Exam

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

1) True or False: A population is the totality of items or things under consideration.

A) True

B) False

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

2) True or False: A sample is the portion of the universe that is selected for analysis.

A) True

B) False

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

3) True or False: A statistic is usually used to provide an estimate for a usually unobserved parameter.

A) True

B) False

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

4) True or False: A statistic is usually unobservable while a parameter is usually observable.

A) True

B) False

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

5) True or False: A professor computing the sample average exam score of 20 students and using it to estimate the average exam score for the 1,500 students taking the exam is an example of inferential statistics.

A) True

B) False

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

6) True or False: In data collection, the most common technique to ensure proper representation of the population is to use a random sample.

A) True

B) False

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

7) True or False: Compiling the number of registered voters who turned out to vote for the members of parliament in Victoria is an example of descriptive statistics.

A) True

B) False

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

8) True or False: Using the number of registered voters who turned out to vote for the primary in Victoria to predict the number of registered voters who will turn out to vote in Tasmania's primary is an example of descriptive statistics.

A) True

B) False

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

9) True or False: Managers need an understanding of statistics to be able to present and describe information accurately, draw conclusions about large populations based on small samples, improve processes, and make reliable forecasts.

A) True

B) False

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

10) The process of using sample statistics to draw conclusions about true population parameters is called

A) sampling.

B) the scientific method.

C) statistical inference.

D) descriptive statistics.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

11) Those methods involving the collection, presentation, and characterisation of a set of data in order to properly describe the various features of that set of data are called

A) the scientific method.

B) sampling.

C) descriptive statistics.

D) statistical inference.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

12) The collection and summarisation of the socioeconomic and physical characteristics of the employees of a particular firm is an example of

A) a parameter.

B) inferential statistics.

C) descriptive statistics.

D) a statistic.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

13) The estimation of the population average family expenditure on food based on the sample average expenditure of 1,000 families is an example of

A) inferential statistics.

B) a statistic.

C) descriptive statistics.

D) a parameter.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

14) The universe or "totality of items or things" under consideration is called

A) a statistic.

B) a parameter.

C) a population.

D) a sample.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

15) The portion of the universe that has been selected for analysis is called

A) a parameter.

B) a frame.

C) a statistic.

D) a sample.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

16) A summary measure that is computed to describe a characteristic from only a sample of the population is called

A) a census.

B) a parameter.

C) a statistic.

D) the scientific method.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

17) A summary measure that is computed to describe a characteristic of an entire population is called

A) a statistic.

B) a census.

C) a parameter.

D) the scientific method.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

18) Which of the following is most likely a population as opposed to a sample?

A) Registered voters in a state.

B) Every third person to arrive at the bank.

C) Respondents to a newspaper survey.

D) The first 5 students completing an assignment.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

19) Which of the following is most likely a parameter as opposed to a statistic?

A) The proportion of trucks stopped yesterday that were found to be unroadworthy.

B) The average height of people randomly selected from a database.

C) The proportion of females registered to vote in a state.

D) The average score of the first 5 students completing an assignment.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

20) Which of the following is NOT an element of descriptive statistical problems?

A) Identification of patterns in the data.

B) Tables, graphs, or numerical summary tools.

C) An inference made about the population based on the sample.

D) The population or sample of interest.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

21) A study is under way in the Otway National Park to determine the mature height of Mountain Ash gum trees. Specifically, the study is attempting to determine what factors aid a tree in reaching heights greater than 60 metres tall. It is estimated that the park contains 25,000 mature Mountain Ash gum trees. The study involves collecting heights from 250 randomly selected mature Mountain Ash gum trees and analysing the results. Identify the population from which the study was sampled.

A) All Mountain Ash gum trees, of any age, in the park.

B) The 25,000 mature Mountain Ash gum trees in the park.

C) All the mature Mountain Ash gum trees taller than 60 metres.

D) The 250 randomly selected mature Mountain Ash gum trees.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

22) A study is under way in the Otway National Park to determine the mature height of Mountain Ash gum trees. Specifically, the study is attempting to determine what factors aid a tree in reaching heights greater than 60 metres tall. It is estimated that the park contains 25,000 mature Mountain Ash gum trees. The study involves collecting heights from 250 randomly selected mature Mountain Ash gum trees and analysing the results. Identify the variable of interest in the study.

A) The age of a Mountain Ash gum tree in the Otway National Park.

B) The height of a Mountain Ash gum tree in the Otway National Park.

C) The species of trees in the Otway National Park.

D) The number of Mountain Ash gum trees in the Otway National Park.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

23) A study is under way in the Otway National Park to determine the mature height of Mountain Ash gum trees. Specifically, the study is attempting to determine what factors aid a tree in reaching heights greater than 60 metres tall. It is estimated that the park contains 25,000 mature Mountain Ash gum trees. The study involves collecting heights from 250 randomly selected mature Mountain Ash gum trees and analysing the results. Identify the sample in the study.

A) The 250 randomly selected mature Mountain Ash gum trees.

B) All the mature Mountain Ash gum trees taller than 60 metres.

C) All Mountain Ash gum trees, of any age, in the park.

D) The 25,000 mature Mountain Ash gum trees in the park.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

24) Most analysts focus on the cost of HECS fees as the way to measure the cost of a university education. But incidentals, such as textbook costs, are rarely considered. A researcher at the University of Adelaide wishes to estimate the textbook costs of first-year students at the University. To do so, she monitored the textbook cost of 250 first-year students and found that their average textbook cost was $300 per semester. Identify the population of interest to the researcher.

A) All first-year University of Adelaide students.

B) All University of Adelaide students.

C) All university students.

D) The 250 students that were monitored.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

25) Most analysts focus on the cost of HECS fees as the way to measure the cost of a university education. But incidentals, such as textbook costs, are rarely considered. A researcher at the University of Adelaide wishes to estimate the textbook costs of first-year students at the University. To do so, she monitored the textbook cost of 250 first-year students and found that their average textbook cost was $300 per semester. Identify the variable of interest to the researcher.

A) The cost of incidental expenses of University of Adelaide students.

B) The age of University of Adelaide students.

C) The textbook cost of first-year University of Adelaide students.

D) The year in school of University of Adelaide students.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

26) Most analysts focus on the cost of HECS fees as the way to measure the cost of a university education. But incidentals, such as textbook costs, are rarely considered. A researcher at the University of Adelaide wishes to estimate the textbook costs of first-year students at the University. To do so, she monitored the textbook cost of 250 first-year students and found that their average textbook cost was $300 per semester. Identify the sample in the study.

A) All first-year University of Adelaide students.

B) The 250 students that were monitored.

C) All university students.

D) All University of Adelaide students.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

27) Researchers suspect that the average number of units passed per semester by university students is rising. A researcher at Brisbane University wishes to estimate the number of units passed by students during the second semester at Brisbane. To do so, he randomly selects 100 student transcripts and records the number of units each student passed in second semester. He found that the average number of semester units passed was 6.85 units per student. Identify the population of interest to the researcher.

A) All university students.

B) All Brisbane University students enrolled in second semester.

C) All Brisbane University students.

D) All university students enrolled in second semester.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

28) The average number of units passed per semester by university students is suspected to be rising. A researcher at Brisbane University wishes to estimate the number of units passed by students during the second semester at Brisbane University. To do so, he randomly selects 100 student transcripts and records the number of units each student passed in second semester. Identify the variable of interest to the researcher.

A) The age of Brisbane University students enrolled in second semester.

B) The number of students enrolled at Brisbane University during second semester.

C) The number of units passed by Brisbane University students during second semester.

D) The average indebtedness of Brisbane University students enrolled in second semester.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

Instruction 1-1

The manager of the customer service division of a major consumer electronics company is interested in determining whether the customers who have purchased a DVD recorder made by the company over the past 12 months are satisfied with their products.

29) Referring to Instruction 1-1, the population of interest is

A) all the customers who have ever bought a DVD player made by the company.

B) all the customers who have bought a DVD player made by the company over the past 12 months.

C) all the customers who have used a DVD player over the past 12 months.

D) all the customers who have bought a DVD player made by the company and brought it in for repair over the past 12 months.

Diff: 3

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

30) The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all (N = 40,000) workers in order to study their preferences for the various components of a potential package. All the employees in the corporation constitute the \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

31) The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all (N = 40,000) workers in order to study their preferences for the various components of a potential package. The 500 employees who will participate in this study constitute the \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

32) The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all (N = 40,000) workers in order to study their preferences for the various components of a potential package. The Director will use the data from the sample to compute \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

33) The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all (N = 40,000) workers in order to study their preferences for the various components of a potential package. Information obtained from the sample will be used to draw conclusions about the true population \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

34) The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all (N = 40,000) workers in order to study their preferences for the various components of a potential package. In this study, methods involving the collection, presentation, and characterisation of the data are called \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

35) The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all (N = 40,000) workers in order to study their preferences for the various components of a potential package. In this study, methods that result in decisions concerning population characteristics based only on the sample results are called \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

36) The oranges grown on commercial farms in Victoria were damaged by some unknown fungi a few years ago. Suppose the manager of a large orchard wanted to study the impact of the fruit flies on the orange crops on a daily basis over a 6-week period. On each day a random sample of orange trees were selected from within a random sample of acres. The daily average number of damaged oranges per tree and the proportion of trees having damaged oranges were calculated. The two main measures calculated each day (i.e., average number of damaged oranges per tree and proportion of trees having damaged oranges) are called \_\_\_\_\_\_\_\_.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

37) The oranges grown on commercial farms in Victoria were damaged by some unknown fungi a few years ago. Suppose the manager of a large orchard wanted to study the impact of the fruit flies on the orange crops on a daily basis over a 6-week period. On each day a random sample of orange trees were selected from within a random sample of acres. The daily average number of damaged oranges per tree and the proportion of trees having damaged oranges were calculated. The two main measures calculated each day (i.e., average number of damaged oranges per tree and proportion of trees having damaged oranges) may be used on a daily basis to estimate the respective true population \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

38) The oranges grown on commercial farms in Victoria were damaged by some unknown fungi a few years ago. Suppose the manager of a large orchard wanted to study the impact of the fruit flies on the orange crops on a daily basis over a 6-week period. On each day a random sample of orange trees were selected from within a random sample of acres. The daily average number of damaged oranges per tree and the proportion of trees having damaged oranges were calculated. In this study, drawing conclusions on any one day about the true population characteristics based on information obtained from the sample is called \_\_\_\_\_\_\_\_.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

39) The oranges grown on commercial farms in Victoria were damaged by some unknown fungi a few years ago. Suppose the manager of a large orchard wanted to study the impact of the fruit flies on the orange crops on a daily basis over a 6-week period. On each day a random sample of orange trees were selected from within a random sample of acres. The daily average number of damaged oranges per tree and the proportion of trees having damaged oranges were calculated. In this study, the presentation and characterisation of the two main measures calculated each day (i.e., average number of damaged oranges per tree and proportion of trees having damaged oranges) is called \_\_\_\_\_\_\_\_.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

40) The Quality Assurance Department of a large urban hospital is attempting to monitor and evaluate patient satisfaction with hospital services. Prior to discharge, a random sample of patients is asked to fill out a questionnaire to rate such services as medical care, nursing, therapy, laboratory, food, and cleaning. The Quality Assurance Department prepares weekly reports that are presented at the Board of Directors meetings and extraordinary/atypical ratings are easy to flag. Values computed from the sample results each week are called \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

41) The Quality Assurance Department of a large urban hospital is attempting to monitor and evaluate patient satisfaction with hospital services. Prior to discharge, a random sample of patients is asked to fill out a questionnaire to rate such services as medical care, nursing, therapy, laboratory, food, and cleaning. The Quality Assurance Department prepares weekly reports that are presented at the Board of Directors meetings and extraordinary/atypical ratings are easy to flag. True population characteristics estimated from the sample results each week are called \_\_\_\_\_\_\_\_.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

42) The Department of Health in Western Australia wanted to study malpractice litigation in Western Australia. A sample of 31,000 medical records was drawn from a population of 850,000 patients who were discharged during the year 2011. The proportion of malpractice claims filed from the sample of 31,000 patients is a \_\_\_\_\_\_\_\_.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

43) The Department of Health in Western Australia wanted to study malpractice litigation in Western Australia. A sample of 31,000 medical records was drawn from a population of 850,000 patients who were discharged during the year 2011. The true proportion of malpractice claims filed from the population of 850,000 patients is a \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

44) The Department of Health in Western Australia wanted to study malpractice litigation in Western Australia. A sample of 31,000 medical records was drawn from a population of 850,000 patients who were discharged during the year 2011. Using the information obtained from the sample to predict population characteristics with respect to malpractice litigation is an example of \_\_\_\_\_\_\_\_.

Diff: 2

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

45) The Department of Health in Western Australia wanted to study malpractice litigation in Western Australia. A sample of 31,000 medical records was drawn from a population of 850,000 patients who were discharged during the year 2011. The collection, presentation, and characterisation of the data from patient medical records are examples of \_\_\_\_\_\_\_\_.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

46) One of the "big four" Australian banks is conducting research in order to understand the banking needs of Australian residents. Using data collected by the Australian Bureau of Statistics is an example of a \_\_\_\_\_\_\_\_ source.

Diff: 1

Section: 1.1 Basic Concepts of Statistics

AACSB: Application of Knowledge

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

47) True or False: Problems may arise when statistically unsophisticated users who do not understand the assumptions behind the statistical procedures or their limitations are misled by results obtained from computer software.

A) True

B) False

Diff: 1

Section: 1.2 The Growth of Statistics and Information Technology

AACSB: Ethical Understanding and Reasoning

48) True or False: Data collected and distributed by the Australia Bureau of Statistics to be used for analysis by an organisation or individual can be classified as primary data.

A) True

B) False

Diff: 1

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

49) A potential investor wants to determine which firms within which industries are likely to have

experienced growth in a period of economic recovery. He accessed information from an Internet

site to capture the average performance figures of firms from various industries. Which of the four

methods of data collection was he using?

A) Data distributed by an organisation or an individual.

B) A designed experiment.

C) A survey.

D) An observational study.

Diff: 1

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

50) A marketing research analyst needs to assess the effectiveness of a new television advertisement. To collect appropriate data, she has provided a questionnaire instrument that can be answered electronically. Which of the 4 methods of data collection is she using?

A) Data distributed by an organisation or an individual.

B) A survey.

C) A designed experiment.

D) An observational study.

Diff: 1

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

51) A marketing research firm, in conducting a comparative taste test, provided three types of peanut butter to a sample of households randomly selected within the state. Which of the 4 methods of data collection is involved when people are asked to compare the three types of peanut butter?

A) Data distributed by an organisation or an individual.

B) A designed experiment.

C) A survey.

D) An observational study.

Diff: 1

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

52) Tim was planning for a meeting with his boss to discuss a raise in his annual salary. In preparation, he wanted to use the Consumer Price Index to determine the percentage increase in his real (inflation-adjusted) salary over the last three years. Which of the 4 methods of data collection was involved when he used the Consumer Price Index?

A) Data distributed by an organisation or an individual.

B) A designed experiment.

C) A survey.

D) An observational study.

Diff: 1

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

53) Which of the 4 methods of data collection is involved when a person counts the number of cars passing designated locations on the Melbourne CityLink freeway system?

A) Data distributed by an organisation or an individual.

B) A designed experiment.

C) A survey.

D) An observational study.

Diff: 2

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

54) A statistics student found a reference in the campus library that contained the median family incomes for all Australian states and territories. She would report her data as being collected using

A) a designed experiment.

B) a published source.

C) a random sample.

D) observational data.

Diff: 1

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

55) The personnel director at a large company studied the eating habits of the company's employees. The director noted whether employees brought their own lunches to work, ate at the company cafeteria, or went out to lunch. The goal of the study was to improve the food service at the company cafeteria. This type of data collection would best be considered as

A) a designed experiment.

B) an observational study.

C) a quota sample.

D) a random sample.

Diff: 1

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

56) A study attempted to estimate the proportion of Queensland residents who were willing to spend more tax dollars on protecting the beaches from environmental disasters. Twenty-five hundred Queensland residents were surveyed. What type of data collection procedure was most likely used to collect the data for this study?

A) A designed experiment.

B) A random sample.

C) Observational data.

D) A published source.

Diff: 1

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

57) One of the "big four" Australian banks is conducting research in order to understand the banking needs of Australian residents. Another option is to collect data using focus groups which is an example of \_\_\_\_\_\_\_\_ research.

Diff: 1

Section: 1.3 Collecting Data

AACSB: Application of Knowledge

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

58) True or False: The possible responses to the question "How long have you been living at your current residence?" are values from a continuous variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

59) True or False: The possible responses to the question "How many times in the past three months have you visited a city park?" are values from a discrete variable.

A) True

B) False

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

60) True or False: A continuous variable may take on any value within its relevant range even though the measurement device may not be precise enough to record it.

A) True

B) False

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

61) True or False: Faculty rank (professor to associate lecturer) is an example of discrete numerical data.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

62) True or False: Student grades (A to D) are an example of continuous numerical data.

A) True

B) False

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

63) True or False: The amount of coffee consumed by an individual in a day is an example of a discrete numerical variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

64) True or False: The answer to the question "What is your favourite colour?" is an example of a continuous variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

65) True or False: The answer to the question "How do you rate the quality of your business statistics course?" is an example of an ordinal scaled variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

66) True or False: The answer to the question "How many hours on average do you spend watching TV every week?" is an example of a discrete variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

67) True or False: The answer to the question "What is your sleeping bag temperature rating?" is an example of a categorical variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

68) True or False: The type of TV one owns is an example of an ordinal scaled variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

69) True or False: Whether a university student is a full-fee student or a HECS student is an example of a nominal scaled variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

70) True or False: Whether a university student is a full-fee student or a HECS student is an example of a categorical variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

71) True or False: Marital status is an example of an ordinal scaled variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

72) True or False: Marital status is an example of a numerical variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

73) True or False: The grade level (1-12) of a student is an example of a nominal scaled variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

74) True or False: The grade level (1-12) of a student is an example of a numerical variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

75) True or False: The quality ("terrible", "poor", "fair", "acceptable", "very good" and "excellent") of a day care centre is an example of a nominal scaled variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

76) True or False: The quality ("terrible", "poor", "fair", "acceptable", "very good" and "excellent") of a day care centre is an example of a numerical variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

77) True or False: The amount of alcohol consumed by a person per week will be measured on an interval scale.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

78) True or False: The amount of alcohol consumed by a person per week is an example of a continuous variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

79) True or False: The number of defective apples in a single box will be measured on an interval scale.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

80) True or False: The number of defective apples in a single box is an example of a continuous variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

81) True or False: The amount of kilojoules contained in a 250 gram packet of cheese will be measured on a ratio scale.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

82) True or False: The amount of kilojoules contained in a 250 gram packet of cheese is an example of a discrete variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

83) True or False: The amount of time a student spent studying for an exam will be measured on a ratio scale.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

84) True or False: The amount of time a student spent studying for an exam is an example of a continuous variable.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

85) True or False: The date when a new factory becomes operational will be measured with a ratio scale.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

86) True or False: Data from a categorical variable can be measured on a ratio scale or on an interval scale, whilst data from a numerical variable are measured on a nominal scale or on an ordinal scale.

A) True

B) False

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

87) Which of the following is a discrete quantitative variable?

A) The number of employees of an insurance company.

B) The volume of water released from a dam.

C) The S&P/ASX 200 stock index.

D) The distance you drove yesterday.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

88) Which of the following is a continuous quantitative variable?

A) The colour of a student's eyes.

B) The number of gallons of milk sold at the local grocery store yesterday.

C) The amount of milk produced by a cow in one 24-hour period.

D) The number of employees of an insurance company.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

89) To monitor campus security, the campus security office is taking a survey of the number of students in a parking lot each 30 minutes of a 24-hour period with the goal of determining when patrols of the lot would serve the most students. If *X* is the number of students in the lot each period of time, then *X* is an example of

A) a categorical random variable.

B) a discrete random variable.

C) a continuous random variable.

D) a statistic.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

90) Researchers are concerned that the weight of the average Australian school student is increasing implying, among other things, that children's clothing should be manufactured and marketed in larger sizes. If *X* is the weight of school children sampled in a nationwide study, then *X* is an example of

A) a categorical random variable.

B) a discrete random variable.

C) a continuous random variable.

D) a parameter.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

91) The classification of student year of study (first year, second year, third year, honours) is an example of

A) a categorical random variable.

B) a discrete random variable.

C) a continuous random variable.

D) a parameter.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

92) The classification of student major (accounting, economics, management, marketing, other) is an example of

A) a categorical random variable.

B) a discrete random variable.

C) a continuous random variable.

D) a parameter.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

93) The Vice Chancellor of a major university was concerned about alcohol abuse on her campus and wanted to find out the proportion of students at her university who visited the campus bar on the weekend before the final exam period. Her advisor took a random sample of 250 students. The total number of students in the sample who visited the campus bar on the weekend before the final exam period is an example of

A) a categorical random variable.

B) a discrete random variable.

C) a continuous random variable.

D) a parameter.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

94) The Vice Chancellor of a major university was concerned about alcohol abuse on her campus and wanted to find out the proportion of students at her university who visited the campus bar on the weekend before the final exam period. Her advisor took a random sample of 250 students and computed the portion of students in the sample who visited the campus bar on the weekend before the final exam. The portion of all students at her university who visited the campus bar on the weekend before the final exam period is an example of

A) a categorical random variable.

B) a discrete random variable.

C) a continuous random variable.

D) a parameter.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

95) The Vice Chancellor of a major university was concerned about alcohol abuse on her campus and wanted to find out the proportion of students at her university who visited the campus bar on the weekend before the final exam period. Her advisor took a random sample of 250 students. The portion of students in the sample who visited the campus bar on the weekend before the final exam period is an example of

A) a discrete random variable.

B) a parameter.

C) a statistic.

D) a categorical random variable.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

96) The Vice Chancellor of a major university was concerned about alcohol abuse on her campus and wanted to find out the proportion of students at her university who visited the campus bar on the weekend before the final exam period. Her advisor took a random sample of 250 students. The answer on "are you likely to visit the campus bar on the weekend before the final exam period" is an example of

A) a discrete random variable.

B) a categorical random variable.

C) a continuous random variable.

D) a parameter.

Diff: 3

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

Instruction 1-1

The manager of the customer service division of a major consumer electronics company is interested in determining whether the customers who have purchased a DVD recorder made by the company over the past 12 months are satisfied with their products.

97) Referring to Instruction 1-1, the possible responses to the question "How many DVD players made by other manufacturers have you used?" are values from a

A) discrete random variable.

B) continuous random variable.

C) categorical random variable.

D) parameter.

Diff: 1

Section: 1.4 Types of Variables

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98) Referring to Instruction 1-1, the possible responses to the question "Out of a 7 point scale with 7 being 'extremely satisfied' and 1 being 'extremely unsatisfied', what is your satisfaction level on the DVD player that you purchased?" are values from a

A) discrete numerical random variable.

B) continuous numerical random variable.

C) categorical random variable.

D) parameter.

Diff: 1

Section: 1.4 Types of Variables

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99) Referring to Instruction 1-1, the possible responses to the question "What is your annual income rounded to the nearest thousand?" are values from a

A) discrete numerical random variable.

B) continuous numerical random variable.

C) categorical random variable.

D) parameter.

Diff: 3

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

100) Referring to Instruction 1-1, the possible responses to the question "How much time do you use the DVD player every week on the average?" are values from a

A) continuous numerical random variable.

B) discrete numerical random variable.

C) categorical random variable.

D) parameter.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

101) The numbers on football players' uniforms is an example of

A) an ordinal scale.

B) an interval scale.

C) a nominal scale.

D) a ratio scale.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

102) The rankings of teams in a rugby tournament is an example of

A) an ordinal scale.

B) an interval scale.

C) a nominal scale.

D) a ratio scale.

Diff: 1

Section: 1.4 Types of Variables

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103) The average salary of a University lecturer in Australian dollars is an example of

A) an interval scale.

B) a nominal scale.

C) an ordinal scale.

D) a ratio scale.

Diff: 1

Section: 1.4 Types of Variables

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104) The sports shoes for adults sold in Australia are often marked with sizes based on the US or UK

system. In this case, shoe size is an example of

A) an ordinal scale.

B) an interval scale.

C) a nominal scale.

D) a ratio scale.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

105) An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. The number of claims a person has made in the last 3 years is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

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106) An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. The distance a person drives in a year is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

107) An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. A person's age is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

108) An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. How long a person has been a licensed driver is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

109) An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. The number of tickets a person has received in the last three years is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 1

Section: 1.4 Types of Variables

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110) In purchasing a motor vehicle, there are a number of variables to consider. The body style of the car (sedan, coupe, wagon, etc.) is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

111) In purchasing a motor vehicle, there are a number of variables to consider. The classification of the car as a subcompact, compact, standard, or luxury size is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

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112) In purchasing a motor vehicle, there are a number of variables to consider. The colour of the car is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

113) Most universities admit students based on their achievements in a number of different areas. The grade obtained in English in their final year of high school (A, B, C, D, or F) is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

114) Most universities admit students based on their achievements in a number of different areas. The total university entrance score achieved by a student is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

115) The Dean of Students conducted a survey on campus. The gender of the student is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

116) The Dean of Students conducted a survey on campus. Class designation (first year, second year, third year, honours) is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

117) The Dean of Students conducted a survey on campus. Major area of study is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

118) The Dean of Students conducted a survey on campus. Grade point average (GPA) is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

119) The Dean of Students conducted a survey on campus. The number of units currently enrolled for is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

120) The Dean of Students conducted a survey on campus. The number of clubs, groups, teams, and organisations affiliated with on campus is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

121) A personal computer user survey was conducted. The computer brand primarily used is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

122) A personal computer user survey was conducted. The number of personal computers owned is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

123) A personal computer user survey was conducted. The number of years using a personal computer is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

124) A personal computer user survey was conducted. The hours of personal computer use per week is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

125) A personal computer user survey was conducted. The primary word processing package used is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

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126) A personal computer user survey was conducted. The number of computer magazine subscriptions is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

127) A telecommunications provider conducted a survey on mobile phone usage in Australia. The number of mobile phones owned per household is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

128) A telecommunications provider conducted a survey on mobile phone usage in Australia. The number of years using a mobile phone is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

129) A telecommunications provider conducted a survey on mobile phone usage in Australia. The length (in minutes) of the longest call made per month is an example of a \_\_\_\_\_\_\_\_ numerical variable.

Diff: 2

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

130) A telecommunications provider conducted a survey on mobile phone usage in Australia. The responses on "whether all mobile phones in the household use the same telecommunications provider" is an example of a \_\_\_\_\_\_\_\_ variable.

Diff: 1

Section: 1.4 Types of Variables

AACSB: Application of Knowledge

131) A telecommunications provider conducted a survey on mobile phone usage in Australia. The amount of time spent surfing the Internet per week is an example of \_\_\_\_\_\_\_\_ numerical variable.

Diff: 2

Section: 1.4 Types of Variables

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1) A

2) A

3) A

4) B

5) A

6) A

7) A

8) B

9) A

10) C

11) C

12) C

13) A

14) C

15) D

16) C

17) C

18) A

19) C

20) C

21) B

22) B

23) A

24) A

25) C

26) B

27) B

28) C

29) B

30) population

31) sample

32) statistics

33) parameters

34) descriptive statistics/methods

35) inferential statistics/methods

36) statistics

37) parameters

38) inferential statistics/methods

39) descriptive statistics/methods

40) statistics

41) parameters

42) statistic

43) parameter

44) inferential statistics

45) descriptive statistics/methods

46) secondary

47) A

48) B

49) A

50) B

51) B

52) A

53) D

54) B

55) B

56) B

57) qualitative

58) A

59) A

60) A

61) B

62) B

63) B

64) B

65) A

66) A

67) B

68) B

69) A

70) A

71) B

72) B

73) B

74) B

75) B

76) B

77) B

78) A

79) B

80) B

81) A

82) B

83) A

84) A

85) B

86) B

87) A

88) C

89) B

90) C

91) A

92) A

93) B

94) D

95) C

96) B

97) A

98) A

99) A

100) A

101) C

102) A

103) D

104) B

105) discrete

106) continuous

107) continuous

108) continuous

109) discrete

110) categorical

111) categorical

112) categorical

113) categorical

114) discrete

115) categorical

116) categorical

117) categorical

118) continuous

119) discrete

120) discrete

121) categorical

122) discrete

123) continuous

124) continuous

125) categorical

126) discrete

127) discrete

128) continuous

129) continuous

130) categorical

131) continuous