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Indicate the answer choice that best completes the statement or answers the question.

1. Use a random-number table to simulate the outcomes of tossing a quarter 20 times beginning at row 5, block 3. Assume that the quarter is balanced (i.e., fair) and an even digit is assigned to the outcome heads (H) and an odd digit to the outcome tails (T).

65321	85623	10204	50218	20321	22315
98532	91972	39800	45670	20510	10451
92012	59826	35456	79289	91483	29754
45652	98653	45863	36963	15326	78952
45678	10100	91251	37041	13712	14672

- a. T T H T T T T H H T T T T H H T H H T H
- b. T T H T T T T H T T T T T H T H H T H
- c. T T H T T T T H H T T T T T H T H T H H
- d. T T H T T T T H H T T T T T H T H T T H
- e. T T H T T T T H H T T T T T H T H H T H

2. Find the technique for gathering data in the study below.

The Colorado Division of Wildlife netted and released 774 fish at Quincy Reservoir. There were 219 perch, 315 blue gill, 83 pike, and 157 rainbow trout.

- a. experiment
- b. observational study
- c. none of these choices
- d. sampling
- e. census

3. Identify the variable in the information below.

USA Today reported that 44.9% of those surveyed (1261 adults) ate in a fast-food restaurant from one to three times each week.

- a. fast-food restaurant as well as response regarding frequency of at restaurants
- b. adults surveyed
- c. fast-food restaurants
- d. response regarding frequency of at restaurants
- e. none of these choices

4. Identify the level of measurement corresponding to the data "Salesperson's performance: below average, average, above average" associated with robotics.

- a. nominal
- b. none of these choices
- c. ordinal
- d. ratio
- e. interval

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5. Identify whether the variable in the information below is qualitative or quantitative.

The archeological site of Tara is more than 4000 years old. Tradition states that Tara was the seat of the high kings of Ireland. Because of its archeological importance, Tara has received extensive study (Reference: Tara: An Archeological survey by Conor Newman, Royal Irish Academy, Dublin). Suppose an archeologist wants to estimate the density of ferromagnetic artifacts in the Tara region. For this purpose, a random sample of 55 plots, each of size 100 square meters, is used. The number of ferromagnetic artifacts for each plot is determined.

- a. quantitative
- b. qualitative
- c. neither qualitative nor quantitative
- d. qualitative as well as quantitative
- e. Information does not have any variable.

6. Identify the sampling technique used in the following information.

An important part of employee compensation is a benefits package that might include health insurance, life insurance, child care, vacation days, retirement plan, parental leave, bonuses, etc. Suppose you want to conduct a survey of benefits packages available in private businesses in Hawaii. You want a sample size of 100. Sampling technique used to get the sample size of 100 is described below.

Assign each business in the Island Business Directory a number, and then use a random-number table to select the business to be included in the sample.

- a. Cluster sample
- b. Convenience sample
- c. Simple random sample
- d. Systematic sample
- e. Stratified sample

7. Use a random-number table to get a list of 4 random numbers between 100 and 150 beginning at row 5, block 2.

65321	85623	10204	50218	20321	22315
98532	91972	39800	45670	20510	10451
92012	59826	35456	79289	91483	29754
45652	98653	45863	36963	15326	78952
45678	10100	91251	37041	13712	14672

- a. 101 0 100 0 137 0 121 0 0 0
- b. 101 0 125 0 137 0 112 0 0 0
- c. 101 0 125 0 137 0 121 0 0 0
- d. 101 0 100 0 137 0 112 0 0 0
- e. 101 0 125 0 137 0 137 0 0 0

8. Identify the implied population in the information below.

Government agencies carefully monitor water quality and its effect on wetlands (Reference: Environment Protection Agency Wetland Report EPA 832-R-93-

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005). Of particular concern is the concentration of nitrogen in water draining from fertilized lands. Too much nitrogen can kill fish and wildlife. Twenty-eight samples of water were taken at random from a lake. The nitrogen concentration (milligrams of nitrogen per liter of water) was determined for each sample. The variable in this information is nitrogen concentration (mg nitrogen/l water).

- a. number of fish
- b. samples of water taken at random
- c. samples of water taken at random
- d. nitrogen concentration (mg nitrogen/l water) in the entire lake
- e. none of these choices

9. Data may be classified by one of the four levels of measurement. What is the name of the lowest level?

- a. interval
- b. nominal
- c. ordinal
- d. ratio
- e. simple

10. Find the technique for gathering data in the study below.

A study of all league football scores attained through touchdowns and field goals was conducted by the National Football League to determine whether field goals account for more scoring events than touchdowns (USA Today).

- a. sampling
- b. census
- c. experiment
- d. simulation
- e. none of these choices

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Answer Key

1. e

2. b

3. d

4. c

5. a

6. c

7. c

8. d

9. b

10. b