

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) The primary determinant of most consumers' decisions on whether to consume a food is _____
A) habit. B) taste. C) cost. D) availability.
- 2) The preferred source of energy in the body comes from _____
A) carbohydrates. B) total fats. C) omega-3-fats. D) proteins.
- 3) Persons who are eating a low-carbohydrate diet often _____
A) adopt a sedentary lifestyle.
B) use no nutritional supplements.
C) use cost as the primary determinant of their food choices.
D) move effortlessly and willingly.
- 4) Ana wants to lose weight and is on a low-carbohydrate diet. She notices that since she began the diet, she _____
A) is full of energy.
B) is craving fats.
C) has been able to finish her workout at the gym.
D) is feeling more anxious than usual.
- 5) Overweight persons need to _____ their fat consumption in order to lose weight. _____
A) maintain B) increase C) reduce D) zero
- 6) The leading cause of death among American adults is _____
A) heart disease. B) obesity. C) cancer. D) osteoporosis.
- 7) The most effective method of nutritional assessment is to assess typical food and beverage intake over the last _____ hours _____
A) 48 B) 12 C) 24 D) 4
- 8) An effective 24-hour intake assesses _____ intake over the last 24 hours. _____
A) fluid B) food and fluid C) food D) food and water
- 9) The study of food and the nutrients needed to sustain life and for reproduction is called _____
A) nutrition. B) protein-calorie nutrition.
C) malnutrition. D) nutritional status.
- 10) Substances which must be consumed from foods because they cannot be made in the body are _____
A) micronutrients. B) nutrients.
C) macronutrients. D) essential nutrients.
- 11) Minerals are _____
A) organic. B) micronutrients.
C) energy-producing nutrients. D) inorganic.

- 12) The amount of energy which is needed to raise the temperature of one kilogram of water by one degree is a _____
 A) essential nutrient. B) kilocalorie.
 C) nonessential nutrient. D) energy-yielding nutrient.
- 13) Carbohydrates, lipids, proteins, vitamins all contain _____
 A) carbon, nitrogen, oxygen. B) carbon, minerals, hydrogen.
 C) carbon, nitrogen, hydrogen. D) carbon, hydrogen, oxygen.
- 14) One gram of carbohydrate, protein, fat and alcohol provide calories as follows _____
 A) 4:7:9:4. B) 4:9:7:4. C) 4:9:7:1. D) 4:4:9:7.
- 15) The terms "kcal", and "kilocalorie" are the same as a _____
 A) cal. B) calorie.
 C) energy-yielding nutrient. D) macronutrient.
- 16) In the body, the capacity to do the work of digesting and absorbing a meal, contracting heart muscles, fueling the heartbeat, and creating new body cells is referred to as _____
 A) nutrients. B) non-essential nutrients.
 C) essential nutrients. D) energy.
- 17) Vitamins and minerals are _____
 A) classified nutrients. B) organic substances.
 C) micronutrients. D) macronutrients.
- 18) Carbohydrates, fats and proteins _____
 A) do not contain carbon.
 B) are the primary energy source.
 C) are the building blocks for the synthesis of tissues.
 D) provide energy as kilocalories.
- 19) Although this substance does not provide kilocalories, it is still essential _____
 A) water. B) trace nutrients. C) carbohydrates. D) acids.
- 20) Although the main role of carbohydrates and lipids is to provide energy; vitamins, minerals, and _____ must also be present in the cell. _____
 A) water B) nitrogen C) kilocalories D) cal
- 21) The non-nutritive plant compounds in fruits and vegetables help to fight chronic diseases are called _____
 A) functional nutrients. B) phytochemicals.
 C) zoochemicals. D) nutrient chemicals.
- 22) Non-nutritive animal compounds such as omega-3 fatty acids, beneficial bacteria/probiotics are _____
 A) functional foods. B) essential nutrients.
 C) zoochemicals. D) phytochemicals.
- 23) Foods which provide health benefits along with the functions of nutrients are called _____
 A) functional chemicals. B) macronutrients.
 C) functional nutrients. D) functional foods.

- 24) A vitamin or mineral supplement is nutritionally _____ to whole unprocessed foods 24) _____
 A) inferior B) equivalent C) acute D) superior
- 25) Compounds in functional foods lower the risk of 25) _____
 A) intestinal parasites. B) heart disease.
 C) some cancers. D) diarrhea.
- 26) Non-communicable diseases include conditions such as 26) _____
 A) influenza, suicide. B) heart disease, cancer, stroke, diabetes.
 C) pneumonia, Alzheimer's disease. D) respiratory diseases.
- 27) Juan knows that he only eats a small number of foods and that he mostly eats junk foods. 27) _____
 Therefore he needs
 A) adequate amounts of the needed nutrients.
 B) excessive amounts of the needed nutrients.
 C) megadoses of the needed nutrients.
 D) more of the needed nutrients.
- 28) A healthy diet may increase or decrease risk of certain diseases by 28) _____
 A) nutritional epigenetics—the study of the nutrition factors which influence gene expression.
 B) gene expression—processing of genetic information to create a specific protein.
 C) nutritional genomics—the study of the relationship between genes, gene expression and nutrition.
 D) epigenetics—the study of the environmental factors and other mechanisms which influence gene expression.
- 29) Mary has passed a national exam after four years of nutrition training at a university. Her name tag reads 29) _____
 A) nutrition assistant. B) nutritionist.
 C) registered dietitian nutritionist. D) dietitian.
- 30) Eating right could prevent _____ of the deaths in the United States 30) _____
 A) 40% B) 25% C) 50% D) 35%
- 31) Maria has a history of heart disease, stroke, and diabetes in her family. Eating right could 31) _____
 A) have no effect on these conditions. B) delay the onset of these conditions.
 C) reverse these conditions. D) worsen the symptoms of these conditions.
- 32) Grandma has had heart disease for many years and last year, she had a stroke. The most effective 32) _____
 approach for her is to
 A) stop taking nutritional supplements. B) take new nutritional supplements.
 C) drink more water. D) consult a registered dietitian nutritionist.
- 33) Malnourished persons may be either 33) _____
 A) undernourished or overnourished. B) undernourished.
 C) well-nourished. D) overnourished.

- 34) The ABCDs of Nutrition Assessment include measures of _____
 A) Anthropometric, Biological, Clinical, Dietary Intake.
 B) Anthropological, Biological, Clinical, Dietary Intake.
 C) the simplest ways to correct inappropriate eating.
 D) Anthropometric, Biochemical, Clinical, Dietary Intake.
- 35) Which of the following represents an anthropometric measurement? _____
 A) feces
 B) body mass index
 C) a food frequency questionnaire
 D) urine
- 36) Biochemical measurements provide insights into _____
 A) changes in weight.
 B) growth.
 C) vitamin and mineral status.
 D) intake of low-fat dairy products.
- 37) Clinical assessment of hair, fingernails, and lips provide insight in a person's _____
 A) protein status.
 B) growth.
 C) obesity, change in weight.
 D) nutrient deficiencies or excesses.
- 38) A 24-hour dietary recall, a food record and a food frequency questionnaire represent the _____ type of assessment. _____
 A) dietary intake B) biochemical C) anthropometric D) clinical
- 39) The National Health and Nutrition Examination Survey is conducted to _____
 A) determine the nutritional status of Americans of all ages.
 B) assess nutritional status of American pets.
 C) identify what Americans are eating.
 D) determine nutritional status of vulnerable Americans.
- 40) Most Americans overconsume _____
 A) potassium. B) calcium. C) fiber. D) added sugars.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 41) Although most Americans agree that breakfast is important, 25% routinely skip breakfast. _____
- 42) Carbohydrates are composed of carbon, hydrogen, and nitrogen. _____
- 43) The Framingham Heart Study coined the phrase "risk factors" by collecting data on two generations of 10,000 Americans. _____
- 44) Biochemical and laboratory data are similar. _____
- 45) Water is a component of every body cell. _____
- 46) Because phytochemicals are derived from plant foods, they are nutritionally superior to zoochemicals. _____
- 47) Healthy People 2020 describes the current and ideal eating patterns of Americans. _____

- 48) Most Americans need to increase of fruits and vegetables to improve health. 48) _____
- 49) There are more overweight and obese Americans today than ever before. 49) _____
- 50) The American diet contains too much added sugars, sodium, and saturated fat. 50) _____
- 51) The Scientific Method is used to test hypotheses. 51) _____
- 52) In double-blind, placebo-controlled studies, neither the subjects nor the researchers know who is receiving the treatment. 52) _____
- 53) To accurately assess the information on a website, its funding source should always be identified. 53) _____
- 54) Minerals contain a single element. 54) _____
- 55) One gram of alcohol provides 7 calories. 55) _____
- 56) The first step of the Scientific Method is to make an educated guess or a hypothesis. 56) _____
- 57) Overweight and obesity rates have been increasing among Americans. 57) _____
- 58) The Scientific Method is a procedure which is used to assess and minimize health fraud. 58) _____
- 59) The credibility of nutrition misinformation can be assessed by asking two important questions. 59) _____
- 60) The best approach to meeting nutritional needs is the take the highest quality nutritional supplements. 60) _____
- 61) Each of the six classes of nutrients in foods performs the same functions. 61) _____
- 62) The ABCD method leads to reliable and accurate nutrition information which consumers can used to make dietary decisions. 62) _____
- 63) Studying the scientific method is the best approach to meeting individual nutritional needs. 63) _____
- 64) Of the 10 leading causes of death, only heart disease can be prevented by eating right. 64) _____
- 65) All macronutrients, vitamins and minerals provide energy. 65) _____
- 66) Macronutrients are organic. 66) _____
- 67) Energy-yielding nutrients include carbohydrates, fats and proteins. 67) _____
- 68) One gram of carbohydrate and one gram of protein provide 4 kilocalories. 68) _____
- 69) The ABCD method would be used by a registered dietitian nutritionist to help a person who has been recently diagnosed with diabetes. 69) _____

- 70) Public health nutritionists and registered dietitian nutritionists take a national exam. 70) _____
- 71) A retired person who is eating a healthy diet is likely to prevent nutrient deficiencies. 71) _____
- 72) Since most Americans do not eat enough fiber, the best solution would be to take fiber supplements. 72) _____
- 73) Ashley, a college student, has just been diagnosed with cancer of the breast. The best approach to meeting her nutritional needs would be to use the ABCD method. 73) _____
- 74) Most Americans need to learn to use the scientific method to decipher nutrition misinformation. 74) _____
- 75) To find out about a patient's eating habits, a registered dietitian nutrition would consult "What We Eat In America". 75) _____

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 76) Explain how macronutrients and micronutrients differ.
- 77) What is the ABCD method and how is it used?
- 78) Describe the main difference between organic nutrients and minerals.
- 79) Name three nutrients that are typically underconsumed by most Americans.
- 80) What is the Scientific Method?
- 81) Name the nutrient is likely to be underconsumed in women, but not in men.
- 82) What is the ABCD method?
- 83) Describe the typical American nutrients which are overconsumed and underconsumed.
- 84) Explain the best approach to meeting the nutritional needs of an individual.
- 85) List three ways in which foods can influence a person's health?
- 86) Explain the process of assessing the credibility of nutrition information.
- 87) Why is water important to body cells?
- 88) What makes it difficult for consumers to receive credible nutrition information?
- 89) How is the National Health and Nutrition Examination Survey different from the Framingham Heart Study?
- 90) What are double-blind placebo-controlled studies?
- 91) Which factors influence food choices?

- 92) Are nutrients which provide energy superior to those which do not?
- 93) What are essential nutrients?
- 94) Are macronutrients more important than micronutrients?
- 95) How are water-soluble and fat-soluble vitamins different?
- 96) What are the potential consequences for individuals who do not consume enough protein?
- 97) What is the disadvantage of using nutritional supplements?
- 98) What is Nutrition?
- 99) How are carbohydrates, proteins and lipids similar?
- 100) How are carbohydrates, proteins and lipids different?

Answer Key

Testname: UNTITLED1

- 1) B
- 2) A
- 3) A
- 4) C
- 5) C
- 6) A
- 7) C
- 8) B
- 9) A
- 10) D
- 11) D
- 12) B
- 13) D
- 14) D
- 15) B
- 16) D
- 17) C
- 18) D
- 19) A
- 20) A
- 21) D
- 22) C
- 23) D
- 24) A
- 25) B
- 26) B
- 27) A
- 28) B
- 29) C
- 30) A
- 31) B
- 32) D
- 33) A
- 34) D
- 35) B
- 36) C
- 37) D
- 38) A
- 39) A
- 40) D
- 41) TRUE
- 42) FALSE
- 43) TRUE
- 44) TRUE
- 45) TRUE
- 46) FALSE
- 47) TRUE
- 48) TRUE
- 49) TRUE
- 50) TRUE

Answer Key

Testname: UNTITLED1

- 51) TRUE
- 52) TRUE
- 53) TRUE
- 54) TRUE
- 55) TRUE
- 56) TRUE
- 57) TRUE
- 58) FALSE
- 59) FALSE
- 60) FALSE
- 61) FALSE
- 62) FALSE
- 63) FALSE
- 64) FALSE
- 65) FALSE
- 66) TRUE
- 67) TRUE
- 68) TRUE
- 69) TRUE
- 70) FALSE
- 71) TRUE
- 72) FALSE
- 73) FALSE
- 74) FALSE
- 75) FALSE
- 76) The macronutrients—carbohydrates, lipids, and proteins—are needed in the body in large amounts. Micronutrients—vitamins and minerals—are also essential nutrients which are needed in the body in relatively small amounts.
- 77) The ABCD method is used by registered dietitian nutritionists to uncover nutrient intake and nutrient status. Anthropometric (body measures), biochemical (urine, blood measures), clinical (observation of hair, nails), and dietary intake (24-hour food recall, food frequency questionnaires) measures are used to assess nutrient status.
- 78) Carbohydrates, fats and proteins are organic because they contain carbon. They also contain hydrogen and oxygen. Minerals contain a single element in the earth's crust.
- 79) Most Americans need to eat more calcium, vitamin D, and potassium.
- 80) The Scientific Method is a systematic procedure which is used to ask questions, propose an explanation or hypothesis, test the hypothesis by conducting an experiment, and then reporting the results.
- 81) iron
- 82) The ABCD method is used by registered dietitian nutritionists to assess individuals' nutritional status. Anthropometric measures (body weight, growth), Biochemical or laboratory measures (blood, urine), Clinical measures (observation of hair, nails), and Dietary intake measures (24-hour recall, food frequency questionnaires) are used to determine nutrient deficiencies and excesses.
- 83) Most Americans overconsume added sugars, sodium, and saturated fats; and underconsume fiber, vitamin D, potassium, and calcium. Women are more likely than men to underconsume iron.
- 84) The best way to maintain nutritional health is to eat a variety of foods, including whole grains (brown rice, oatmeal); fruits, vegetables, lean meats, and low-fat dairy products. These foods provide a variety of nutrients. Processed foods which have added fat and sugar provide additional kilocalories and little fiber. Nutritional supplements provide a small number of nutrients but they do not include phytochemicals and zoochemicals which exist in whole unprocessed foods.

Answer Key

Testname: UNTITLED1

- 85) Food intake can reduce the intake of chronic diseases (heart disease, cancer, diabetes, stroke). Eating healthy foods can prevent nutrient deficiencies (scurvy). A healthy diet can positively affect gene expression—how genetic information is processed to create specific proteins. For example, adequate intake of folate alters the expression of genes and a healthy embryo leads to normal development of the spinal cord. However, inadequate folate intake leads to permanent spinal defects.
- 86) To assess the quality of nutrition information in a magazine article or TV report, it is important to find out if the article was published in a peer-reviewed journal, if the study participants are similar to the reader, and who has a financial interest in the findings or the website.
- 87) Water bathes the inside and outside of every cell, it helps maintain body temperature, acts as a lubricant and protective cushion, and delivers nutrients and oxygen to the cells. Water is essential to the body because it cannot be made in the body, and it is needed by every body cell. Water does not provide nutrients but it is critical for body functions.
- 88) Credible nutrition information is best obtained from trained public health nutritionists and registered dietitian nutritionists who have the education and experience to critically review nutrition information. Credible nutrition websites provide up-to-date information which is not biased by those who funded the study or the website.
- 89) The National Health and Nutrition Examination Survey is used to determine the nutritional status of a large population. It is conducted annually, and results are used to determine the nutritional status of Americans of all ages and to monitor their risk behaviors over time. The intake of carbohydrates, lipids, protein, vitamins, minerals, and fiber is collected using a 24-hour recall method. The Framingham Heart Study provided the foundation for the current dietary recommendations for heart health. It used surveys to collect longitudinal data on two generations and more than 10,000 participants to establish the current recommendations for the prevention of cardiovascular disease.
- 90) In double-blind placebo-controlled studies, neither the subjects nor the researchers are aware of who is receiving treatment, and such studies are therefore considered the gold standard of experimental research. These studies make it possible to determine how the treatment affects treatment and control groups. Double-blind placebo-controlled studies are superior to observational and epidemiological research which do not include a treatment.
- 91) Taste and enjoyment are the primary reasons people prefer certain foods. A food's availability makes it more easily become part of a culture, and many foods can be regularly eaten out of habit. Advertising, food trends, limited time, convenience, emotions, and the perception that foods are healthy or unhealthy also influence food choices.
- 92) Carbohydrates, fats, proteins, and alcohol all provide energy and without them the body would not be able to move muscles, digest and absorb food. Vitamins, minerals, water and fiber do not provide energy but they are required for reactions which take place in every cell. The role of a nutrient or substance is specific. Each nutrient or substance has its own role. The role of a nutrient is neither superior or inferior. The body depends on the action of each nutrient or substance to perform its role to work as a single unit.
- 93) Nutrients such as carbohydrates, fats (lipids), proteins, vitamins, minerals, and water must be consumed as foods and beverages because they cannot be made in the body in sufficient quantities to meet its needs and support health. If they are not consumed in adequate quantities, deficiency symptoms appear in the body.
- 94) Macronutrients are the energy-containing carbohydrates, lipids, and proteins that the body needs in large amounts. Micronutrients are also essential nutrients which the body needs in smaller amounts: Although these vitamins and minerals do not provide energy, but they are involved in numerous key functions in the body. They are essential to help regulate metabolism, for example, and without them we would be unable to convert carbohydrates, fats, and proteins to energy or to sustain numerous other chemical reactions. A deficiency of vitamins and minerals can cause a cascade of ill-health effects ranging from fatigue to stunted growth, weak bones, and organ damage. The amount of the nutrient that is needed by the body is not related to its importance.
- 95) Water-soluble vitamins, which include vitamin C and the eight B-complex vitamins, are easily absorbed and excreted by the body and need to be consumed daily. The fat-soluble vitamins—A, D, E, and K—are stored in the liver and fatty tissues and thus do not need to be consumed on a daily basis.
- 96) Proteins can be used for energy, but their main role is to provide the building blocks for body structures and functional compounds. In the absence of adequate protein, hormones, enzymes and body structures such as hair, teeth, nails, cannot be synthesized and maintained.

Answer Key

Testname: UNTITLED1

- 97) A wide variety of whole unprocessed foods is the best approach to getting all the necessary nutrients. Whole fruits and vegetables which have no added ingredients, whole grains such as brown rice, and oatmeal; and lean or low-fat meats and dairy products provide adequate nutrients with few calories. Nutritional supplements provide nutrients but they do not supply the beneficial zoochemicals and phytochemicals which naturally occur in foods. Individuals who use nutritional supplements may be tempted to mistakenly believe that they are superior to whole unprocessed foods.
- 98) The science of nutrition is the study of food and the nutrients we need to sustain life and reproduce. It examines the way food nourishes the body and affects health. Since its inception, the science of nutrition has explored how food is digested, absorbed, transported, metabolized, and used or stored in the body.
- 99) Carbohydrates, proteins, and lipids contain the elements carbon, hydrogen and oxygen. They are called macronutrients because they are needed in the body in large quantities. Because they all contain carbon, they are also called organic nutrients. They can all be used as a source of energy in body cells if necessary.
- 100) One gram of carbohydrate provides 4 kilocalories, one gram of protein provides 4 kilocalories, and one gram of lipids provides 9 kilocalories. The main function of carbohydrates is to provide energy. The main function of fat is to store energy, and proteins are the building blocks of amino acids which are used as hormones, enzymes and antibodies.