

Dietetics and Nutritional Science

Dietetics · Practice Test · 10 Questions

1. Which vitamin is essential for the synthesis of neurotransmitters and the formation of red blood cells, and is primarily found in animal products?

- A) Vitamin C
- B) Vitamin B12
- C) Vitamin E
- D) Vitamin K

2. What is the primary physiological role of dietary fiber in the human gastrointestinal tract?

- A) Providing energy for muscle contraction
- B) Increasing intestinal transit time
- C) Aiding in the maintenance of healthy gut microbiota
- D) Directly inhibiting the absorption of all fat-soluble vitamins

3. Which mineral is a critical component of hemoglobin, the protein responsible for oxygen transport in the blood?

- A) Magnesium
- B) Zinc
- C) Iron
- D) Calcium

4. In nutritional biochemistry, what are the building blocks of proteins?

- A) Fatty acids
- B) Monosaccharides
- C) Amino acids
- D) Nucleotides

5. Which of the following describes the thermic effect of food (TEF)?

- A) The heat produced during digestion, absorption, and metabolism of nutrients
- B) The base energy required to maintain organ function at rest
- C) The total energy expenditure during physical exercise
- D) The energy stored in adipose tissue

6. Which macronutrient provides the highest amount of energy per gram when metabolized?

- A) Carbohydrates
- B) Proteins
- C) Lipids
- D) Fiber

7. What is the function of the hormone leptin in the human body?

- A) To stimulate appetite
- B) To signal satiety and regulate long-term energy balance
- C) To increase blood glucose levels
- D) To facilitate the digestion of dietary fats

8. Which vitamin is synthesized in the human skin through exposure to ultraviolet B (UVB) radiation?

- A) Vitamin A
- B) Vitamin D
- C) Vitamin B6
- D) Vitamin C

9. What characterizes an essential amino acid in human nutrition?

- A) It can be synthesized by the liver from glucose
- B) It must be obtained through the diet as the body cannot synthesize it in sufficient quantities
- C) It is only found in plant-based food sources
- D) It is stored in large quantities in muscle tissue

10. Which organ is primarily responsible for the detoxification of substances and the regulation of blood glucose levels via glycogen storage?

- A) Kidneys
- B) Pancreas
- C) Liver
- D) Gallbladder