6. Prenatal exposure to alcohol is one of the leading preventable causes of mental retardation in the United States.
    a. True
    b. False

ANSWER:	True
REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Remember

7. Epidemiologic methodology can be used to determine whether syndromes are related to each other or represent distinct conditions.
    a. True
    b. False

ANSWER:	True
REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Remember

8. A single individual with a confirmed diagnosis of a disease is classified as a case.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Remember

9. In a study on liver cancer, subjects with a high fat intake had a relative risk of 2.15, meaning they have double the risk of developing liver cancer than those with a low intake of fat.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Understand

10. The prevalence of a disease is the number of new cases of a disease during a specific time period in a defined population.
    a. True
    b. False

ANSWER:	False
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.3 - Explain prevalence rates and how they differ from incidence rates.
KEYWORDS:	Bloom's: Remember

11. The rate of incidence of a disease is best measured using a cross-sectional study.
    a. True
    b. False

ANSWER:	False
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.3 - Explain prevalence rates and how they differ from incidence rates.
KEYWORDS:	Bloom's: Remember

12. A cohort is a well-defined group of people who are studied over a period of time to determine their incidence of disease, injury, or death.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Remember

13. The first step of the scientific method is hypothesis development and prediction.
    a. True
    b. False

ANSWER:	False
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Remember

14. A scientific study in which participants self-selected involvement would likely show error due to selection bias.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

15. A confounding factor is a "hidden" factor or characteristic that may cause an association that the researchers attribute to other factors.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

16. An important principle of the scientific method is that most research generates new questions, not final answers.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

17. Prospective cohort studies use existing longitudinal data to look back for a temporal relationship between exposure factors and outcome development.
    a. True
    b. False

ANSWER:	False
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

18. An ecological study focuses on groups of people and examines the relationship between exposure and disease.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

19. In an experimental study, investigators examine preventions and treatments for diseases by actively manipulating which groups receive the agent under study.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

20. The investigation of the correlation between fish consumption and breast cancer incidence in humans is an example of a correlation study.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of

epidemiologic studies.

KEYWORDS: Bloom's: Understand

21. Cross-sectional studies examine the relationships among dietary intake, diseases, and other variables as they exist in a population at a particular time.
    a. True
    b. False

ANSWER: True

REFERENCES: Types of Epidemiologic Studies

LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.

KEYWORDS: Bloom's: Understand

22. A disadvantage of a case-control study is the need to study large numbers of subjects.
    a. True
    b. False

ANSWER: False

REFERENCES: Types of Epidemiologic Studies

LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.

KEYWORDS: Bloom's: Understand

23. A randomized clinical trial conducted as a double-blind experiment is the most rigorous evaluation of a dietary hypothesis.
    a. True
    b. False

ANSWER: True

REFERENCES: Types of Epidemiologic Studies

LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.

KEYWORDS: Bloom's: Understand

24. Case control studies are useful when rare diseases or diseases with long latency periods are being studied.
    a. True
    b. False

ANSWER: True

REFERENCES: Types of Epidemiologic Studies

LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.

KEYWORDS: Bloom's: Understand

25. One of the first applications of epidemiology to nutrition science was Lind's controlled trial investigating the curative effects of citrus fruits on sailors with scurvy.
    a. True
    b. False

ANSWER: True

REFERENCES:	Nutritional Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS:	Bloom's: Understand

26. Nutritional epidemiology today is primarily concerned with the major chronic diseases of the Western world.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Nutritional Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS:	Bloom's: Understand

27. The complexity and variability of our diets makes it challenging to the study of the relationship of diet to disease.
    a. True
    b. False

ANSWER:	True
REFERENCES:	Nutritional Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS:	Bloom's: Understand

28. Food balance sheets measure the food actually ingested by a population.
    a. True
    b. False

ANSWER:	False
REFERENCES:	Nutritional Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS:	Bloom's: Understand

29. Dietary recalls are considered the best method of assessing dietary intake for individuals.
    a. True
    b. False

ANSWER:	False
REFERENCES:	Nutritional Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS:	Bloom's: Understand

30. Interpreting epidemiologic data involves evaluating the criterion for a causal association and assessing for the presence of bias and the contribution of chance.
    a. True
    b. False

ANSWER:	True

REFERENCES:	Epidemiology and the Community Nutritionist
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

Multiple Choice

31. The discipline of epidemiology has expanded from its origin as the study of epidemics to include _____.
    a. the health and wellness of individuals
    b. medicine
    c. laboratory science
    d. health problems of populations

ANSWER:	d
REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.1 - Define epidemiology.
KEYWORDS:	Bloom's: Remember

32. In the context of epidemiology, the term _____ refers to the causes and factors that affect the risk of disease.
    a. distribution
    b. determinants
    c. host factors
    d. incidence

ANSWER:	b
REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.1 - Define epidemiology.
KEYWORDS:	Bloom's: Remember

33. In the 1990s, epidemiologic studies established that women could reduce their risk of bearing a child with neural tube birth defects by increasing their intake of _____.
    a. vitamin B
    b. vitamin C
    c. folic acid
    d. ascorbic acid

ANSWER:	c
REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.1 - Define epidemiology.
KEYWORDS:	Bloom's: Remember

34. Over the past decade, epidemiologic data have been used to develop _____ methods for identifying women at high risk of giving birth to a child with fetal alcohol spectrum disorder (FASD).
    a. surveillance
    b. pervasive
    c. intervention
    d. determinant

ANSWER:	a

REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Remember

35. Prenatal exposure to _____ is one of the leading preventable causes of mental retardation in the United States.
    a. nicotine
    b. alcohol
    c. cocaine
    d. marijuana

ANSWER:	b
REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Remember

36. Which of the following is **not** considered a vital statistic?
    a. cause-specific death rate
    b. fetal death rate
    c. infant mortality rate
    d. drug-usage rate

ANSWER:	d
REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Remember

37. To an epidemiologist studying factors that contribute to diabetes, an individual with a confirmed case of diabetes is a(n) _____.
    a. incidence
    b. prevalence
    c. case
    d. risk factor

ANSWER:	c
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.3 - Explain prevalence rates and how they differ from incidence rates.
KEYWORDS:	Bloom's: Remember

38. An epidemiologic study evaluated the relationship between caffeine and developing high blood pressure. The relative risk of the group drinking five caffeinated drinks a day in comparison to the group drinking no caffeinated drinks a day was 0.99. This means that if a person drinks five caffeinated drinks a day, he or she _____.
    a. has a 99 percent chance of developing high blood pressure
    b. has a 99 percent chance of NOT developing high blood pressure
    c. is not at increased risk of high blood pressure
    d. will almost certainly develop particularly severe high blood pressure

ANSWER:	c

REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Apply

39. Which characteristic is associated with the incidence rate of disease development?
    a. All cases in a single survey are counted.
    b. It is measured in a single point in time.
    c. All individuals are examined including cases and non-cases.
    d. It is measured most efficiently in a cohort study.

ANSWER:	d
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.3 - Explain prevalence rates and how they differ from incidence rates.
KEYWORDS:	Bloom's: Understand

40. Which risk factor for heart disease cannot be changed by lifestyle modifications?
    a. genetics
    b. obesity
    c. high blood pressure
    d. physical activity

ANSWER:	a
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Understand

41. Which step of the scientific method occurs immediately after the identification of the problem?
    a. experimental design
    b. data collection
    c. hypothesis formulation
    d. theory development

ANSWER:	c
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Remember

42. During statistical analysis, the investigator may consider searching for statistical associations among various groups that may suggest a cause–effect relationship, without having generated prior hypotheses about these groups. This is known as ____.
    a. selection bias
    b. data dredging
    c. measurement testing
    d. confounding bias

ANSWER:	b

REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Remember

43. _____ bias is the presence of another variable that accounts for an observation.
   a. Confounding
   b. Measurement
   c. Selection
   d. Control

ANSWER:	a
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Remember

44. One of the first large population studies to examine the relationship between blood cholesterol levels and risk of CHD was the Seven Countries Study. This study is an example of ____.
   a. observing
   b. counting cases
   c. relating cases to the population at rise
   d. making comparisons

ANSWER:	d
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.
KEYWORDS:	Bloom's: Remember

45. _____ bias may occur if study participants are not picked randomly from the population of interest.
   a. Confounding
   b. Measurement
   c. Sample
   d. Selection

ANSWER:	d
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Remember

46. In a(n) ____ trial, subjects are assigned to intervention alternatives by a method that is not random.
   a. observational
   b. cross-sectional
   c. trend
   d. nonrandomized controlled

ANSWER:	d

REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

47. In a(n) _____ study, exposure factors and outcomes are observed or measured at a single point in time in a sample from the population being studied.

    a. cross-sectional

    b. experimental

    c. randomized controlled

    d. cohort

ANSWER:	a
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

48. In a(n) _____ study, groups of people are studied to examine the relationship between exposure and disease.

    a. trend

    b. ecological

    c. cohort

    d. case-control

ANSWER:	b
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

49. In a(n) _____ study, systematic, quantitative methods are used to combine the results of all relevant studies to produce an overall estimate.

    a. trend

    b. experimental

    c. non-biased

    d. meta-analysis

ANSWER:	d
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

50. An investigation of the correlation between consumption of genetically modified corn and colon cancer incidence and mortality rates in humans is an example of a(n) _____ study.

    a. observational

    b. ecological

    c. experimental

    d. meta-analysis

ANSWER: b
REFERENCES: Types of Epidemiologic Studies
LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of
                       epidemiologic studies.
KEYWORDS: Bloom's: Understand

51. A study that follows a group of individuals free of the disease or condition of interest into the future is an example of
a(n) _____ study.
    a. retrospective cohort
    b. prospective cohort
    c. retrospective cross-sectional
    d. prospective cross-sectional
ANSWER: b
REFERENCES: Types of Epidemiologic Studies
LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of
                       epidemiologic studies.
KEYWORDS: Bloom's: Understand

52. The most appropriate use of a correlational study is to _____.
    a. generate hypotheses
    b. draw conclusions
    c. change public policy
    d. validate previous studies
ANSWER: a
REFERENCES: Types of Epidemiologic Studies
LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of
                       epidemiologic studies.
KEYWORDS: Bloom's: Understand

53. The major objective of the *Nurse's Health Study I* was to _____.
    a. investigate the development of cardiovascular disease
    b. prevent or delay the development of type 2 diabetes
    c. investigate diets and lifestyle risk factors for chronic disease in women
    d. evaluate men's health and fitness to incidence of serious illness
ANSWER: c
REFERENCES: Types of Epidemiologic Studies
LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of
                       epidemiologic studies.
KEYWORDS: Bloom's: Understand

54. Nutritional epidemiology _____.
    a. is a fairly new area of study
    b. focuses on the role of Western diet and chronic disease
    c. always utilizes controlled, clinical trial protocols
    d. currently focuses on deficiency diseases

ANSWER: a
REFERENCES: Nutritional Epidemiology
LEARNING OBJECTIVES: CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS: Bloom's: Understand

55. A single 24-hour dietary recall ____.
   a. is considered the best method of assessing dietary intake
   b. uses a questionnaire to assess nutrient intake
   c. requires the subject to make judgments about their usual food habits
   d. may not give an adequate picture of a specific individual's usual intake

ANSWER: d
REFERENCES: Nutritional Epidemiology
LEARNING OBJECTIVES: CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS: Bloom's: Understand

56. The ____ method of assessing intake is time consuming, and the results may not be accurate if subjects modify their eating habits during the time of the study.
   a. twenty-four-hour recall
   b. food record
   c. food frequency
   d. diet history

ANSWER: b
REFERENCES: Nutritional Epidemiology
LEARNING OBJECTIVES: CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS: Bloom's: Remember

57. Food ____ measure the food available for consumption from imports and domestic food production minus the food through exports, waste, or spoilage.
   a. records
   b. histories
   c. balance sheets
   d. questionnaires

ANSWER: c
REFERENCES: Nutritional Epidemiology
LEARNING OBJECTIVES: CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS: Bloom's: Remember

58. In Basiotis et al.'s year-long food intake study, which food component required the largest number of days of food intake records to yield a "true" average intake?
   a. food energy
   b. carbohydrates
   c. iron

    d. vitamin A

ANSWER: d

REFERENCES: Nutritional Epidemiology

LEARNING OBJECTIVES: CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.

KEYWORDS: Bloom's: Remember

59. Methods of assessing household food consumption include _____.
    a. records of food wasted, spoiled, or fed to pets

    b. records of number of meals eaten at home or away from the home

    c. per capita export data

    d. food disappearance data

ANSWER: b

REFERENCES: Nutritional Epidemiology

LEARNING OBJECTIVES: CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.

KEYWORDS: Bloom's: Remember

60. When evaluating epidemiological data, plausibility refers to the _____.
    a. consistency of the association with other knowledge

    b. similarity of findings with other studies

    c. likelihood of a casual association

    d. chronology of exposure and disease onset

ANSWER: a

REFERENCES: Epidemiology and the Community Nutritionist

LEARNING OBJECTIVES: CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.

KEYWORDS: Bloom's: Understand

Matching

Match the advantage or disadvantage in the left column with its correct type of study. Items will be used more than once.
a. case-control study

b. cohort study

REFERENCES: Types of Epidemiologic Studies

LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.

KEYWORDS: Bloom's: Remember

61. Relies on recall or existing records about past exposures
ANSWER: a

62. Difficult to select suitable comparison group
ANSWER: a

63. Can calculate and compare rates in exposed and unexposed

ANSWER: b

64. Need to study large numbers of individuals and which may take years to accomplish
ANSWER: b

65. Relatively quick and inexpensive as it requires relatively few subjects
ANSWER: a

66. May provide incomplete data from subject loss to follow-up
ANSWER: b

Match the step in the scientific method in the left column with its correct description in the right column.
a. experiment
b. hypothesis & prediction
c. observation & question
d. results & interpretations
e. theory

REFERENCES: Types of Epidemiologic Studies
LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS: Bloom's: Remember

67. The problem is identified.
ANSWER: c

68. A tentative solution to the problem is formulated.
ANSWER: b

69. A study is designed and conducted to collect relevant data.
ANSWER: a

70. Conclusions are drawn based on collected data.
ANSWER: d

71. Conclusions of studies that support the hypothesis are integrated.
ANSWER: e

Match the definitions in the left column with the appropriate terms in the right column.
a. risk
b. confounding factor
c. prevalence
d. determinants
e. case
f. cohort
g. incidence
h. case-control study
i. vital statistics

j. food balance sheets

REFERENCES: Basic Epidemiologic Concepts
LEARNING OBJECTIVES: CNIA.BOYL.17.2.3 - Explain prevalence rates and how they differ from incidence rates.
KEYWORDS: Bloom's: Remember

72. The number of existing cases of a disease in a given population
ANSWER: c

73. The number of new cases of a disease during a specific time period in a defined population
ANSWER: g

Match the definitions in the left column with the appropriate terms in the right column.
a. risk
b. confounding factor
c. prevalence
d. determinants
e. case
f. cohort
g. incidence
h. case-control study
i. vital statistics
j. food balance sheets

REFERENCES: Basic Epidemiologic Concepts
LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS: Bloom's: Remember

74. A well-defined group of people who are studied over a period of time
ANSWER: f

75. A type of observational analytic study
ANSWER: h

76. A "hidden" characteristic that is distributed differently in the study and control groups that may cause an association that the researchers attribute to other factors
ANSWER: b

Match the definitions in the left column with the appropriate terms in the right column.
a. risk
b. confounding factor
c. prevalence
d. determinants
e. case
f. cohort
g. incidence
h. case-control study

i. vital statistics

j. food balance sheets

REFERENCES: Nutritional Epidemiology

LEARNING OBJECTIVES: CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.

KEYWORDS: Bloom's: Remember

77. National accounts of the annual production of food, changes in stocks, imports/exports, and food distribution
ANSWER: j

Match the definitions in the left column with the appropriate terms in the right column.

a. risk

b. confounding factor

c. prevalence

d. determinants

e. case

f. cohort

g. incidence

h. case-control study

i. vital statistics

j. food balance sheets

REFERENCES: Basic Epidemiologic Concepts

LEARNING OBJECTIVES: CNIA.BOYL.17.2.2 - Describe various vital statistics used by epidemiologists to monitor a population's health status.

KEYWORDS: Bloom's: Remember

78. The probability that people will acquire a disease
ANSWER: a

79. Figures pertaining to certain life events
ANSWER: i

80. A particular instance of a disease or outcome of interest
ANSWER: e

Match the definitions in the left column with the appropriate terms in the right column.

a. risk

b. confounding factor

c. prevalence

d. determinants

e. case

f. cohort

g. incidence

h. case-control study

i. vital statistics

j. food balance sheets

REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.1 - Define epidemiology.
KEYWORDS:	Bloom's: Remember

81. Causes and factors that affect the risk of disease
ANSWER: d

Subjective Short Answer

82. List different controllable and non-controllable risk factors of heart disease.
ANSWER:	Controllable risk factors include high LDL cholesterol, low HDL cholesterol, high blood pressure, cigarette smoking, diabetes, physical inactivity, obesity, an atherogenic diet, and stress. Non-controllable risk factors include age, gender, and genetics.
REFERENCES:	Basic Epidemiologic Concepts
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.2 - Describe various vital statistics used by epidemiologists to monitor a population's health status.
KEYWORDS:	Bloom's: Remember

83. List the steps of the scientific method in order.
ANSWER:	Observation and question; hypothesis and prediction; experiment; results and interpretation; support or rejection of hypothesis; and formation of theory, if hypothesis was supported, or development of new questions/hypotheses, if hypothesis was not supported.
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

84. Define confounding factors. List possible confounding factors in an epidemiological study.
ANSWER:	Confounding factors are "hidden" factors or characteristics that are distributed differently in the study and control groups and may cause an association that the researchers attribute to other factors. Possible confounding factors include: age, gender, race, ethnicity, and dietary or lifestyle factors.
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

85. Can data derived from an ecological study accurately yield a final conclusion that consumption (or lack thereof) of a specific nutrient can lead to the development of a given disease? Why or why not?
ANSWER:	No; the data from an ecological study cannot be used to draw these conclusions as the dietary data obtained are based on population food disappearance data and are therefore not particularly specific.
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

86. What is the main difference between a retrospective and prospective cohort study?

ANSWER:	A retrospective cohort study examines previous data in an effort to look back in time to reconstruct exposures and health outcomes, whereas prospective cohort studies follow a group into the future.
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Understand

87. Define the term relative risk and explain what a relative risk of greater than 1.0 means.

ANSWER:	The relative risk is a comparison of the risk of some health-related event, such as disease or death, in two groups. If the relative risk is greater than 1.0, the exposed group is at greater risk of the health-related event than the unexposed group.
REFERENCES:	The Practice of Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.2 - Describe various vital statistics used by epidemiologists to monitor a population's health status.
KEYWORDS:	Bloom's: Understand

88. Make an observation on the diet-cancer relationship as it is understood today.

ANSWER:	Answers will vary, but could include the following: Those who consume a low-fiber, low-antioxidant, low–fruit and -vegetable diet have an increased risk of developing cancer.
REFERENCES:	Nutritional Epidemiology
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.
KEYWORDS:	Bloom's: Apply

89. Develop a hypothesis to be tested that is relevant to the diet-cancer relationship.

ANSWER:	Answers will vary; however, in an experimental trial, the investigator will need to identify a cause-effect comparison.
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Apply

90. Would a cohort study be appropriate to investigate your hypothesis? Why or why not?

ANSWER:	Answers will vary; however, in most situations a cohort study could be appropriate because it allows comparisons of groups.
REFERENCES:	Types of Epidemiologic Studies
LEARNING OBJECTIVES:	CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS:	Bloom's: Apply

91. What role might the community nutritionist play in this study?

ANSWER:	Answers will vary, but could include the following:

- Identifying nutritional problems within the community
- Interpreting the scientific literature for the public and other health professionals
- Critically evaluating the scientific literature before formulating new nutrition

policies or offering advice about eating patterns

REFERENCES: Epidemiology and the Community Nutritionist

LEARNING OBJECTIVES: CNIA.BOYL.17.2.2 - Describe various vital statistics used by epidemiologists to monitor a population's health status.

KEYWORDS: Bloom's: Understand

Essay

92. Define epidemiology and its relationship to community nutrition.

ANSWER: Epidemiology is the study of the distribution and determinants of health-related states and events in specified populations and the applications of this study to the control of health problems. The epidemiologist works to identify the causes of disease and to propose strategies for controlling or preventing health and nutrition problems.

REFERENCES: The Practice of Epidemiology

LEARNING OBJECTIVES: CNIA.BOYL.17.2.1 - Define epidemiology.

KEYWORDS: Bloom's: Understand

93. Describe two examples of how the results of epidemiological studies have impacted the nutritional status of Americans.

ANSWER:

- The relationship between adequate folic acid consumption and the lowered risk of neural tube defects led to the national policy of all grain products being fortified with folic acid.

- The relationship between diets low in fruits and vegetables and an increased risk of certain types of cancer led to an approved health claim on food labels.

REFERENCES: The Practice of Epidemiology

LEARNING OBJECTIVES: CNIA.BOYL.17.2.2 - Describe various vital statistics used by epidemiologists to monitor a population's health status.

KEYWORDS: Bloom's: Understand

94. Describe major vital statistics used by epidemiologists to monitor a population's health status.

ANSWER:

- *Crude birth rate* is the ratio of the number of live births during the year as compared to the average mid-year population multiplied by 1000.
- *Crude death rate* is the number of deaths during the year as compared to the average midyear population multiplied by 1000.
- *Age-specific death rate* is the ratio of the number of deaths to people in a particular age group as compared to the average midyear population in a specified age group multiplied by 1000.
- *Cause-specific death rate* is the ratio of the number of deaths due to a particular cause during the year as compared to the average midyear population multiplied by 1000.
- *Infant mortality rate* is the number of deaths of infants under the age of 1 as compared to the number of live births in the same year multiplied by 1000.
- *Neonatal mortality rate* is the number of deaths of infants under the age of 28 days during the year as compared to the number of live births in the same year multiplied by 1000.

- *Fetal death rate* is the number of fetal deaths (>20 weeks of gestation) during the year as compared to the number of live births and fetal deaths in the same year multiplied by 1000.

Maternal mortality rate is the number of pregnancy-related deaths during the year as compared to the number of live births in the same year multiplied by 100,000.

REFERENCES: The Practice of Epidemiology
LEARNING OBJECTIVES: CNIA.BOYL.17.2.2 - Describe various vital statistics used by epidemiologists to monitor a population's health status.
KEYWORDS: Bloom's: Understand

95. Explain prevalence rates and how they differ from incidence rates.
ANSWER: The prevalence rate is the fraction or proportion of a group possessing a disease or condition at a specific time, whereas the incidence rate is the fraction or proportion of a group initially free of a disease or condition that develops the disease or condition over a period of time. By calculating and comparing rates, epidemiologists can determine the strength of the association between risk factors and the health problem being studied.
REFERENCES: Basic Epidemiologic Concepts
LEARNING OBJECTIVES: CNIA.BOYL.17.2.3 - Explain prevalence rates and how they differ from incidence rates.
KEYWORDS: Bloom's: Understand

96. Discuss two reasons why data that is collected may not be valid.
ANSWER:
Two possible explanations for incorrect or invalid results include:

- They are biased due to a systematic error in measuring one or more outcome variables or there were systematic differences in the populations studied.

- The results are due to chance and do not represent the true state of affairs; that is, the observations made arose from random variations within the sample.

REFERENCES: Types of Epidemiologic Studies
LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.
KEYWORDS: Bloom's: Understand

97. Compare and contrast the major strengths and limitations of cohort studies and case-control studies.
ANSWER: A comparison of the major strengths and limitations is presented in Table 5.5 in the text. Essentially, a cohort study may provide complete data on the cases and stages of a disease in which calculations and comparisons can be made between those who were exposed and not exposed. These studies tend to be expensive and take many years to complete, thus increasing the amount of non-response data and limiting the control of confounding variables. Case-control studies are relatively quick and inexpensive studies that are an excellent way to study rare diseases and diseases with long latency periods. Oftentimes, existing records can be utilized on a relatively few study subjects. Limitations of this type of study include that the mechanism of the disease is not studied, with validation of data difficult to achieve.
REFERENCES: Types of Epidemiologic Studies
LEARNING OBJECTIVES: CNIA.BOYL.17.2.4 - Describe the strengths and weaknesses of various types of epidemiologic studies.

98. Explain how the complexity of our diets creates challenges in studying the relationship of diet to disease.
ANSWER:

- The complexity and diversity of chemicals found in the foods and supplements we consume
- The need for long-term dietary intake to be examined
- The variety of foods consumed throughout the year
- The variety of foods consumed day-to-day (within-person variation)

REFERENCES: Nutritional Epidemiology

LEARNING OBJECTIVES: CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.

KEYWORDS: Bloom's: Understand

99. Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.

ANSWER: If only one day's intake is determined, then, the true long-term nutrient intake may be misrepresented, leading to a false assessment of nutritional status.

REFERENCES: Nutritional Epidemiology

LEARNING OBJECTIVES: CNIA.BOYL.17.2.5 - Explain why the day-to-day variation in an individual's nutrient intake can have important implications for nutritional epidemiologic studies.

KEYWORDS: Bloom's: Understand

100. Differentiate among the methods of collecting food consumption data at the national, household, and individual levels.

ANSWER: The primary method of assessing the available food supply at the national level is based on food balance sheets. Food balance sheets measure the food available for consumption from imports and domestic food production, less the food "lost" through exports, waste, or spoilage, on a per capita basis. It is not a measure of actual food consumption, but availability.
Methods of assessing household food consumption consider the per capita food consumption of the household, taking into account the age and sex of persons in the household (or institution), the number of meals eaten at home or away from home, income, shopping practices, and other factors.
Four different methods used to assess food consumption at the individual level include: diet history, 24-hour dietary recall, food record or diary, and food frequency questionnaire. Dietary recalls are appropriate for assessing the intakes of groups of people, but a single 24-hour recall may not give an adequate picture of a specific individual's usual intake. Food records are often considered the best method of assessing dietary intake, but they are time consuming, and the results may not be accurate if subjects modify their eating habits during the time of the study. Diet histories can provide detailed information, but they require subjects to make judgments about their usual food habits. Food frequency questionnaires provide less detailed information, but are well suited for use with large groups.

REFERENCES: Nutritional Epidemiology

LEARNING OBJECTIVES: CNIA.BOYL.17.2.6 - List the advantages and disadvantages of various dietary assessment methods.

KEYWORDS: Bloom's: Understand

Chapter 02 - Principles of Epidemiology