TECEP® Test Description for BIO-208-TE

THE SCIENCE OF NUTRITION

The Science of Nutrition TECEP® exam assesses students' knowledge of basic nutritional science. This exam assesses students' understanding of the function of the chemical components of foods, including nutrients, vitamins, minerals, and water and their role in human metabolism. The exam also includes food selection, diet, and health. (3 credits)

- **Test format:** 100 multiple choice questions (1 point each)
- **Passing score:** 65% (65/100 points).Your grade will be reported as CR (credit) or NC (no credit).
- **Time limit:** 2 hours

OUTCOMES ASSESSED ON THE TEST

- Explain the importance of science-based dietary guidelines, dietary assessment, and understanding food labeling in achieving a healthy society.
- Identify the vitamins and minerals and the role they play in human biological function.
- Explain the basic structure and function of carbohydrates, fats, and proteins in human nutrition
- Describe the steps involved in metabolism and the consequences of consuming too much or obtaining too little energy.
- Examine the nutritional needs of special populations, including infants, pregnant women, and those with chronic disease conditions.

TOPICS ON THE TEST AND THEIR APPROXIMATE DISTRIBUTION

The table below indicates the main topics covered by this exam and the approximate percentage of the exam devoted to each main topic. Under the main topic heading is a list of related–but more specific–topics. It is important to review these topics to determine how much prior knowledge you have and/or how much additional study is necessary.

Topic	Percentage
Nutrition, Science, and a Healthy Society ● Diet planning principles; the Food Label, USDA MyPlate and food guidance systems ● GI system and digestive problems; Nutrition and the Human Body; Weight management	**30%**
Macronutrients: Carbohydrates, Fats and Proteins ● Simple and complex carbohydrates/fiber ● Fats and its impact on health ● Proteins	**20%**
Nutrient Metabolism ● Steps involved in metabolism ● How energy is derived from carbohydrates, fat and protein ● Consequences of consuming too much or too little energy	**15%**
Water, Vitamins, and Minerals ● Water: the essential nutrient-its function in health; recommendations for adequate hydration ● Water and Fat Soluble Vitamins/Antioxidants ● Minerals: Major and Trace Minerals	**10%**
Diet, Health, Energy Balance and Healthy Body Composition ● Nutrition applied to physical activity and sports nutrition ● Life cycle: fetal development, infancy, childhood, adolescence, adulthood and aging ● Disease and prevention ● Consumer concerns and food safety	**25%**

STUDY MATERIALS

We encourage you to explore the resources below to make sure that you are familiar with multiple perspectives on the topics above. All of these resources are openly licensed, which means that they are free to be revised, remixed, reused, redistributed, and retained, so long as their unique terms are followed. You can learn more about open licensing here.

Resource Licensing Guide	
Title	**License**
Zimmerman, M., & Snow, B. (2012). *An introduction to nutrition*. (updated by Thomas Edison State University in 2019).	CC BY-NC-SA 3.0
Global Text Project, & . (2004). Section 24.7: Nutrition and Diet. In *Anatomy & Physiology*. Houston, TX: OpenStax CNX.	CC BY 4.0
Caballero, B. (2014). *Principles of Human Nutrition*. Baltimore, MD: Johns Hopkins University.	CC BY-NC-SA
Boundless.com. (n.d.) Nutrition. In *Boundless Anatomy & Physiology* [Lumen Course]. Portland, OR: Lumen Learning.	CC BY-SA

SAMPLE QUESTIONS

The questions below are designed to help you study for your TECEP. Answering these questions does not guarantee a passing score on your exam.

Please note that the questions below **will not** appear on your exam.

1. Reliable sources of nutrition information

    a. provide guidance about the most recent dietary trends
    b. provide guidance based on multiple studies and achieve scientific consensus
    c. have embedded beliefs regarding proper nutrition and a profit motive
    d. have only medical experts to support their claims

2. What do UL's refer to within nutrition?

    a. Minimum levels of a nutrient one needs to consume to be healthy
    b. Used to assess adequacy of intakes of population groups
    c. Upper limits of nutrient intake compatible with health
    d. Nutrient intake values used by athletes

3. Which of the following is the term for substances that are both required by the body and that must be obtained from diet?

    a. Food
    b. Nutrients
    c. Essential foods
    d. Essential dietary needs

4. Movement of food through much of the digestive system is done via which form of muscle action?

    a. Peristalsis
    b. Secretion
    c. Sphincter contraction
    d. Bolus segmentation

5. A group of lactic acid-producing bacteria that appear to provide a range of positive digestive benefits are known as

    a. probiotics
    b. nutribiotics
    c. gastro biotics
    d. bioproductives

6. Gastroesophogeal reflux disease (GERD) is a digestive disorder that

    a. occurs when the valve at the top of the stomach relaxes
    b. occurs when the liver is in poor health
    c. is related to kidney functions
    d. is related to the presence of some heart conditions

7. Lipids (fats) are absorbed directly from the small intestines into

    a. the blood
    b. fat cells
    c. lymphatic cells
    d. lymphatic vessels

8. Which of the following statements about fatty foods is true?

    a. Fatty foods are low in energy density.
    b. Fat in foods contributes to satiety.
    c. Fat gives foods a tough texture.
    d. Fat impairs the absorption of some phytochemicals.

9. A close relationship exists between the rising of _____ and of type 2 diabetes in the United States.

    a. obesity
    b. cancer
    c. depression
    d. blood disorders

10. Which hormone stimulates glycogen breakdown in the liver?

    a. Insulin
    b. Glucagon
    c. Leptin
    d. Thyroid hormone

11. Glycogen is mainly stored in

    a. muscle and liver tissue
    b. pancreas and kidney tissue
    c. stomach and intestine tissue
    d. brain and red blood cell tissue

12. What is the most common type of fat in food and in body fat stores?

    a. Glycerol
    b. Triglycerides
    c. Monoglycerides
    d. Diglycerides

13. Which of the lipoproteins is the most triglyceride-rich?

    a. LDL
    b. HDL
    c. VLDL
    d. Chylomicron

14. Which of the following amino acid is essential?

    a. Asparagine
    b. Tryptophan
    c. Glycine
    d. Glutamine

15. How often do humans need a fresh supply of essential amino acids?

    a. At every meal
    b. Daily
    c. Weekly
    d. Monthly

16. Active individuals require more additional fluids than non-active individuals because of greater losses in

    a. sweat
    b. urine
    c. stool
    d. lung experiations

17. Which of the following is an important function of water?

    a. Lessen fatigue
    b. Relieve pain
    c. Act as a part of the body's cooling system
    d. Improve motor and sensory nerve function

18. Water excretion is regulated by the brain and the

    a. kidneys
    b. bloodstream
    c. stomach
    d. salivary glands

19. Dietary sources of antioxidants include

    a. Vitamins A, E, and C
    b. Vitamins B6, Iron and Calcium
    c. Vitamins D, A and B
    d. carotenoids, Vitamin C and iron

20. A molecule that can block free radicals by donating one of its own electrons is called

    a. a superoxide molecule
    b. a reactive oxygen species
    c. an antioxidant
    d. an electron destabilizer

21. Athletes' intake of electrolytes, such as sodium, should

    a. be increased with salt pills
    b. be increased with foods
    c. remain fairly constant
    d. be decreased with pills

22. Adequate consumption of _____ before and during the early stages of pregnancy significantly reduces the incidence of neural tube defects.

    a. folic acid
    b. thiamin
    c. Vitamin A
    d. Vitamin C

23. Which of the following is NOT one of the risk factors for cardiovascular disease?

    a. Diabetes
    b. Hypertension
    c. High LDL
    d. High HDL

24. Individual's blood cholesterol and the rate of death from heart disease is low in populations whose dietary fat consists mostly of _____ fats, and a diet that includes fish, fruits, and vegetables.

    a. unsaturated
    b. saturated
    c. trans
    d. omega-6

ANSWERS TO SAMPLE QUESTIONS

1. (**b**)
2. (c)
3. (b)
4. (**a**)
5. (**a**)
6. (**a**)
7. (**d**)
8. (**b**)
9. (**a**)
10. (**b**)
11. (**a**)
12. (**b**)
13. (**d**)
14. (**b**)
15. (**b**)
16. (**a**)
17. (**c**)
18. (**a**)
19. (**a**)
20. (**c**)
21. (**b**)
22. (**a**)
23. (**d**)
24. (**a**)