

Here are 20 multiple-choice questions in markdown format covering the concepts from Chapter 7 on Human Nutrition.

Multiple-Choice Questions: Chapter 7 Human Nutrition

1. Which of the following defines a balanced diet?

- a) A diet containing only carbohydrates and fats for energy.
- [cite_start]b) A diet that contains all essential nutrients in the correct proportions. [cite: 473]
- c) A diet rich in protein for muscle growth.
- d) A diet that includes plenty of water and vitamins.

2. A lack of which vitamin leads to scurvy, characterized by bleeding gums?

- a) Vitamin A
- b) Vitamin D
- [cite_start]c) Vitamin C [cite: 653]
- d) Vitamin B

3. What is the primary function of dietary fibre (roughage)?

- a) To provide energy for the body.
- b) To be absorbed and used for growth.
- [cite_start]c) To help prevent constipation by adding bulk to the faeces. [cite: 710, 713]
- d) To be broken down into amino acids.

4. Rickets, a condition causing soft and deformed bones in children, is caused by a deficiency in which two nutrients?

- a) Iron and Vitamin C
- [cite_start]b) Vitamin D and Calcium [cite: 669, 701]
- c) Protein and Fat
- d) Fibre and Vitamin A

5. Which of the following correctly matches the nutrient with its main function?

- a) Carbohydrate - Growth and tissue repair.
- b) Protein - Main source of energy.
- [cite_start]c) Fat - Insulation and making cell membranes. [cite: 635]
- d) Iron - Hardening bones and teeth.

6. Which type of human tooth is primarily adapted for biting off pieces of food?

- a) Molar
- b) Canine
- c) Premolar
- [cite_start]d) Incisor [cite: 868]

7. Physical digestion involves which of the following processes?

- a) The breakdown of starch into glucose by amylase.
- [cite_start]b) The emulsification of fats into small droplets by bile. [cite: 831, 920]
- c) The breakdown of proteins into amino acids by protease.
- d) The absorption of nutrients in the small intestine.

8. What are the two key functions of hydrochloric acid in the stomach?

- a) To digest protein and emulsify fats.
- b) To neutralize bile and activate amylase.
- [cite_start]c) To kill harmful bacteria and provide an optimum pH for protease. [cite: 1001, 1313]
- d) To lubricate food and start starch digestion.

9. In the digestive system, where is the enzyme amylase secreted?

- a) Stomach and liver.
- [cite_start]b) Salivary glands and pancreas. [cite: 989, 1007, 1075]
- c) Pancreas and gall bladder.
- d) Small intestine and stomach.

10. What are the final, soluble products of protein digestion?

- a) Fatty acids and glycerol.
- b) Simple sugars like glucose.
- c) Peptides.
- [cite_start]d) Amino acids. [cite: 954, 1021]

11. Bile is produced by the liver and stored in the gall bladder. What is its main role in digestion?

- a) To digest fats into fatty acids and glycerol.
- [cite_start]b) To neutralize stomach acid and emulsify fats. [cite: 1093, 1095, 1308]
- c) To break down proteins in the duodenum.
- d) To absorb water in the large intestine.

12. Which process describes the uptake and use of absorbed nutrients by the body's cells?

- a) Ingestion
- b) Digestion
- c) Egestion
- [cite_start]d) Assimilation [cite: 944]

13. The ileum is adapted for efficient absorption. Which feature is responsible for vastly increasing its internal surface area?

- a) Its muscular walls for peristalsis.
- b) The presence of mucus-producing cells.
- [cite_start]c) The presence of thousands of villi. [cite: 1124]
- d) Its connection to the large intestine.

14. After being absorbed in the villi of the small intestine, where do most fatty acids and glycerol go?

- [cite_start]a) Directly into the blood capillaries. [cite: 1133]
- b) They are stored in the epithelial cells.

[cite_start]c) Into the lacteal. [cite: 1135]

d) They are transported to the liver for storage.

15. A person has iron-deficiency anaemia. Which component of their blood would be lower than normal, and what is its function?

a) Platelets, which are needed for clotting.

[cite_start]b) Haemoglobin, which is needed for oxygen transport. [cite: 678, 688]

c) Plasma, which transports hormones.

d) White blood cells, which fight infection.

16. The wave of muscular contractions that moves food along the alimentary canal is called:

a) Chewing

b) Egestion

[cite_start]c) Peristalsis [cite: 910]

d) Absorption

17. Where in the alimentary canal does the digestion of starch begin and where is it completed?

a) Begins in the stomach, completed in the ileum.

[cite_start]b) Begins in the mouth, completed in the duodenum/ileum. [cite: 1054, 1075]

c) Begins in the duodenum, completed in the colon.

d) Begins and is completed in the stomach.

18. Which statement about energy requirements is correct?

a) An adult office worker needs more energy than a very active adult.

b) Energy needs decrease as a child grows to age 18.

[cite_start]c) On average, males have higher energy requirements than females. [cite: 520]

[cite_start]d) We do not require energy while we are sleeping. [cite: 526]

19. Which part of a tooth is the extremely hard, outer layer found above the gum line?

- a) Dentine
- b) Pulp cavity
- c) Cement

[cite_start]d) Enamel [cite: 877]

20. In what part of the digestive system is most of the water from digested food and digestive juices absorbed?

- a) Stomach
- b) Liver

[cite_start]c) Small intestine (ileum) [cite: 1025, 1119]

d) Rectum

Answer Key

1. [cite_start]b) A diet that contains all essential nutrients in the correct proportions. [cite: 473]
2. [cite_start]c) Vitamin C [cite: 653]
3. [cite_start]c) To help prevent constipation by adding bulk to the faeces. [cite: 710, 713]
4. [cite_start]b) Vitamin D and Calcium [cite: 669, 701]
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