegetables.

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

(iv) (A): Accumulation of fat around the abdomen is indicated by higher waist circumference.

(R): Higher waist circumference is classified as Central Obesity.

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

(v) (A): Food is cooked to make them easily digestible and palatable.

(R): Cooking kills many micro-organisms and makes the food unsafe to be consumed.

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

(vi) (A): As per the salt restriction prescribed for a hypertension patient, the moderate sodium-restricted diet should contain 3 to 4 g of salt.

(R): To control hypertension, success lies in lowering salt intake and eating whole foods.

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

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

(i) Define hypertension.

Ans: Hypertension is a health condition that is characterized by high blood pressure.

(ii) What is gestational diabetes?

Ans: Gestational diabetes is the condition where diabetes develops during pregnancy.

(iii) Write the full form of IDDM.

Ans: Insulin-Dependent Diabetes Mellitus

(iv) List the glycemic index of whole wheat bread and white boiled rice.

Ans: Whole wheat bread: 74 ± 2

White boiled rice: 73 ± 4

(v) Explain renal glycosuria.

Ans: It is the condition when blood glucose levels are high and beyond 180mg/dl, glucose is excreted in urine.

(vi) Explain polydipsia and polyphagia.

Ans: Polydipsia is the feeling of thirst. Polyphagia is the increased appetite or hunger despite eating.

Section - B

(Subjective Type Questions)

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

7. What is Stress? Suggest two ways to manage it.

Ans: Stress is a state of feeling upset, annoyed, and hopeless. Some of the ways to manage stress are given below.

- Stay positive and analyse what is going wrong in a certain situation. Resolving the situation is easy once understood.
- Maintain an accomplishment sheet and enter even small achievements.
- Keep your thoughts in the present. Pondering over past issues makes us feel upset and helpless.
- Talk to friends and family for comfort.
- Practice meditation and yoga.
- Whenever you feel negative thoughts are taking over, take a look at your accomplishment sheet.

8. Write four steps to overcome personality disorders.

Ans: Steps to overcome personality disorders

- Talk to someone. Most often, it helps to share your feelings.
- Look after your physical health. A healthy body can help you maintain a healthy mind.
- Build confidence in your ability to handle difficult situations.
- Engage in hobbies, such as music, dance, and painting. These have a therapeutic effect.
- Stay positive by choosing words like 'challenges' instead of 'problems'.

9. List four presentation software.

Ans: Ant four

- 1. LibreOffice Impress
- 2. Microsoft Office – PowerPoint
- 3. OpenOffice Impress
- 4. Google Slides
- 5. Apple Keynote

10. Give four qualities of successful entrepreneur.

Ans:

- Willingness to take risks
- Ability to learn from experience
- Must have self-confidence
- Must be hardworking
- Decision-making ability

11. Explain S.M.A.R.T.

Ans: SMART is an acronym for Specific, Measurable, Action-oriented, Realistic, and Timely that refers to setting goals.

- Specific: Goals should be stated in specific terms
- Measurable: Goals must be measurable.
- Action-oriented: Effective goal setting should include action-based steps that one will follow to achieve the goal.
- Realistic: Goals must always be realistically attainable.
- Timely: Goals must have deadlines.

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

12. Write the principles of diet therapy.

Ans: The principles of diet therapy are to:

- Maintain good nutritional condition,
- Improve deficiencies or disease, if any,
- Provide adequate rest to the body,
- Help metabolize the nutrients, and
- Make changes in body weight when necessary.

13. Explain four advantages of steaming.

Ans: Advantages of steaming

- 1. Constant stirring is not required.
- 2. Nutritive value of the food remains intact.
- 3. The cooking time is less.
- 4. Makes the food easily digestible.
- 5. The flavor of the steamed food is good.

14. Write two main objectives of dietary management during sub-acute fever.

Ans: The main objective of dietary management during sub-acute fever is to: (any two)

- i) provide a nutritious diet to prevent malnutrition,
- ii) restore positive nitrogen balance and reduce the burden on the kidneys,
- iii) provide relief to symptoms as and when present,
- iv) correct and maintain water and electrolyte balance,
- v) Avoid irritation of the intestinal tract, as may occur in typhoid.

15. What are the four foods each to be included and to be avoided in the diet of a T.B. patient?

Ans: Four foods to be included:

- Cereals like wheat, ragi, and jowar.
- Pulses like rajma, soybean, and chana.
- Eggs, cheese, tender meat.
- Green leafy vegetables.

Foods to be avoided:

- Red meat
- Refined foods
- Fried foods
- Acidic and spicy foods

16. Explain HbA1c.

Ans: HbA1c refers to glycosylated haemoglobin. When the concentration of glucose in the blood rises, more of it gets attached to hemoglobin, forming glycosylated hemoglobin (HbA1c). In a normal individual without diabetes, the HbA1c concentration varies from 5-6%, while in diabetics, it increases to over 6% of the total hemoglobin, depending on the blood glucose level.

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

17. List six symptoms of an active T.B. patient.

Ans: The common symptom of active TB in individuals is that they:

- are in a catabolic (breakdown of protein/body tissue) state, leading to muscle wasting,
- experience weight loss,
- have fever, fatigue, exhaustion, and persistent coughing,
- show signs of vitamin and mineral deficiencies, and
- have a low body mass index (BMI) (lower than 18.5 kg/m^2).

18. Give any three reasons resulting in foodborne illness.

Ans: Foodborne illness usually results from one of the following reasons:

- 1. Consuming food obtained from an infected plant or animal.

- 2. Food contaminated by insects, flies, rodents, etc.
- 3. Food that comes in contact with sewage water or sewage-polluted water.
- 4. Food handled in an unhygienic way.

19. What are the six modifiable risk factors and six non-modifiable risk factors for hypertension?

Ans:

Modifiable risk factors:

- Cigarette smoking, secondhand smoking
- Diabetes mellitus
- Dyslipidemia/hypercholesterolemia
- Overweight/obesity
- Physical inactivity/low fitness
- Unhealthy diet

Non-modifiable risk factors

- CAD
- Family history
- Increased age
- Low socioeconomic/educational status
- Obstructive sleep apnea
- Psychological stress

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

20. Prepare a sample menu (3000 Kcal) for an anorexic patient.

Ans:

- Early Morning: Milkshake (1 glass)
- Breakfast: Paushtik Methi roti
- Mid-Morning (Snack): Veg. Soup with cream
- Lunch: Chapati (2)+ Fried Rice
- Mid Afternoon (Snack): Veggie pasta or Vegetable Upma
- Evening Tea (Snack): Fruity Muffin
- Dinner: Chapati (4) Dal (1katori) Aloo

21. What are the consequences of worm/parasite infection on children?

Ans: Hookworm, roundworm infection, amoebiasis, and giardiasis are among the most common intestinal parasitic infections worldwide. These infections are associated with decreased child growth, loss of weight, chronic blood loss, iron deficiency anaemia, diarrhoea, and stunted growth.

22. Write any eight food products for which FSSAI has prescribed standards.

Ans: The FSSAI has prescribed standards for the following food products:

- Dairy products and analogues
- Fats, oils, and fat emulsions
- Fruits and vegetable products
- Cereal and cereal products

- Meat and meat products
- Fish and fish products
- Sweets & confectionery
- Sweetening agents, including honey
- Salt, spices, condiments, and related products
- Beverages (other than dairy and fruits & vegetables based)
- Other food products and ingredients
- Proprietary food
- Irradiation of food

23. Explain the warning symptoms of diabetes.

Ans: The symptoms of diabetes are

- Frequent and increased/excessive urinary output (Polyuria)
- Feeling of thirst (Polydipsia) and dry mouth
- Hunger, increased appetite (Polyphagia), even though the individual is eating
- Extreme fatigue, lack of energy, easy tiredness, and irritability
- Unexplained Weight loss
- Blurry vision
- Frequent infections such as skin, vaginal infections
- Cuts, bruises, sores that are slow to heal, and
- Tingling sensation, pain, or numbness in the hands and feet

24. In a tabular form write the classification of blood pressure and the stages of hypertension.

Ans:

Blood Pressure Category	Systolic Blood Pressure (SBP)	Diastolic Blood Pressure (DBP)
Normal	<120 mm Hg	<80 mm Hg
Elevated	120–129 mm Hg	<80 mm Hg
Hypertension		
Stage 1	130–139 mm Hg	80–89 mm Hg
Stage 2	≥140 mm Hg	≥90 mm Hg
Hypertensive Crisis	≥180 mm Hg	≥120 mm Hg