

Foundations of Dietetics

Dietetics · Answer Key · 20 Questions

1. Which nutrient is classified as a macronutrient that provides 9 kilocalories per gram?

- A) Protein
- B) Carbohydrates
- C) Lipids**
- D) Fiber

2. Which vitamin is water-soluble and essential for collagen synthesis?

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

3. What is the primary storage form of glucose in the human liver and muscles?

- A) Amylose
- B) Glycogen**
- C) Cellulose
- D) Fructose

4. Which mineral deficiency is most commonly associated with goiter?

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

5. Which amino acid is considered conditionally essential during periods of physiological stress?

- A) Glutamine**
- B) Leucine
- C) Valine
- D) Lysine

6. What is the standard chemical structure of a trans fatty acid?

- A) Cis-configuration
- B) Hydrogen atoms on opposite sides of the double bond**
- C) Saturated hydrocarbon chain
- D) Polyunsaturated structure

7. Which substance acts as a precursor to Vitamin D in the human skin?

A) Cholesterol

B) Retinol

C) Tocopherol

D) Ascorbic Acid

8. What is the thermic effect of food (TEF) approximately as a percentage of total energy expenditure?

A) 5-10%

B) 20-30%

C) 40-50%

D) 60-70%

9. Which organ is the primary site for the absorption of cobalamin (Vitamin B12)?

A) Stomach

B) Duodenum

C) Ileum

D) Colon

10. What is the recommended dietary allowance (RDA) unit of measurement for dietary folate equivalents (DFE)?

A) Milligrams

B) Micrograms

C) International Units

D) Nanograms

11. Which enzyme is responsible for the initial breakdown of starch in the oral cavity?

A) Lipase

B) Pepsin

C) Amylase

D) Trypsin

12. What condition is characterized by a failure to absorb nutrients due to an immune reaction to gluten?

A) Crohn's Disease

B) Celiac Disease

C) Ulcerative Colitis

D) Diverticulitis

13. Which mineral is a key component of hemoglobin responsible for oxygen transport?

- A) Zinc
- B) Iron**
- C) Selenium
- D) Copper

14. What type of fiber is known to form a gel-like substance in the digestive tract?

- A) Insoluble fiber
- B) Soluble fiber**
- C) Cellulose
- D) Lignin

15. Which fat-soluble vitamin is essential for the synthesis of blood clotting factors?

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

16. What is the byproduct of anaerobic glycolysis in muscle tissue?

- A) Lactic acid**
- B) Pyruvate
- C) Acetyl-CoA
- D) Citrate

17. Which sugar is a disaccharide composed of one glucose and one fructose molecule?

- A) Lactose
- B) Maltose
- C) Sucrose**
- D) Galactose

18. What is the physiological role of the intrinsic factor secreted by the stomach?

- A) Fat digestion
- B) B12 absorption**
- C) Glucose metabolism
- D) Protein denaturation

19. Which protein is the most abundant in the human body, providing structural support to connective tissues?

- A) Keratin
- B) Myosin
- C) Collagen**
- D) Albumin

20. What is the average nitrogen content in dietary protein?

- A) 6.25%
- B) 12.5%
- C) 16%**
- D) 20%