

First and last name .....

### Question 1/20

\_\_\_\_\_ is an example of a strategy used to reduce the likelihood of committing statistical error.

- A. Filling in missing data
- B. Altering or otherwise changing the data
- C. Including outliers in analysis
- D. Excluding outliers in analysis

### Question 2/20

In statistical testing of the hypothesis, what happens to the region of rejection when the level of significance  $\alpha$  is reduced?

- A. The rejection region is unaltered
- B. The rejection region is reduced in size
- C. The answer depends on the value of  $\beta$
- D. The rejection region is increased in size

### Question 3/20

. What will a factor loading in an orthogonal solution represent?

- A. correlation
- B. standard deviation
- C. covariance
- D. eigenvalues

### Question 4/20

Which of the following statements sounds like a null hypothesis?

- A. There is no difference between male and female incomes in the population
- B. There is a correlation in the population
- C. The defendant is guilty
- D. The coin is not fair

### Question 5/20

Determine the 30th percentile of the following eight numbers: 14, 12, 19, 23, 5, 13, 28, 17.

- A. 13
- B. 19
- C. 23
- D. 5

### Question 6/20

Any measure indicating the centre of a set of data, arranged in an increasing or decreasing order of magnitude, is called a measure of:

- A. skewness
- B. central tendency
- C. symmetry
- D. dispersion

### Question 7/20

Identify the right type of chart using the following hints.

Hint 1: This chart is often used to visualize a trend in data over intervals of time.

Hint 2: The line in this type of chart is often drawn chronologically.

- A. bar chart
- B. pie chart
- C. scatter plot
- D. Line chart

### Question 8/20

Which of the following measures of variation is used most frequently because of its statistical properties and interpretive value?

- A. Quartile deviation
- B. Range
- C. Mean
- D. Standard deviation

### Question 9/20

Which of the following measures of variation is used most frequently because of its statistical properties and interpretive value?

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- B. Mean
- C. Standard deviation
- D. Quartile deviation

### Question 10/20

The mean of 10 observations is 10. All the observations are increased by 10%. The mean of increased observations will be:

- A. 10
- B. 11
- C. 10.1
- D. 1.1

### Question 11/20

Efficient portfolios can be defined as those portfolios which for a given level of risk provides

- A. maximum return
- B. average return
- C. minimum return
- D. no gain

### Question 12/20

Of what is  $p$  the probability if the null hypothesis were true?

- A.  $p$  is the probability of observing a test statistic at least as big as the one we have if there were no effect in the population (i.e., the null hypothesis were true).
- B.  $p$  is the probability that the results are not due to chance, the probability that the null hypothesis ( $H_0$ ) is false.
- C.  $p$  is the probability that the results would be replicated if the experiment was conducted a second time.
- D.  $p$  is the probability that the results are due to chance, the probability that the null hypothesis ( $H_0$ ) is true.

### Question 13/20

Pr reasonably normally distributed with a mean of 18 and standard deviation of 6, determine the proportion of students with a 33 or higher.

- A. 0.0124
- B. 0.0062
- C. 0.0109
- D. 0.0217

### Question 14/20

. When the correlation coefficient,  $r$ , is close to one:

- A. there is no relationship between the two variables
- B. the slope of the regression line will be close to one
- C. it is impossible to tell if there is a relationship between the two variables
- D. there is a strong linear relationship between the two variables

### Question 15/20

What is the relationship between sample size and the standard error of the mean?

- A. The standard error is unaffected by the sample size.
- B. The standard error increases as the sample size increases.
- C. The standard error decreases as the sample size decreases.
- D. The standard error decreases as the sample size increases.

### Question 16/20

If you drew all possible samples from some population, calculated the mean for each of the samples, and constructed a line graph (showing the shape of the distribution) based on all of those means, what would you have?

- A. A sampling distribution
- B. parameter distribution
- C. A population distribution
- D. normal distribution

### Question 17/20

If all the points of a scatter diagram lie on a straight line falling from left upper corner to the right bottom corner, the correlation is called.....

- A. High degree of positive correlation
- B. Perfect positive correlation
- C. Perfect negative correlation
- D. Zero correlation

### Question 18/20

In autoregressive models \_\_\_\_\_ ?

- A. Current value of dependent variable is influenced by current and past values of independent variables
- B. Current value of dependent variable is influenced by current values of independent variables
- C. Current value of dependent variable is influenced by past values of both dependent and independent variables
- D. None of the above

### Question 19/20

What do you expect will happen with bias and variance as you increase the size of training data?

- A. Bias increases and Variance increases
- B. Bias increases and Variance decreases
- C. Bias decreases and Variance decreases
- D. Bias decreases and Variance increases

### Question 20/20

The purpose of simple linear regression analysis is to:

- A. Obtain the expected value of the independent random variable for a given value of the dependent variable
- B. Replace points on a scatter diagram by a straight-line
- C. Predict one variable from another variable
- D. Measure the degree to which two variables are linearly associated