

## Chapter 01: Nutrition and Health

### Schlenker & Gilbert: Williams' Essentials of Nutrition and Diet Therapy, 11th Edition

#### MULTIPLE CHOICE

1. The major focus of nutritional recommendations in this century has shifted to:
  - a. prevention and control of chronic diseases.
  - b. improved sanitation and public health.
  - c. prevention and control of infectious diseases.
  - d. development of healthful foods using food technology.

ANS: A                      DIF: Easy                      REF: p. 2

MSC: Type of Question: Knowledge

2. A physical science that contributes to understanding how nutrition relates to health and well-being is:
  - a. anatomy.
  - b. biochemistry.
  - c. physics.
  - d. pharmacology.

ANS: B                      DIF: Easy                      REF: p. 6

MSC: Type of Question: Knowledge

3. The body of scientific knowledge related to nutritional requirements of human growth, maintenance, activity, and reproduction is known as:
  - a. physiology.
  - b. nutrition science.
  - c. biochemistry.
  - d. dietetics.

ANS: B                      DIF: Easy                      REF: p. 7

MSC: Type of Question: Knowledge

4. The professional primarily responsible for application of nutrition science in clinical practice settings is the:
  - a. nurse.
  - b. physician.
  - c. public health nutritionist.
  - d. registered dietitian.

ANS: D                      DIF: Easy                      REF: p. 7

MSC: Type of Question: Knowledge

5. The primary responsibility for nutrition care of people in the community belongs to the:
  - a. community physician.
  - b. public health nurse.
  - c. public health nutritionist.
  - d. registered dietitian.

ANS: C                      DIF: Easy                      REF: p. 7

MSC: Type of Question: Knowledge

6. The best source of nutrients is provided by:
- specific food combinations.
  - a variety of foods.
  - individual foods.
  - a variety of food supplements.

ANS: B                      DIF: Easy                      REF: p. 7  
MSC: Type of Question: Knowledge

7. Macronutrients include:
- minerals.
  - proteins.
  - vitamins.
  - enzymes.

ANS: B                      DIF: Easy                      REF: p. 7  
MSC: Type of Question: Knowledge

8. Micronutrients include:
- fats.
  - proteins.
  - vitamins.
  - carbohydrates.

ANS: C                      DIF: Easy                      REF: p. 7  
MSC: Type of Question: Knowledge

9. The sum of all chemical processes inside living cells of the body that sustain life and health is known as:
- physiology.
  - digestion.
  - metabolism.
  - nutrition.

ANS: C                      DIF: Easy                      REF: p. 7  
MSC: Type of Question: Knowledge

10. A primary function of macronutrients in the body is to:
- supply energy.
  - regulate metabolic processes.
  - maintain homeostasis.
  - control cellular activity.

ANS: A                      DIF: Medium                      REF: p. 7  
MSC: Type of Question: Knowledge

11. Nutrients interact in the body to regulate metabolic processes, to build and repair tissue, and to:
- provide energy.
  - control cellular wastes.
  - control hormone levels.

d. regulate absorption.

ANS: A                    DIF: Medium                    REF: p. 7  
MSC: Type of Question: Knowledge

12. Individual nutrients are characterized by their ability to:
- work alone.
  - fulfill specific metabolic roles.
  - influence weight loss.
  - improve mental status.

ANS: B                    DIF: Medium                    REF: p. 7  
MSC: Type of Question: Knowledge

13. The nutrient group that provides the primary source of energy for the body is:
- carbohydrates.
  - fats.
  - proteins.
  - vitamins.

ANS: A                    DIF: Medium                    REF: p. 7  
MSC: Type of Question: Knowledge

14. The primary function of carbohydrates as a food source is to:
- regulate metabolic processes.
  - build body tissue.
  - supply energy.
  - provide bulk.

ANS: C                    DIF: Easy                    REF: p. 7  
MSC: Type of Question: Knowledge

15. The main body storage form of carbohydrates is:
- glycogen.
  - starch.
  - fat.
  - glucose.

ANS: A                    DIF: Medium                    REF: p. 7  
MSC: Type of Question: Knowledge

16. The number of kilocalories (kcalories or kcal) provided by a food that contains 30 g of carbohydrate is:
- 90.
  - 120.
  - 180.
  - 270.

ANS: B  
Carbohydrate contains 4 kcal per gram; therefore, 30 g carbohydrate contains  $30 \times 4 = 120$  kcal.

DIF: Medium                    REF: p. 7                    MSC: Type of Question: Application

17. The percentage of the total daily caloric intake for healthy persons that should be supplied by carbohydrate is:
- 10% to 35%.
  - 20% to 35%.
  - 40% to 55%.
  - 45% to 65%.

ANS: D                      DIF: Medium                      REF: p. 7  
MSC: Type of Question: Knowledge

18. It has been generally accepted that the percentage of total daily kcalories supplied by fats should be no more than:
- 10% to 15%.
  - 10% to 35%.
  - 20% to 35%.
  - 40% to 55%.

ANS: C                      DIF: Medium                      REF: p. 7  
MSC: Type of Question: Knowledge

19. The number of kcalories provided by a food that contains 22 g of fat is:
- 88.
  - 132.
  - 154.
  - 198.

ANS: D  
Fat contains 9 kcal per gram; therefore, the number of kcal in 22 g of fat is  $22 \times 9 = 198$  kcal.

DIF: Medium                      REF: p. 7                      MSC: Type of Question: Application

20. The primary function of protein in the body is to:
- supply energy.
  - regulate metabolic processes.
  - control muscle contractions.
  - build tissue.

ANS: D                      DIF: Easy                      REF: p. 7  
MSC: Type of Question: Knowledge

21. The number of kcalories provided by 15 g of protein is:
- 15.
  - 45.
  - 60.
  - 135.

ANS: C  
Protein contains 4 kcal per gram; therefore, the number of kcal in 15 g protein is  $15 \times 4 = 60$  kcal.

DIF: Medium                      REF: p. 7                      MSC: Type of Question: Application

22. For a healthy person, the percentage of daily kcalories supplied by protein should be:
- 5% to 10%.
  - 10% to 35%.
  - more than 25%.
  - more than 35%.

ANS: B                    DIF: Easy                    REF: p. 7  
MSC: Type of Question: Knowledge

23. In addition to protein, nutrients that contribute to building and repair of tissue include:
- vitamins.
  - carbohydrates.
  - fats.
  - enzymes.

ANS: A                    DIF: Easy                    REF: p. 8  
MSC: Type of Question: Knowledge

24. The types of acids that form the basic building blocks of protein are \_\_\_\_\_ acids.
- fatty
  - amino
  - nucleic
  - omega fatty

ANS: B                    DIF: Easy                    REF: p. 7  
MSC: Type of Question: Knowledge

25. In addition to calcium, the major minerals needed to build and maintain bone tissue include:
- potassium.
  - iron.
  - phosphorus.
  - fluoride.

ANS: C                    DIF: Medium                    REF: p. 7  
MSC: Type of Question: Knowledge

26. The mineral that helps control enzyme actions in cell mitochondria that produce and store high-energy compounds is:
- iron.
  - cobalt.
  - hemoglobin.
  - vitamin B<sub>12</sub>.

ANS: A                    DIF: Hard                    REF: p. 8  
MSC: Type of Question: Knowledge

27. The nutrients involved in metabolic regulation and control include minerals, vitamins, and:
- amino acids.
  - carbohydrates.
  - fats.
  - water.

ANS: D                    DIF: Hard                    REF: p. 8  
MSC: Type of Question: Knowledge

28. An observation that provides evidence that a person has good nutritional status is:
- small muscle mass.
  - normal weight-to-height ratio.
  - smooth tongue.
  - fragile skin.

ANS: B                    DIF: Easy                    REF: p. 9  
MSC: Type of Question: Knowledge

29. Individuals with optimal nutritional status differ from those with marginal nutritional status in their:
- nutrient reserves.
  - clinical signs.
  - body weight.
  - risk for mental illness.

ANS: A                    DIF: Medium                    REF: p. 9  
MSC: Type of Question: Knowledge

30. In addition to poor eating habits, a factor that often contributes to marginal nutritional status is:
- dependence on caffeine.
  - acute illness.
  - low income.
  - size of family unit.

ANS: C                    DIF: Easy                    REF: p. 9  
MSC: Type of Question: Knowledge

31. Signs of malnutrition can appear when:
- nutrient reserves are depleted.
  - nutrient intake exceeds daily needs.
  - energy intake is restricted.
  - caloric expenditure increases.

ANS: A                    DIF: Medium                    REF: p. 10  
MSC: Type of Question: Knowledge

32. An age group that is very vulnerable to malnutrition is:
- infants.
  - teenagers.
  - young adults.
  - middle-age adults.

ANS: A                    DIF: Medium                    REF: p. 10  
MSC: Type of Question: Knowledge

33. The function of Dietary Reference Intakes (DRIs) is to designate nutrient recommendations for:
- different ethnic groups.

- b. all individuals.
- c. most people.
- d. most healthy people.

ANS: D                    DIF: Medium            REF: p. 12  
MSC: Type of Question: Knowledge

34. The Tolerable Upper Intake Level (UL) is:
- a. a replacement for Recommended Dietary Allowances (RDAs).
  - b. a safe level of intake for people of all ages.
  - c. a potentially toxic level of intake of a nutrient.
  - d. the highest amount of a nutrient that can be safely consumed.

ANS: D                    DIF: Medium            REF: p. 12  
MSC: Type of Question: Knowledge

35. An example of government nutrition policy is:
- a. MyPlate Food Guidance System.
  - b. *Dietary Guidelines for Americans 2010*.
  - c. *Healthy People 2020*.
  - d. Dietary Reference Intakes (DRIs).

ANS: C                    DIF: Medium            REF: p. 11  
MSC: Type of Question: Knowledge

36. MyPlate food guidance is based on:
- a. percentage of kcalories from each macronutrient.
  - b. *Exchange Lists for Meal Planning*.
  - c. appropriate amounts of food from each food group.
  - d. amounts of macronutrients and micronutrients.

ANS: C                    DIF: Medium            REF: pp. 16-19  
MSC: Type of Question: Knowledge

37. Foodborne illness may be caused by contamination of food with:
- a. pesticides.
  - b. genetically modified ingredients.
  - c. microorganisms.
  - d. food additives.

ANS: C                    DIF: Medium            REF: p. 20  
MSC: Type of Question: Knowledge

38. It is important to understand standard serving sizes of foods because:
- a. it is easy to eat too much of some nutrients when choosing healthful foods.
  - b. serving sizes have generally decreased over the past few decades.
  - c. most people have difficulty estimating the amount of food they eat.
  - d. food portions need to be weighed to check serving sizes accurately.

ANS: C                    DIF: Hard                REF: p. 16  
MSC: Type of Question: Application

39. Major nutrients supplied by foods in the Vegetables group of MyPlate include:



MSC: Type of Question: Knowledge

45. In the most recent edition of *Choose Your Foods: Exchange List for Diabetes*, the three groups into which foods are arranged are:
- fruits and vegetables, breads, and meats.
  - fats, starches and sugars, and meat and milk.
  - fruits and vegetables, meat and milk, and starches.
  - carbohydrates, meat and meat substitutes, and fats.

ANS: D                    DIF: Medium                    REF: p. 20

MSC: Type of Question: Knowledge

46. The Dietary Guidelines are published and revised by the U.S. Department of Agriculture in association with the:
- Department of Health and Human Services.
  - National Institutes of Health.
  - National Academy of Sciences.
  - Food and Nutrition Board.

ANS: A                    DIF: Medium                    REF: p. 13

MSC: Type of Question: Knowledge

47. A major focus of the 2010 Dietary Guidelines is:
- generally healthy segments of the population.
  - the unhealthy American public.
  - vulnerable population segments.
  - ethnically diverse eating styles.

ANS: B                    DIF: Medium                    REF: pp. 13-14

MSC: Type of Question: Knowledge

48. Dietary guidelines are most useful for:
- limiting portion sizes.
  - designing a personal food plan.
  - making smart food choices.
  - avoiding excessive nutrient intakes.

ANS: C

Dietary guidelines include recommendations to limit portion sizes and provide general advice that can help with designing a personal food plan, and can help consumers avoid excessive nutrient intakes. However, their main use is to help consumers make wise food choices.

DIF: Medium                    REF: p. 13                    MSC: Type of Question: Application

49. One useful outcome of keeping a record of everything you eat and drink for a day is:
- precise estimates of portion sizes.
  - determination of appropriate energy intake.
  - estimation of supplement needs.
  - increased awareness of personal food patterns.

ANS: D                    DIF: Medium                    REF: p. 20

MSC: Type of Question: Knowledge