Exam

Name_____

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

1) Choose the answer below that best completes the following statement.　　　　1) _____

A _____ is a number that describes a population.
  A) summary   B) statistic   C) parameter   D) sample

Answer: C

2) Choose the answer below that best completes the following statement.　　　　2) _____

A _____ is a number that describes a sample.
  A) parameter   B) population   C) measurement   D) statistic

Answer: D

3) Which of the following sample types should you always regard as unreliable?　　3) _____
  A) simple random samples   B) cluster samples
  C) stratified samples   D) voluntary response samples

Answer: D

4) A pollster randomly samples 159 Democrats, 151 Republicans and 16 Independents (all　　4) _____
registered voters) in Metro City and asks each poll participant which mayorial candidate
he or she prefers. Identify the kind of sample that the pollster is using.
  A) sample of convenience   B) stratified sample
  C) voluntary response sample   D) cluster sample

Answer: B

5) A middle school student passes out leaflets to the adults at a school function. The leaflets　　5) _____
ask the recipient to indicate whether they believe in anthropogenic global warming. The
bottom of the leaflet indicates that the completed leaflet should be returned to the
student. Identify the kind of sample that is being used.
  A) cluster sample   B) systematic sample
  C) sample of convenience   D) stratified sample

Answer: C

6) By visiting homes door-to-door, a municipality surveys all the households in 89　　6) _____
randomly-selected neighborhoods to see how residents feel about a proposed property
tax increase. Identify the type of sample that is being used.
  A) stratified sample   B) systematic sample
  C) cluster sample   D) voluntary response sample

Answer: C

7) An electronics manufacturer test every 1000th cell phone to verify that it is functioning properly. Identify the kind of sample that is being used.

    A) systematic sample   B) simple random sample

    C) stratified sample   D) cluster sample

7) _____

Answer: A

8) The names of all 130 students in a professor's class are written on identical slips of paper, and the slips are placed into a large glass jar. Then, the professor selects 5 random slips from the jar. Identify the kind of sample that is being used.

    A) simple random sample   B) systematic sample

    C) cluster sample   D) sample of convenience

8) _____

Answer: A

9) Determine which of the following describes quantitative data.

    i). the name of a chemical sample

    ii). the mass of a chemical sample

    iii). the color of a chemical sample

    A) i only   B) ii only   C) i and ii only   D) i, ii, and iii

9) _____

Answer: B

10) Determine which of the following describes quantitative data.

    i). the length of an object in feet

    ii). the speed of an object in meters per second

    iii). the number of objects that are blue

    A) i, ii, and iii   B) i only   C) iii only   D) i and ii only

10) _____

Answer: A

11) Determine which of the following describes qualitative data.

    i). the volume of a shipping container, in gallons

    ii). the name of the material from which the container is made

    iii). the shape of the container

    A) ii and iii only   B) i and iii only   C) i, ii, and iii   D) i and ii only

11) _____

Answer: A

12) Determine which of the following describes qualitative data.

    i). the make of the car with license plate number VNS-862

    ii). the license plate number VNS-862

    iii). the number of vehicles whose license plate number begins with "VNS"

    A) i and ii only   B) neither i, nor ii, nor iii

    C) iii only   D) i only

12) _____

Answer: A

13) Determine which of the following describes nominal data.   13) _____
    i. My favorite days of the week are Friday, Saturday, and Tuesday.
    ii. My favorite day of the week is Friday, my second-favorite is Saturday, and
       third-favorite is Tuesday.
    A) i only   B) ii only   C) neither i nor ii   D) both i and ii
    Answer: A

14) Determine which of the following describes nominal data.   14) _____
    i. Michaelangelo's sells small, medium, large, and jumbo pizzas.
    ii. Michaelangelo's most-requested toppings are pepperoni, black olives, and mushroo
    A) ii only   B) neither i nor ii   C) i only   D) both i and ii
    Answer: D

15) Determine which of the following describes ordinal data.   15) _____
    i. In the horse race, Betty's Girl won, Mr. Ed placed, and Wabash showed.
    ii. In the horse race, I bet on Betty's Girl to win, Mr. Ed to place, and Wabash to show
    A) i only   B) neither i nor ii   C) both i and ii   D) ii only
    Answer: C

16) Determine which of the following describes ordinal data.   16) _____
    i. My best friends are Georgia, Amithaba, and Raphael.
    ii. My favorite numbers are 2, 7 and 13.
    A) i only   B) neither i nor ii   C) both i and ii   D) ii only
    Answer: B

17) Which one of the following data are discrete?   17) _____
    A) the average height of players on the University of Connecticut's women's basketball
       team
    B) the height of the tallest player on Duke University's men's basketball team
    C) the pre-season ranking of Duke University's men's basketball team
    D) the average preseason ranking of the University of Connecticut's women's
       basketball team over the past 10 years
    Answer: C

18) Which one of the following data are discrete?   18) _____
    A) the latitude and longitude of the boat's port of departure
    B) the latitude and longitude of a boat at sea
    C) the number of crew members on the boat
    D) the speed of the boat's propeller, in revolutions per minute
    Answer: C

19) Which one of the following data are continuous?
 A) the average height of a sample of trees
 B) the rankings of the trees, from most numerous to least numerous
 C) the number of representatives of each species in the park
 D) the number of species of trees in a park
Answer: A

20) Which one of the following data are continuous?   20) _____
 A) the number of musicians performing in the MP3 file
 B) the number of times the file has been downloaded
 C) the time remaining for an MP3 music download
 D) all of these represent continuous data
Answer: C

21) When rolling two six-sided dice, your total roll ranges from 2 (double ones) to 12   21) _____
 (double sixes).Characterize the nature of the roll total.
 A) qualitative and discrete   B) quantitative and continuous
 C) quantitative and discrete   D) qualitative and continuous
Answer: C

22) When experimental units are people, they are sometimes called _____.   22) _____
 A) human units   B) personnel   C) subjects   D) topics
Answer: C

23) In an experiment, the _____ is what is measured on each experimental unit.   23) _____
 A) outcome   B) subject   C) category   D) treatment
Answer: A

24) Which of the following is the best description of a randomized experiment?   24) _____
 A) an experiment in which the outcomes are random
 B) an experiment in which the investigators are chosen at random

 C) an experiment in which the experimental units are selected at random
 D) an experiment in which the treatments are assigned randomly to experimental units
Answer: D

25) In a randomized experiment, if there are large differences in outcomes among the   25) _____
 treatment groups, we can conclude that the differences are due to
 _____.
 A) deliberate data manipulation   B) experimental error
 C) random luck   D) the treatments
Answer: D

26) Which of the following is the best description of a double-blind experiment?　26) _____
   A) an experiment in which neither the investigators nor the subjects know how the treatments have been assigned
   B) an experiment in which the subjects are blindfolded so they cannot see which treatment is applied to them
   C) an experiment in which neither the investigators nor the subjects know the others' names
   D) an experiment in which both the investigators and the subjects are hidden from the others' views
Answer: A

27) In an experiment, subjects are put into two categories according to sex, and then each subject is randomly assigned a treatment . This is an example of...　27) _____
   A) gender bias   B) randomized blocking
   C) confounding   D) observational studies
Answer: B

28) A(n) _____ makes it difficult to determine whether an experimental outcome is due to the applied treatment.　28) _____
   A) perplexer   B) uncooperative subject
   C) error   D) counfounder
Answer: D

29) An experiment that tends to overestimate or underestimate the true value is said to be _____.　29) _____
   A) flagrant   B) un-randomized
   C) randomized   D) biased
Answer: D

30) People are reluctant to admit to behavior that may reflect negatively on them. This can lead to ...　30) _____
   A) sampling bias   B) social acceptability bias
   C) voluntary response bias   D) hurt feelings
Answer: B

31) The question...　31) _____
   "Do you favor a higher standard of living, even though it produces unclean air and wa ... is an example of ...
   A) random sampling   B) framing
   C) leading question bias   D) sampling bias
Answer: C

32) You ask your friends who they plan to vote for in the next congressional election. Based on 32) _____
responses, you conclude that the candidate you favor cannot lose!

This is most likely an example of ...
   A) voluntary response bias   B) sampling bias
   C) randomized sampling   D) self-interest bias

Answer: B