Name _Ivan Leung_

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

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

2) A pollster randomly samples 159 Democrats, 151 Republicans and 16 Independents (all 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) cluster sample   B) sample of convenience
   C) stratified sample   D) voluntary response sample

3) A middle school student passes out leaflets to the adults at a school function. The leaflets 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) sample of convenience   B) stratified sample
   C) cluster sample   D) systematic sample

4) By visiting homes door-to-door, a municipality surveys all the households in 89 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) cluster sample**
   C) systematic sample   D) voluntary response sample

5) 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) stratified sample   B) simple random sample
   C) systematic sample   D) cluster sample

6) 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) systematic sample   **B) simple random sample**
   C) cluster sample   D) sample of convenience

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

8) 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) neither i, nor ii, nor iii   B) i and ii only
    C) i only   D) iii only

9) Determine which of the following describes nominal data.
    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) neither i nor ii   B) i only   C) ii only   D) both i and ii

10) Determine which of the following describes ordinal data.
    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) ii only   B) both i and ii   C) neither i nor ii   D) i only

11) Which one of the following data are discrete?
    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

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

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

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

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

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

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

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

18) An experiment that tends to overestimate or underestimate the true value is said to be

   _____.
   A) biased   B) un-randomized   C) randomized   D) flagrant

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

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

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

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