

# Class 12 Food, Nutrition and Dietetics Sample Paper 2026 Solved

## SECTION A: OBJECTIVE TYPE QUESTIONS

1. Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)

i. Name any two elements of communication.

Ans: Elements of communication are:

- Sender
- Message
- Encoding
- Channel/Medium
- Receiver
- Decoding
- Feedback
- Noise/Barriers

ii. Rohit does not hurt anyone but holds grudges against them. Identify the personality disorder he is suffering from?

Ans: Rohit is showing signs of Passive–Aggressive Personality Disorder.

iii. What is a spreadsheet?

Ans: A spreadsheet is a computer application used to organize, analyze, and store data in tabular form, often with formulas and functions (e.g., MS Excel).

iv. Define a ‘first-generation entrepreneur’.

Ans: A first-generation entrepreneur is a person who starts a business for the first time and is not from a business family background.

v. Write the expanded form of ICT.

Ans: ICT stands for Information and Communication Technology.

vi. Enlist the benefits of green jobs (Any two).

Ans: Benefits of green jobs:

- Reduce environmental impact
- Promote sustainable development
- Improve energy efficiency
- Create new employment opportunities
- Contribute to better public health
- Support climate change mitigation

2. Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)

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

Ans:

- Enteral feeding (via tube into the stomach or intestine, e.g., nasogastric tube).
- Parenteral feeding (intravenous feeding through veins).

**ii. Calculate BMI of a 30 years old Indian female, whose weight is 60 kg and height is 1.4 m.**

**Ans:** Formula:

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

$$\text{BMI} = 60 / 1.4 \times 1.4 = 60 / 1.96 \approx 30.6$$

$$\text{BMI} = 30.6 \rightarrow \text{Obese category } (\geq 30).$$

**iii. Why is hypertension known as a silent killer?**

**Ans:** Because it usually shows no early symptoms but can cause severe complications like heart attack, stroke, kidney damage, and vision loss if left untreated.

**iv. How can food-borne diseases be prevented?**

**Ans:**

- Wash your hands and utensils before handling food.
- Cook food thoroughly at safe temperatures.
- Store food at safe refrigeration levels.
- Avoid contaminated water and street food.
- Maintain kitchen hygiene.

**v. List any two non-communicable diseases.**

**Ans:**

- Diabetes mellitus
- Cancer

(Other examples: Hypertension, Osteoporosis, Cardiovascular disease).

**vi. What is the range of bilirubin level in jaundice patients?**

**Ans:** Normal bilirubin: 0.3 – 1.2mg/dL

In jaundice: Above 2.5 mg/dL (can rise to 20 mg/dL or more depending on severity).

**vii. Write two precautions that should be taken to prevent typhoid.**

**Ans:**

- Drink only boiled or purified water.
- Wash your hands before eating and after using the toilet.

(Other: Avoid Street food, proper sanitation, vaccination).

**3. Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)**

**i. Dietary recommendations are given by CSIR.**

**Ans:** False. (They are given by the ICMR – Indian Council of Medical Research).

**ii. Biological hazards include sharp and hard objects.**

**Ans:** False. (These are physical hazards; biological hazards include bacteria, viruses, parasites, etc.)

**iii. Children with obesity are at a higher risk of Type II diabetes.**

**Ans:** Children with obesity are also at higher risk of type 2 diabetes – True

**iv. *Salmonella* bacteria live in the intestine of people, animals, and birds.**

**Ans:** *Salmonella* bacteria live in the intestine of people, animals, and birds – True

**v. A bland diet is made up of very spicy and fiber-rich foods.**

**Ans:** False. (Bland diet = soft, low fiber, non-spicy, easy to digest foods).

**vi. Diastolic pressure is the peak pressure in the arteries.**

**Ans:** False. (Systolic pressure is the peak; diastolic is the minimum pressure when the heart rests).

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

**Ans:** Hygiene is the most important factor in order to prevent food illness – True

**4. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**

**i. Give two examples of a therapeutic diet.**

**Ans:** Diabetic diet and Low-sodium diet.

(Other examples: Renal diet, Gluten-free diet, Liquid diet).

**ii. Define the term blanching.**

**Ans:** Blanching is a cooking process where food (usually vegetables or fruits) is briefly boiled or steamed and then immediately cooled in ice water to stop enzyme action, preserve color, texture, and nutrients.

**iii. What is starvation syndrome?**

**Ans:** Starvation syndrome refers to the body's adaptive response to prolonged inadequate calorie intake, leading to slowed metabolism, fatigue, weight loss, muscle wasting, hormonal imbalance, and organ dysfunction.

**iv. What is the full form of acronym GERD?**

**Ans:** GERD = Gastroesophageal Reflux Disease.

**v. Define the term 'parenteral feeding'.**

**Ans:** Parenteral feeding is the method of supplying nutrients directly into the bloodstream through a vein, bypassing the digestive system (used when the gut cannot be used for feeding).

**vi. List two characteristics of a person suffering from binge eating.**

**Ans:**

- Recurrent episodes of eating unusually large amounts of food in a short time.
- Feeling loss of control during eating, followed by guilt, shame, or distress.

**5. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**

**Multiple Choice Questions (MCQ's):**

**i. Name the cooking method shown in the following picture.**



- (A) Poaching
- (B) Frying
- (C) Steaming**
- (D) Roasting

**ii. Poaching method is generally used for cooking \_\_\_\_\_.**

- (A) Fruits and vegetables
- (B) Eggs**
- (C) Bread slices
- (D) Milk

**iii. In case of fever, there is-**

- (A) a decrease in BMR to about 2%.
- (B) 5% increase in BMR with every 1°C rise in body temperature.
- (C) no change in BMR.
- (D) 13% increase in BMR with every 1°C rise in body temperature.**

**iv. Fruits like mango, papaya, and orange are-**

- (A) light sources of potassium (< 10 mg/100 g)
- (B) medium sources of potassium (200- 300 mg/100 g)
- (C) high sources of potassium (>300 mg/100 g)
- (D) low sources of potassium (< 200 mg/100 g)**

**v. 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

**vi. FSSAI Act was established in the year**

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

**6. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks).**

*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. Assertion-Typhoid is caused by Staphylococcus bacteria.**

**Reason -The mode of spread of the infection is through the fecal-oral route.**

**Ans:** (D) (a) is false, but (r) is true.

**ii. Assertion: The particular cause of eating disorder is not known.**

**Reason - It includes multidimensional causative factors.**

**Ans:** (D) (a) is false, but (r) is true.

**iii. Assertion-Hygiene is the most important factor in order to prevent food illnesses.**

**Reason- It is very important for food handlers to follow high standards of food hygiene.**

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

**iv. Assertion-Eating unhealthy and junk food with low physical activity results in weight gain.**

**Reason- When food is abundant and the physical activity level decreases, it results in fat deposition.**

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

**v. Assertion- As per the salt restriction prescribed for a hypertension patient, the moderate sodium-restricted diet should contain 324 grams of salt.**

**Reason- To control hypertension, success lies in lowering salt intake and eating whole foods.**

**Ans:** (D) (a) is false, but (r) is true.

**vi. Assertion- Multigrain chapatis have low GI.**

**Reason- Low GI is beneficial for diabetic patients.**

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

## **SECTION B: SUBJECTIVE TYPE QUESTIONS**

*Answer any 3 out of the given 5 questions on Employability Skills in 20 – 30 words each (2 x 3 = 6 marks)*

**7. What is a worksheet?**

**Ans:** A worksheet is a single spreadsheet page in a workbook where data is entered, organized, calculated, and analyzed using rows and columns. (e.g., in MS Excel).

**8. Explain the acronym SMART.**

**Ans:** SMART is a framework for setting effective goals. It stands for:

- S – Specific (clearly defined)
- M – Measurable (progress can be tracked)
- A – Achievable (realistic and attainable)
- R – Relevant (aligned with objectives)
- T – Time-bound (with a deadline).

**9. What is stress? Suggest two ways to manage it.**

**Ans:** Stress is the body's physical and emotional response to demanding or challenging situations.

Two ways to manage stress:

- Practice relaxation techniques (deep breathing, meditation, yoga).
- Maintain a healthy lifestyle (regular exercise, proper sleep, balanced diet).

**10. Explain two green collar practices.**

**Ans:**

- Using renewable energy sources like solar or wind instead of fossil fuels.
- Waste management and recycling to reduce pollution and conserve resources.

**11. Describe two roles of entrepreneurs.**

**Ans:**

- Innovation: Entrepreneurs introduce new ideas, products, or services to the market.
- Job creation: They generate employment opportunities and contribute to economic growth.

*Answer any 3 out of the given 5 questions in 20 – 30 words each (2 x 3 = 6 marks)*

**12. Define celiac diseases.**

**Ans:** Celiac disease is an autoimmune disorder in which the immune system reacts to gluten (a protein found in wheat, barley, and rye), causing damage to the small intestine lining and leading to poor nutrient absorption.

**13. How does hypertension cause damage to eyes and brain?**

**Ans:**

- Eyes: Hypertension damages the small blood vessels of the retina, causing hypertensive retinopathy, blurred vision, or even blindness.
- Brain: Persistent high blood pressure weakens or blocks brain blood vessels, increasing risk of stroke, brain haemorrhage, and memory problems.

**14. Differentiate between incidental adulteration and intentional adulteration.**

**Ans:**

- Incidental adulteration: Occurs accidentally due to carelessness, poor storage, or contamination during processing (e.g., pesticide residues, rodent droppings, packaging material).
- Intentional adulteration: Done deliberately to increase profit or quantity by adding harmful or inferior substances (e.g., adding water to milk, colouring agents in spices).

**15. Write the full form of HbA1c.**

**Ans:** HbA1c = Glycated Haemoglobin (Haemoglobin A1c). (To diagnose and Monitor Diabetes)

**16. Explain the term 'Renal Glycosuria'.**

**Ans:** Renal glycosuria is a condition in which glucose is excreted in urine despite normal or low blood glucose levels, due to a defect in the renal tubules that fail to reabsorb glucose properly.

**Answer any 2 out of the given 3 questions in 30– 50 words each (3 x 2 = 6 marks)**

**17. What are different types of diabetes?**

**Ans:** There are mainly three types of diabetes:

- Type 1 Diabetes: An autoimmune condition where the pancreas produces little or no insulin. Usually occurs in childhood or adolescence. Requires lifelong insulin therapy.
- Type 2 Diabetes: The most common type; occurs when the body becomes resistant to insulin or the pancreas does not make enough. Strongly linked with obesity and lifestyle factors.
- Gestational Diabetes: Develops during pregnancy due to hormonal changes that make the body resistant to insulin. Usually disappears after delivery, but increases the risk of developing type 2 diabetes later.

**18. Discuss the role of a dietitian in nutritional care.**

**Ans:**

- Assess the patient's nutritional needs through history, lab reports, and medical condition.
- Plan and prescribe therapeutic diets according to disease (e.g., diabetes, renal failure, hypertension).
- Educate patients and families about healthy eating habits.
- Monitor progress and modify diet plans as required.
- Work with doctors and healthcare teams to improve patient recovery and prevent complications.

**19. Ravi is a 2-year-old boy. He has a history of frequent passing of stools. Is Ravi suffering from diarrhea? List any one symptom of diarrhea. How is diarrhea different from dysentery?**

**Ans:** Yes, Ravi is suffering from diarrhoea.

Symptoms of diarrhoea.

- Frequent watery stools
- Dehydration (thirst, sunken eyes, dry mouth)

(Other symptoms: abdominal cramps, fever, weakness).

- Diarrhoea: Passage of frequent, watery stools, mainly due to infection, contaminated food, or water.
- Dysentery: Severe form of diarrhoea where blood and mucus are present in the stools, usually caused by Shigella bacteria or *Endamoeba histolytica*.

**Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)**

**20. Explain any four methods of cooking. Write their advantages and disadvantages.**

**Ans:**

- Boiling
  - Advantages: Simple, easy to digest, preserves nutrients in water for soups.
  - Disadvantages: Loss of heat-sensitive vitamins (Vit. C, B-complex) in water.
- Steaming
  - Advantages: Retains nutrients, natural flavour, and colour; no fat required.
  - Disadvantages: Takes more time, requires special equipment.
- Frying
  - Advantages: Enhances taste, texture, and energy value.
  - Disadvantages: Increases fat content, may cause indigestion, and risk of oxidation of oil.

- Baking
  - Advantages: Gives variety (cakes, breads), less oil needed, attractive texture.
  - Disadvantages: Time-consuming, loss of heat-sensitive vitamins, requires an oven.
- (Other methods: roasting, grilling, pressure cooking, microwaving).

**21. Plan a sample menu for a patient who requires 3000 kilocalories.**

**Ans:** (High-calorie, high-protein, easily digestible foods):

- Breakfast: Banana shake with honey + stuffed
- paratha with curd (approx. 800 kcal)
- Mid-morning: Fruit juice + boiled eggs (approx. 400 kcal)
- Lunch: Rice, dal, paneer curry, chapatti with ghee, salad, kheer (approx. 900 kcal)
- Evening snack: Milk with biscuits, dry fruits (approx. 400 kcal)
- Dinner: Chapatti, chicken/fish curry (or paneer for vegetarians), vegetables, custard (approx. 500 kcal)

Total ≈ 3000 kcal

**22. Draw a flowchart to show the classification of fever. Give examples.**

**Ans:** Fever

- Continuous fever (temperature remains above normal without fluctuation, e.g., Typhoid)
- Remittent fever (temperature falls daily but not to normal, e.g., Infective endocarditis)
- Intermittent fever (temperature rises and falls with normal periods, e.g., Malaria)
- Relapsing fever (fever subsides but reappears after a few days, e.g., Borrelia infection)

**23. What is malnutrition? How does it cause infection in our body? (Write three ways)**

**Ans:** Malnutrition is a condition caused by a deficiency, excess, or imbalance of nutrients in the diet.

Effects on infection:

- Weakens the immune system → increased susceptibility to infections.
- Delays recovery and wound healing.
- Increases risk of complications and mortality.
- Severe malnutrition may cause frequent diarrhoea, pneumonia, or TB.

**24. Enlist the various standards as set by FSSAI for food products.**

**Ans:** FSSAI (Food Safety and Standards Authority of India) sets regulations for:

- Food safety and hygiene standards (hygienic practices, permissible limits of contaminants).
- Labelling requirements (nutritional information, expiry date, allergen declaration).
- Fortification standards (e.g., iodized salt, fortified oil, fortified milk).
- Maximum residue limits of pesticides and antibiotics.
- Additives standards (approved colours, preservatives, emulsifiers).
- Packaging standards (food-grade material, non-toxic).