

Fundamentals of Human Nutrition and Dietetics

Dietetics · Answer Key · 15 Questions

1. Which organ is responsible for the primary production of bile to assist in the digestion of fats?

- A) Pancreas
- B) Gallbladder
- C) Liver**
- D) Stomach

2. What is the primary function of dietary fiber in the human digestive system?

- A) Providing concentrated energy
- B) Increasing fecal bulk and bowel regularity**
- C) Lowering blood pressure
- D) Synthesizing vitamin C

3. Which mineral is essential for the structure of hemoglobin, the protein in red blood cells that carries oxygen?

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

4. What is the thermic effect of food (TEF) referring to?

- A) The heat lost through skin during exercise
- B) The energy expenditure required to digest and metabolize food**
- C) The temperature at which nutrients are destroyed
- D) The body's basal metabolic rate

5. Which vitamin is primarily synthesized by the human body through exposure to ultraviolet B (UVB) radiation?

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

6. What is the primary storage form of carbohydrates in the human body, found mainly in the liver and muscles?

- A) Glucose
- B) Starch
- C) Cellulose
- D) Glycogen**

7. Which amino acid is considered 'conditionally essential' in the human diet because the body cannot always produce enough during periods of illness or stress?

A) Glutamine

- B) Leucine
- C) Valine
- D) Tryptophan

8. What is the recommended physiological purpose of the 'Intestinal Microbiota'?

A) To produce insulin

B) To ferment undigested carbohydrates and synthesize certain vitamins

- C) To digest protein exclusively
- D) To filter blood toxins

9. Which group of nutrients provides the highest energy density per gram?

- A) Proteins
- B) Carbohydrates

C) Fats

D) Vitamins

10. What does the Body Mass Index (BMI) specifically measure?

- A) Percentage of body fat
- B) Bone density

C) Ratio of weight to height squared

D) Metabolic rate

11. Which hormone is secreted by the pancreas to facilitate the uptake of glucose into body cells?

A) Glucagon

B) Insulin

- C) Ghrelin
- D) Leptin

12. Which water-soluble vitamin is also known as ascorbic acid?

A) Vitamin B6

B) Vitamin C

- C) Vitamin B12
- D) Vitamin E

13. What is the primary site for the absorption of nutrients in the human gastrointestinal tract?

- A) Esophagus
- B) Stomach
- C) Small intestine**
- D) Large intestine

14. Which electrolyte is the most abundant cation found in the intracellular fluid of human cells?

- A) Sodium
- B) Calcium
- C) Chloride
- D) Potassium**

15. What process describes the body's ability to maintain a stable internal environment despite external changes?

- A) Homeostasis**
- B) Catabolism
- C) Anabolism
- D) Osmosis