

Energy and Food

A. Choose the correct answer:

1. What is the primary source of energy in our diet?

- A) Vitamins
- B) Proteins
- C) Carbohydrates
- D) Minerals

2. Which of the following food sources provides the highest energy per gram?

- A) Carbohydrates
- B) Proteins
- C) Fats
- D) Vitamins

3. Which of the following processes helps in converting food into usable energy?

- A) Photosynthesis
- B) Respiration
- C) Fermentation
- D) Evaporation

4. Which of the following processes helps in converting food into usable energy?

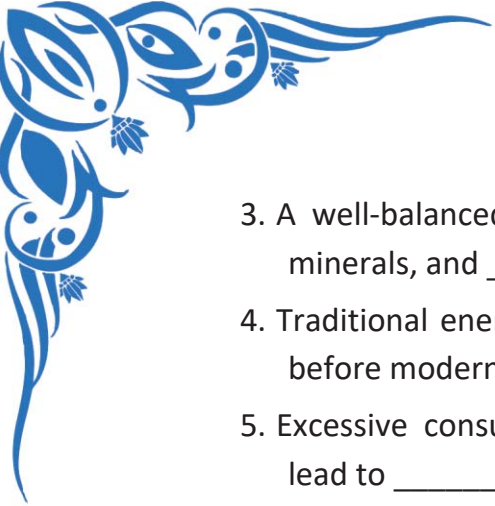
- A) Proteins
- B) Fats
- C) Minerals
- D) Water

5. Which of the following foods is considered an energy-rich food?

- A) Leafy vegetables
- B) Fruits
- C) Butter
- D) Pulses

B. Fill in the Blanks:

1. The unit used to measure energy in food is _____.
2. The process of breaking down food to release energy in the body is called _____.



3. A well-balanced diet should include carbohydrates, proteins, fats, vitamins, minerals, and _____.
4. Traditional energy sources for cooking included _____ and _____ before modern appliances were introduced.
5. Excessive consumption of energy-dense foods without physical activity can lead to _____.

C. Case Study:

A health researcher, Dr. Mehta, conducted a study on how different types of diets influence energy levels and overall health. She observed the food intake and activity levels of three individuals:

- **Person X** consumed a diet rich in carbohydrates and fats but had a sedentary lifestyle.
- **Person Y** ate a balanced diet with proteins, carbohydrates, and essential vitamins while maintaining regular physical activity.
- **Person Z** followed a strict low-carb diet and often felt fatigued.

After six months, Dr. Mehta recorded the following findings:

- **Person X** gained weight and frequently felt sluggish.
- **Person Y** remained energetic and maintained a healthy weight.
- **Person Z** experienced low stamina and frequent dizziness due to lack of carbohydrates.

Questions & Answers:

1. What was Dr. Mehta trying to analyze through her study?
2. Why did Person X feel sluggish despite eating energy-rich food?
3. What was the effect of a low-carb diet on Person Z's energy levels?
4. Based on this study, why is a balanced diet important for maintaining energy?

D. Short Answer Questions:

1. Why is food important for the production of energy in living organisms?
2. How do carbohydrates and fats contribute to energy production in the body?
3. What are some traditional energy-rich foods consumed in different parts of India?

E. Long Answer Questions:

1. Explain the importance of energy in the human body and the role of different nutrients in energy production.



2. Describe the impact of modern food processing techniques on energy levels and overall health.
3. Discuss how food habits vary across regions in India and how local energy-rich foods have evolved based on climate and agriculture.