Test Bank for Nutritional Sciences 4th McGuire

Name:_____ Class:_____ Date:_____

Chapter 01: The Science of Nutrition

1. All nutritional scientists are dietitians.
   a. True
   b. False

ANSWER: False

2. Essential nutrients do not need to be eaten to maintain health, as the body can make them in amounts needed to satisfy its physiological requirements.
   a. True
   b. False

ANSWER: False

3. Vitamins and minerals are considered to be energy-yielding nutrients.
   a. True
   b. False

ANSWER: False

4. When a food is labeled “organic,” it is always healthier than foods without this label.
   a. True
   b. False

ANSWER: False

5. Dietary fiber is a form of carbohydrate that may help decrease an individual's risk of type 2 diabetes.
   a. True
   b. False

ANSWER: True

6. The energy in food is measured in units called calories.
   a. True
   b. False

ANSWER: True

7. Lipids include a variety of fats and oils.
   a. True
   b. False

ANSWER: True

8. All inorganic substances in the human body are called minerals.
   a. True
   b. False

ANSWER: False

9. A gram of fat provides more energy than a gram of protein.
   a. True
   b. False

ANSWER: True

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10. When using the scientific method, the first step is to make an appropriate and accurate observation.
    a. True
    b. False

ANSWER: True

11. Epidemiologic studies investigate correlations.
    a. True
    b. False

ANSWER: True

12. In an intervention study, control groups receive a treatment or intervention.
    a. True
    b. False

ANSWER: False

13. *The New York Times* is generally considered a primary and peer-reviewed source.
    a. True
    b. False

ANSWER: False

14. For a given period of time, the mortality rate refers to the number of deaths while the morbidity rate relates to the number of illnesses.
    a. True
    b. False

ANSWER: True

15. NHANES is an epidemiologic study to assess trends in diet and health in the U.S. population.
    a. True
    b. False

ANSWER: True

16. Which of the following statements describes a "nonessential nutrient"?
    a. The body can make the nutrient in the amount needed.
    b. The body doesn't need the nutrient.
    c. The body cannot use the nutrient.
    d. The body stores the nutrient for later use.
    e. The body immediately excretes the nutrient.

ANSWER: a

17. Which of the following is the overall term for substances in food that are used by the body for at least one of the following: energy, structure, or regulation of chemical reactions in the body?
    a. Calories
    b. Vitamins
    c. Minerals

d. Nutrients
e. Water

ANSWER: d

18. Which of the following statements is true about essential nutrients?
a. They must be synthesized by the body daily.
b. They must be stored in the body.
c. They must come from the food we eat.
d. They must be consumed from organic foods.
e. They need to be generated by the body in the morning.

ANSWER: c

19. Because of his age, baby Omar's body cannot make a nutrient that would normally be considered a nonessential nutrient for older adults. What is the term used for this type of nutrient?
a. Essential
b. Baby nonessential
c. Conditionally essential
d. Partially essential
e. Stored

ANSWER: c

20. Which statement is true about macronutrients?
a. They are defined by being calorie rich.
b. We need large quantities of them on a daily basis.
c. Lipids make up the majority of these nutrients.
d. Most are minerals.
e. The body requires less than a gram per day of these nutrients.

ANSWER: b

21. Which term is used to describe foods such as beets and tomatoes that, when consumed, do more to promote health than simply helping the body meet basic nutritional needs?
a. Fluidic
b. Essential
c. Organic
d. Biodiverse
e. Functional

ANSWER: e

22. Which U.S. government agency certifies foods as grown and processed "organically"?
a. Environmental Protection Agency
b. Food and Drug Administration
c. Department of Health and Human Services
d. Federal Trade Commission
e. Department of Agriculture

ANSWER: e

23. Foods are considered "organic" if they are produced, grown, and harvested without the use of most conventional pesticides, fertilizers made with synthetic ingredients, ionizing radiation, or which of the following?
    a. Carbon-containing compounds
    b. Distilled water
    c. Ultraviolet light
    d. Greenhouses
    e. Bioengineering

ANSWER: e

24. Which statement is true regarding "Certified Organic" foods?
    a. The term has little to do with how a plant or animal is grown or harvested.
    b. These foods are not guaranteed to be more nutritious than those lacking the certification.
    c. These foods are fresher and will last longer than those without the certification.
    d. These foods are never treated with pesticides.
    e. The term means the food is always safer to eat.

ANSWER: b

25. Jude is shopping and finds a box of cereal that is labeled "100% organic." What percentage of the cereal must therefore be organic?
    a. At least 50%
    b. At least 70%
    c. At least 85%
    d. At least 95%
    e. At least 100%

ANSWER: d

26. Which of the following is the primary source of energy for most cells?
    a. Fatty acids
    b. Glucose
    c. Proteins
    d. Sucrose
    e. Water

ANSWER: b

27. What is the approximate percentage of the adult human body weight that is made up of water?
    a. 10%
    b. 20%
    c. 35%
    d. 50%
    e. 60%

ANSWER: e

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28. Tala has decided to try to cut out fat from her diet. Tala could be at risk for developing which of the following vitamin deficiencies since this vitamin is fat-soluble?

a. C
b. B_1
c. B_{12}
d. E
e. B_6

ANSWER: d

29. What substance in the body stores energy like a molecular battery that the body can then use in the future to power many of its physiologic processes?

a. Zoonutrient
b. Adenosine triphosphate
c. Minerals
d. Nucleic acids
e. Vitamins

ANSWER: b

30. Nery is eating a food that contains 6 grams of fat, 20 grams of protein, and 26 grams of carbohydrates. How many kcal will Nery consume by eating this food?

a. 52
b. 104
c. 130
d. 77
e. 238

ANSWER: e

31. Lura has just finished a drink that contained 20 grams of carbohydrates and 12 grams of alcohol. How many kcal did Lura consume?

a. 32
b. 188
c. 145
d. 164
e. 128

ANSWER: d

32. Which of the following provides 7 kcal per gram?

a. Carbohydrates
b. Alcohol
c. Proteins
d. Lipids
e. Fiber

ANSWER: b

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33. Milo just ate six cookies that contained 820 calories, and 520 calories were from fat. Approximately what percent of the calories came from fat?

a. 2.6%
b. 31%
c. 63%
d. 85%
e. 100%

ANSWER: c

34. Vera is on a diet and is out at a restaurant having dinner. She's decided to have an alcoholic beverage that has 13 grams of alcohol. How many additional calories has this added to her meal?

a. 13
b. 52
c. 63
d. 91
e. 117

ANSWER: d

35. If Rohan requires 2500 kcalories per day, about how many of those kcalories should come from carbohydrates based upon the current recommendations?

a. 250–875
b. 500–875
c. 560–980
d. 1,125–1,625
e. 1,260–1,820

ANSWER: d

36. Rima is considering following a 1500-kcalorie diet that includes 500 kcalories from carbohydrates. Select the true statement regarding this diet.

a. It provides less than the current recommended amount of carbohydrates.
b. It is acceptable if the protein intake is roughly 10%–35% of kcalories.
c. It is acceptable if the lipid content is roughly 10%–15% of kcalories.
d. It provides the recommended amount of carbohydrates.
e. It is acceptable if the carbohydrates are mixed with alcohol.

ANSWER: a

37. After making a precise observation, which is the next step in testing theories using the scientific method?

a. Discontinue the research
b. Propose a hypothesis
c. Make an observation
d. Draft the conclusions
e. Conduct experiments

ANSWER: b

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38. In applying the scientific method, it is important that the observation qualifies as which of the following?
    a. Interesting and useful
    b. Simple and repeated
    c. Thoughtful and known
    d. Noteworthy and expected
    e. Accurate and complete

ANSWER: e

39. It is known that when someone takes in fewer kcalories than they need, they will lose weight. This is considered to be an example of which of the following?
    a. Simple relationship
    b. Nonessential relationship
    c. Cause-and-effect relationship
    d. Negative correlation
    e. Complex correlation

ANSWER: c

40. Kiana has been asked to conduct a study to determine if additional vitamin A will promote the growth of healthy, strong fingernails. Since she wants the study to be as close to the "ideal" nutrition intervention study as possible, which of the following will she make sure is part of the study?
    a. Half of the participants get something that looks like additional vitamin A but isn't.
    b. Only the researchers know which participants receive vitamin A.
    c. All participants get the same amount of vitamin A.
    d. All of the participants are between 18 and 25 years of age.
    e. The female chances of getting vitamin A are better than the males.

ANSWER: a

41. Of the following, which is an example of a positive correlation?
    a. The less Pau eats, the more muscle mass he loses.
    b. The more kcalories Tyr eats, the less energy he uses.
    c. The more vitamins Obama consumes, the less energy he has.
    d. The longer Leya exercises, the stronger she gets.
    e. The more sitting Kaliana does, the less she wants to exercise.

ANSWER: d

42. Of the following statements, which statement is an example of a "simple relationship"?
    a. Avoiding exercise can reduce an individual's life expectancy.
    b. Eating organic foods may improve nutritional status.
    c. Swimming may increase an individual's outlook on life.
    d. Consuming inadequate calcium may result in osteoporosis.
    e. Consuming inadequate vitamin C results in a deficiency.

ANSWER: e

43. Which of the following is an example of an environmental factor that influences health?

a. Performing minimal exercise when young
b. Consuming a varied diet
c. Being exposed to pesticides
d. An individual's ethnicity
e. Exercising moderately

ANSWER: c

44. What has to occur before a hypothesis becomes a scientific finding?
a. Design of an appropriate, carefully conducted study, and correct interpretation of the data
b. Debate, presentation of opposing views, and generalization
c. Presentation of the data at a national conference
d. Meta-analysis, summary, and proponent arguments
e. Peer review, delineation of pros and cons, and preparation of a bibliography

ANSWER: a

45. Which type of study includes scientists making observations and recording information without actually asking the subjects to change their behaviors or undergo any sort of treatment?
a. Controlled
b. Experimental
c. Prescribed
d. Epidemiologic
e. Simple

ANSWER: d

46. Which of these study designs would be appropriate if you wanted to determine the relationships among age, gender, activity level, alcohol consumption, and body weight among the students attending the universities in your state?
a. Epidemiologic
b. Efficacy
c. Intervention
d. Intercession
e. Intra-cession

ANSWER: a

47. The Framingham Heart Study investigated the relationship between lifestyle factors and which other variable?
a. Liver damage
b. Cancer
c. Obesity
d. Longevity
e. Heart health

ANSWER: e

48. One of the limitations of epidemiologic studies is that the results cannot be interpreted as proving which of the following?
a. An association

b. A relationship to be causal
c. A negative correlation
d. A positive correlation
e. A link

ANSWER: b

49. The nutrition researchers at a university conduct an epidemiologic study of students' consumption of snacks from campus vending machines. They find that most first-year students on their campus purchased snacks from the vending machines and that the average weight gain for first-year students was 15–25 pounds during the year. Select the most appropriate conclusion.

a. Eating snacks from vending machines causes weight gain.
b. For first-year students, there may be an association between purchasing snacks from vending machines and gaining weight.
c. For first-year students, eating snacks from vending machines causes a weight gain of 15–25 pounds.
d. For college students, consuming snacks from vending machines will result in gaining 15–25 pounds.
e. College students gain weight.

ANSWER: b

50. NHANES simultaneously monitors nutrition and which of the following in the United States?

a. Health of the population
b. Weight gain among adults over 21
c. Incidence of diabetes in children over the age of 2
d. Incidence of vitamin and mineral deficiencies in low-income groups
e. Specific heart-related problems

ANSWER: a

51. Which of the following is the large, ongoing epidemiologic study to simultaneously monitor nutrition and health in the U.S. population?

a. Nutrition, Health, and Nurturing Exploratory Study
b. Nationwide Historic and Nutritional Examination Study
c. Nationwide Home and Nutritional Exploratory Survey
d. National Health and Nutrition Examination Survey
e. Nutritional, Holistic, and Natural Epidemiologic Study

ANSWER: d

52. What type of study will the scientist most likely conduct when a hypothesis suggests a causal relationship?

a. Exacting
b. Interpretive
c. Intervention
d. Epidemiologic
e. General

ANSWER: c

53. You are involved in a study observing the eating and health behaviors of Native Americans across the United States. Which type of study are you conducting?

a. Hawthorne study
b. Intervention study
c. Epidemiologic study
d. Cell culture study
e. Change of events study

ANSWER: c

54. In the middle of your study on the impact of increasing cow's milk intake on bone health, some of your subjects decide on their own to begin to consume non-fat milk instead of the prescribed whole milk because of their participation in the study. This describes which of the following effects?

a. Placebo
b. Hawthorne
c. Intervention
d. Random
e. Individual

ANSWER: b

55. Professor Campbell plans to study the effect of zinc supplements on adults' susceptibility to the common cold virus. He will give some of the participants zinc supplements, while giving which other group supplements that do not contain zinc?

a. Investigation group
b. Research group
c. Control group
d. Experimental group
e. Really sick group

ANSWER: c

56. Which of these is true regarding human intervention studies?

a. There are typically few confounding factors in these types of studies.
b. Their results can provide evidence that the relationships between variables are causal in nature.
c. Their results cannot be directly applied to humans.
d. These types of studies are typically inexpensive.
e. These types of studies can be conducted quickly.

ANSWER: b

57. In which group is a placebo typically used?

a. Control group
b. Subject group
c. Experimental group
d. Population group
e. Intervention group

ANSWER: a

58. Hani is a participant in a human intervention study that is testing the impact of magnesium supplements on the

performance of endurance athletes. Though Hani does not know if he is receiving magnesium or an inactive sugar pill, he is quite certain this new tablet that he is taking has helped him shave several minutes off his usual marathon time. What effect is Hani experiencing?

a. Thornburg
b. Placebo
c. Predisposition
d. NHANES
e. Mineral

ANSWER: b

59. Random assignment of participants to treatment or control groups is important because it equally distributes which of the following among study groups?

a. Confounding variables
b. Men and women
c. Subjects with different ethnic backgrounds
d. Consequence factors
e. Participant knowledge of group placement

ANSWER: a

60. What is a "fake" or imitation treatment called?

a. Replica
b. Synthetic
c. Mock
d. Placebo
e. Duplication

ANSWER: d

61. Which term describes a study where neither the researcher nor the participants know who is in the treatment group and who is not?

a. Randomized-trial
b. Placebo-controlled
c. Double-blind
d. Researcher-protected
e. Double-randomized

ANSWER: c

62. Which of the following is the term used for the study of phenomena within living organisms?

a. *In vitro*
b. *In vivo*
c. Random
d. Organic
e. Systematic

ANSWER: b

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63. What is a technique that allows confounding variables to have an equal chance of being in either group, and therefore helps to control for unknown confounding variables?

a. Systemization
b. Randomization
c. Use of control groups
d. Use of placebos
e. Blinding

ANSWER: b

64. Ken turns in a paper on the benefits of organically raised produce; however, points are deducted from his submission. The assignment was to follow certain procedures, which included only citing credible sources. What is the most probable cause of Ken losing points due to potential sources of inaccuracy in his submission?

a. He chose references that were only primary sources.
b. The research cited was conducted by a scientist in the field.
c. The research cited was peer reviewed.
d. The research cited was supported by a reputable organization.
e. The citations were from news and health store magazines.

ANSWER: e

65. Which of the following is considered the first place that information was reported or published?

a. Foundation document
b. Principal document
c. Key source
d. Primary source
e. Printed source

ANSWER: d

66. Which of the following publications is the preferred source for reputable information about nutrition and other sciences?

a. Daily news
b. Books written by well-known authors
c. Peer-reviewed journals
d. Product information inserts
e. Research backed by large well-known companies

ANSWER: c

67. If a group of farmers who grow oranges helps fund a university-based research project to determine the amount of vitamin C contained in fresh vs. frozen orange juice, it is appropriate to understand which of the following in assessing the research findings?

a. Recognize the funding group could have influenced the research findings.
b. Discount the research as being fully biased.
c. Trust the findings since the research was university based.
d. Discount the research because it was not government funded.
e. Trust the outcomes because it was backed by expert farmers.

ANSWER: a

68. Nara is interested in finding out about the details and other important information about a study she has just read. Which of these would be the best source?
    a. NutriInfo.com
    b. StudyStream
    c. PubMed
    d. Health Magazine
    e. Study.com

ANSWER: c

69. What is used to measure and assess illness over a span of time?
    a. Mortality rates
    b. Migration patterns
    c. Infection patterns
    d. Morbidity rates
    e. Newspaper reviews

ANSWER: d

70. The number of people who are newly diagnosed with a disease in a given period of time is referred to as which of the following?
    a. Incidence
    b. Prevalence
    c. Pervasiveness
    d. Inclusion
    e. Participation

ANSWER: a

71. The major causes of disability and death in the United States are currently which of the following?
    a. Smoking and accidents
    b. HIV/AIDS and infectious diseases
    c. Heart disease and cancer
    d. Diabetes and obesity
    e. Pancreatitis and cirrhosis of the liver

ANSWER: c

72. Which term refers to contagious diseases that are caused by pathogens?
    a. Chronic
    b. Infectious
    c. Persistent
    d. Insignificant
    e. Non-communicable

ANSWER: b

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73. In the United States today, we are facing a rising incidence of illnesses that develop slowly and continue for a long time. Which term refers to this type of disease?

a. Persistent
b. Malnutrition
c. Chronic
d. Infectious
e. Acute

ANSWER: c

74. What do researchers call the shift from undernutrition to overnutrition or unbalanced nutrition as a society becomes more industrialized?

a. Negative shift
b. Nutrition evolution
c. Nutrition transition
d. Positive shift
e. Societal shift

ANSWER: c

75. You are teaching students about the statistical prediction of years of life remaining for a person at a particular age. What is this concept called?

a. Morbidity rate
b. Mortality rate
c. Longevity
d. Life expectancy
e. Prevalence

ANSWER: d

76. What is the term used to describe the fact that although life expectancy in the United States has increased substantially, many middle-aged and older adults are living with one or more chronic health condition such as cancer, cardiovascular disease, and type 2 diabetes?

a. Prevalence
b. Etiology
c. Mortality
d. Comorbidity
e. Incidence

ANSWER: d

77. Which of these describes the leading cause of death in the United States at the turn of the 20th century?

a. Infectious disease
b. Vitamin-deficiency disease
c. Chronic disease
d. Autoimmune disease
e. Degenerative disease

ANSWER: a

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78. Researchers estimate what percentage of U.S. adults are either overweight or obese?
a. 20%
b. 40%
c. 50%
d. 60%
e. 75%

ANSWER: e

79. What is the term for a relationship between two factors that is not influenced or modified by another factor?
a. Genetic factor
b. Environmental factor
c. Lifestyle factor
d. Complex relationship
e. Simple relationship

ANSWER: e

80. A scientist conducting a study can inadvertently influence the outcome by knowing which subjects are receiving the treatment and which ones are not. What is the name for this phenomenon?
a. Researcher bias
b. Hawthorne effect
c. Exceptional variables
d. Randomization effects
e. Single-blind effect

ANSWER: a

81. What is the term for the type of epidemiologic (observational) study in which data are collected at a single time point?
a. Prospective study
b. Longitudinal study
c. Case-control study
d. Cross-sectional study
e. Retrospective study

ANSWER: d

82. In the United States, what is the official organization or place for monitoring health trends and compiling health-related statistics?
a. Department of Health, Education, and Welfare
b. Washington Post Specialist Labs
c. Centers for Disease Control and Prevention
d. The Office of the President of the United States
e. Top 10 University Labs

ANSWER: c

83. Which of these nutrients helps maintain the health of the digestive system, as well as decreasing risk of heart disease and type 2 diabetes?

a. Protein
b. Dietary fiber
c. Glucose
d. Cholesterol
e. Sulfur

ANSWER: b

84. Eos is determining if the sources for his research paper are reliable and credible. Which of the following is least important for him to consider when reviewing a particular source?

a. Whether it is a primary source that has been peer reviewed
b. Whether or not he has heard of the source and knows of its popularity
c. Who conducted the research and their credibility
d. Whether public health experts agree with the findings
e. Determining who funded the research

ANSWER: b

85. Mil is eating a bowl of cereal. The cereal likely contributes which of the following macronutrients to Mil's diet?

a. Water, carbohydrates, protein, fat
b. Niacin, folic acid, calcium
c. Riboflavin, salt, sodium benzoate
d. Thiamin mononitrate, the sun
e. Vitamin D, vitamin C, calcium

ANSWER: a

86. Every year there seem to be foodborne illness outbreaks that make people sick and result in the deaths of some. When some foods are thought to be contaminated, why don't scientists simply conduct intervention studies rather than those that are epidemiologic, so that they can be sure which foods are at fault and remove them from the food supply as soon as possible?

ANSWER: Conducting intervention studies would require that scientists give contaminated foods to the research subjects. Doing so would result in some subjects becoming ill and perhaps dying. Because of the risk of becoming ill, this is not an acceptable scientific approach. Therefore, scientists rely on epidemiologic studies, which may suggest an association but do not prove cause and effect.

87. Javier notices that sometimes the word "Calorie" is capitalized and sometimes it is not. What is a "Calorie," and why is the term sometimes capitalized?

ANSWER: The amount of energy in foods is measured in units called calories. The more calories a food has, the more ATP the body can make from it. Because 1 calorie represents a very small amount of energy, the energy content of foods is typically expressed in units of 1,000 calories, or kilocalories. This is often abbreviated as "kcalories" or "kcal." In addition, a kilocalorie is sometimes referred to as a Calorie (note the capital "C"), as on food labels. Therefore, 1 Calorie is equivalent to 1,000 calories or 1 kilocalorie.

88. Why is the scientific method used to test theories?

ANSWER: To provide a safeguard that conclusions are likely valid. Each step has safeguards to protect against errors and the human tendency to overlook results that contradict expectations.

89. To control for the Hawthorne effect, placebo effect, and researcher bias, how can scientific studies be designed?

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ANSWER: To control for Hawthorne effect, placebo effect, and researcher bias, scientists use blinding (especially double-blinding), use randomization, and control for confounding variables.

90. What guidelines can consumers use to make sound decisions about nutrition claims?

ANSWER: Assess the source of the information, the credibility of the research, source of funding (bias?), and appropriateness of the experimental design; and investigate whether public health organizations concur with the findings.