

Started on	Wednesday, 13 October 2021, 3:03 PM
State	Finished
Completed on	Wednesday, 13 October 2021, 3:48 PM
Time taken	45 mins 1 sec
Grade	16.00 out of 35.00 (46%)

Question **1**

Correct

Mark 1.00 out of 1.00

The shape of the normal curve depends on its _____

- Select one:
- ☐ a. Mean deviation
 - ☒ b. Standard deviation ✓
 - ☐ c. Correlation
 - ☐ d. Quartile deviation

The correct answer is: Standard deviation

Question **2**

Incorrect

Mark 0.00 out of 1.00

What are panel data?

- Select one:
- ☐ a. data containing skewed variable distributions
 - ☐ b. data measured at one point in time
 - ☒ c. data containing units measured at different time points ✗
 - ☐ d. data where each unit is measured at more than one time point

The correct answer is: data where each unit is measured at more than one time point

Question **3**

Correct

Mark 1.00 out of 1.00

The local wants to install cameras that can "catch" drivers who run red lights. They choose a busy intersection, install a test camera, and determine whether each car stops safely or "runs" the light. Choose the correct scale of measurement.

- Select one:
- ☐ a. Ratio
 - ☐ b. Interval
 - ☒ c. Nominal ✓
 - ☐ d. Ordinal

The correct answer is: Nominal

Question **4**

Correct

Mark 1.00 out of 1.00

Difference between R square value and F statistic probabilistic value in regression output is

Select one:

- ☐ a. R square detect mistakes in selection of variable but F statistic prob value trace mistakes in the estimator
- ☐ b. R square relates to Cross sectional data but F statistic prob value relate to time series data
- ☒ c. While R square explains g\Goodness of Fit of the Model within sample F statistics probability value shows Goodness of Fit of the Model in population ✓
- ☐ d. While F statistics probability value shows the significance of individual variable R squared value shows the significance of all the variable taken together

The correct answer is: While R square explains g\Goodness of Fit of the Model within sample F statistics probability value shows Goodness of Fit of the Model in population

Question **5**

Correct

Mark 1.00 out of 1.00

The following Regression result is obtained after evaluating the employment potential of Engineering students in Nirma. Find out this is a case of what type of regression?

$$Y = B_1 + B_2 X_1 + B_3 X_2 + B_4 X_3 + u$$

Y = Employability Skill of Nirma Engineering Students

X1 = Technical Skill of Domain Specialisation

X2 = Communication Skill

X3 = Managerial Capabilities

u = Stochastic Random Variable

Select one:

- ☒ a. Multiple Regression ✓
- ☐ b. Polynomial Regression
- ☐ c. Simple Regression
- ☐ d. Population Regression Function

The correct answer is: Multiple Regression

Question **6**

Correct

Mark 1.00 out of 1.00

whaich of the follwing is true about normal distrubtion

Select one:

- ☒ a. the normal curve is symmetrical ✓
- ☐ b. mean , median and mode of a normal distribution are not equal
- ☐ c. the parameters of normal curve are sample mean and sample varaince
- ☐ d. the normal curve is skewed

The correct answer is: the normal curve is symmetrical

Question **7**

Correct

Mark 1.00 out of 1.00

$\mu \pm 3\sigma$ covers _____ of the items in a data set.

Select one:

- ☐ a. 90%
- ☐ b. 68%
- ☐ c. 95%
- ☒ d. 99.73% ✓

The correct answer is: 99.73%

Question **8**

Correct

Mark 1.00 out of 1.00

Which of these is an example of a test statistic?

Select one:

- ☐ a. the sample mean
- ☐ b. the population mean
- ☒ c. a z-score ✓

The correct answer is: a z-score

Question **9**

Incorrect

Mark 0.00 out of 1.00

Which of the following statements are correct?

Select one:

- ☒ a. a point estimate is an unbiased estimator if its standard deviation is the same as the actual value of the population standard deviation ✗
- ☐ b. a point estimate is a single value estimate of the value of a population parameter
- ☐ c. all of the above statements are correct
- ☐ d. a point estimate is an estimate of the range of a population parameter

The correct answer is: a point estimate is a single value estimate of the value of a population parameter

Question **10**

Incorrect

Mark 0.00 out of 1.00

Consider the following statements

Statement 1

Jignesh scores well in Mathematics. His score in Statistics is also too good

Statement 2

Based on Jignesh's good score in Mathematics we can predict his score in Statistics

Select one:

- ☒ a. Both statements need stochastic random variable to show the correlation ✗
- ☐ b. Both statements are true
- ☐ c. Statement 1 and Statement 2 show correlation only
- ☐ d. While statement 1 can be inferred from Correlation Statement 2 is simply the outcome of regression

The correct answer is: While statement 1 can be inferred from Correlation Statement 2 is simply the outcome of regression

Question **11**

Incorrect

Mark 0.00 out of 1.00

Which one of the following is NOT a BLUE property of Classical Linear Regression Function

Select one:

- ☐ a. It is UNBIASED , that is the average EXPECTED VALUE is equal to the TRUE VALUE
- ☐ b. It is Linear. that is a linear function of a random variable such as the Dependent Variable in the regression model
- ☐ c. Standard Error is MINIMUM- that is the exactness of estimated coefficients are less with minimum difference between sample mean and population mean
- ☐ d. Efficient Estimator - An Unbiased Estimator with least variance
- ☒ e. It has MINIMUM VARIANCE in the class of all such linear unbiased estimators ✖

The correct answer is: Standard Error is MINIMUM- that is the exactness of estimated coefficients are less with minimum difference between sample mean and population mean

Question **12**

Not answered

Marked out of 1.00

Kurtosis refers to

Select one:

- ☐ a. Kurtosis is the spread or standard deviation of an observation from its average value
- ☐ b. Kurtosis is the spread of a sample distribution in a series
- ☐ c. Kurtosis is square root of variance
- ☐ d. In statistics, kurtosis is defined as the parameter of relative sharpness of the peak of the probability distribution curve. It ascertains the way observations are clustered around the centre of the distribution. It is used to indicate the flatness or peakedness of the frequency distribution curve and measures the tails or outliers of the distribution
- ☐ e. Kurtosis is the probability distribution of non linear regression errors

The correct answer is: In statistics, kurtosis is defined as the parameter of relative sharpness of the peak of the probability distribution curve. It ascertains the way observations are clustered around the centre of the distribution. It is used to indicate the flatness or peakedness of the frequency distribution curve and measures the tails or outliers of the distribution

Question **13**

Incorrect

Mark 0.00 out of 1.00

The population mean μ is called:

Select one:

- ☒ a. Discrete variable ✖
- ☐ b. Continuous variable
- ☐ c. Parameter
- ☐ d. Statistic

The correct answer is: Parameter

Question **14**

Incorrect

Mark 0.00 out of 1.00

Heteroscedasticity means

Select one:

- ☐ a. The probability distribution of error terms follows normal distribution with constant variance
- ☒ b. The Independent variables spread but not the error terms ✖
- ☐ c. The dependent variable does not change at all
- ☐ d. If the the conditional variance of Y population varies with X it is a situation of Heteroscedasticity or unequal spread or variance

The correct answer is: If the the conditional variance of Y population varies with X it is a situation of Heteroscedasticity or unequal spread or variance

Question **15**

Correct

Mark 1.00 out of 1.00

If two variables are independant , correlation coefficent is zero.

Select one:

- ☒ True ✔
- ☐ False

The correct answer is 'True'.

Question **16**

Incorrect

Mark 0.00 out of 1.00

R Squared value shows

Select one:

- ☐ a. Goodness of Fit of the Model in Sample not in population
- ☐ b. It further reaffirms the p value as a statistical significance
- ☒ c. Goodness of fit of the model in population not in sample ✖
- ☐ d. Exactness of coefficient values of each independent variable

The correct answer is: Goodness of Fit of the Model in Sample not in population

Question **17**

Correct

Mark 1.00 out of 1.00

What is the difference between standard deviation and standard error

Select one:

- ☐ a. Both are same
- ☐ b. While standard error is mean deviation standard deviation is better captures the outliers
- ☒ c. While standard deviation is the spread of individual observation from the mean standard error is the the exactness of sample mean to population mena ✔
- ☐ d. While Standard Error captures the spread Standard Deviations captures the exactness of estimates

The correct answer is: While standard deviation is the spread of individual observation from the mean standard error is the the exactness of sample mean to population mena

Question **18**

Incorrect

Mark 0.00 out of 1.00

The sum of the the deviations about mean is

Select one:

- ☐ a. Maximum
- ☐ b. None of thses
- ☐ c. zero
- ☒ d. Minimum ✖

The correct answer is: zero

Question **19**

Correct

Mark 1.00 out of 1.00

p value test

Select one:

- ☐ a. The tolerance level of multicollinearity
- ☒ b. the null hypothesis that B Coefficient is equal to zero ✔
- ☐ c. the null hypothesis that B coefficient is always equal to zero
- ☐ d. the significance of B coefficient

The correct answer is: the null hypothesis that B Coefficient is equal to zero

Question **20**

Correct

Mark 1.00 out of 1.00

X is a random normal variable, with mean μ and variance σ^2 . The "standardised form" of X is $Z = (X - \mu) / \sigma$.

What are the mean and variance, respectively, of Z ?

Select one:

- ☐ a. 1, 0
- ☐ b. 1, 1
- ☒ c. 0, 1 ✔
- ☐ d. 0, 2

The correct answer is: 0, 1

Question **21**

Correct

Mark 1.00 out of 1.00

The null and alternative hypotheses are written about

Select one:

- ☒ a. a population parameter ✔
- ☐ b. sample statistic
- ☐ c. sample data

The correct answer is: a population parameter

Question **22**
Incorrect
Mark 0.00 out of 1.00

What does the following shows

$$E(u_i | X_i) = 0$$

Select one:

- ☐ a. The Zero Mean Value of Disturbance - one of the TEN assumptions of Classical Linear Regression Models
- ☒ b. Zero Variance in the estimated errors ✖
- ☐ c. Zero Tolerance level in the case of Multicollinearity
- ☐ d. Zero Variance in the Dependent Variable Y with reference to Independent Variable X

The correct answer is: The Zero Mean Value of Disturbance - one of the TEN assumptions of Classical Linear Regression Models

Question **23**
Incorrect
Mark 0.00 out of 1.00

What do you mean by the assumption of CLRM that the X values are FIXED

Select one:

- ☐ a. The X and U are non stochastic but Y is Stochastic
- ☐ b. Values taken by X are fixed in repeated samples or X values are independent of Error Term
- ☒ c. The X values are stochastic random in nature while the Y is a non stochastic variable ✖
- ☐ d. It refers to fixed quantity of X values with reference to the fixed quantity of Y value in a situation where the error term is stochastic random value

The correct answer is: Values taken by X are fixed in repeated samples or X values are independent of Error Term

Question **24**
Correct
Mark 1.00 out of 1.00

When Hypothesis is tested?

Select one:

- ☐ a. After Hypothesis is framed
- ☒ b. After Estimating the Econometric Model ✔
- ☐ c. After the forecasting or prediction of the model is done
- ☐ d. After data is obtained but before estimating the econometric model

The correct answer is: After Estimating the Econometric Model

Question **25**
Correct
Mark 1.00 out of 1.00

What is the Keynesian Consumption Law?

Select one:

- ☐ a. Both Consumption and Income are functions of demand
- ☐ b. Consumption is the function of income and nothing else
- ☒ c. When Income increases consumption increases but not necessarily in the same rate ✔
- ☐ d. While consumption is the function of income, income is the function of economy as a whole

The correct answer is: When Income increases consumption increases but not necessarily in the same rate

Question **26**

Correct

Mark 1.00 out of 1.00

What is Hypothesis

Select one:

- ☒ a. Hypothesis is a statement to be proved or disproved with statistical inference ✓
- ☐ b. Hypothesis is the last step in Econometric Model
- ☐ c. It is a wonderful term in Econometrics which deals with descriptive statistics
- ☐ d. Hypothesis is not necessary at all for validity purpose

The correct answer is: Hypothesis is a statement to be proved or disproved with statistical inference

Question **27**

Not answered

Marked out of 1.00

What is the assumption related to Outlier in X Variable in the CLRM

Select one:

- ☐ a. X values are fixed in quantity may or may not be stochastic in nature
- ☐ b. X values should be more than the y value but not as equal to the error
- ☐ c. The X values in a given sample must not all be the same. That is , technically Var (X) must be a positive number which means there can be no outliers in the values of the X variable
- ☐ d. Fixed Quantity of X values need not necessary be the non stochastic in nature though the errors are always non stochastic in nature

The correct answer is: The X values in a given sample must not all be the same. That is , technically Var (X) must be a positive number which means there can be no outliers in the values of the X variable

Question **28**

Incorrect

Mark 0.00 out of 1.00

What is the difference between data measured on an interval scale and data measured on a ratio scale?

Select one:

- ☐ a. An interval scale has a true zero point, so zero on the scale corresponds to zero of the concept being measured.
- ☐ b. A ratio scale has equal intervals between the points on the scale, whereas an interval scale does not.
- ☒ c. A ratio scale puts scores into categories, while an interval scale measures on a continuous scale. ✗
- ☐ d. An interval scale has an arbitrary zero which vary from variables to variables under study

The correct answer is: An interval scale has an arbitrary zero which vary from variables to variables under study

Question **29**

Incorrect

Mark 0.00 out of 1.00

Which of the following statements is correct?

Select one:

- ☐ a. an interval estimate describes a range of values that is likely not to include the actual population parameter
- ☒ b. none of the statements are correct ✗
- ☐ c. an interval estimate is an estimate of the range for a sample statistic
- ☐ d. an interval estimate is an estimate of the range of possible values for a population parameter

The correct answer is: an interval estimate is an estimate of the range of possible values for a population parameter

Question **30**

Incorrect

Mark 0.00 out of 1.00

Which of these is a correct null hypothesis?

Select one:

- ☐ a. $H_0: \bar{x} = 12$
- ☒ b. $H_0: \mu > 12$ ✖
- ☐ c. $H_0: \mu = 12$

The correct answer is: $H_0: \mu = 12$

Question **31**

Correct

Mark 1.00 out of 1.00

School administrators sponsor a study of bullying on elementary school playgrounds. Trained observers record the number of incidents of aggression that occur during consecutive 10-minute periods. Aggression is measured on which of the following scales of measurement

Select one:

- ☒ a. Ratio ✔
- ☐ b. Interval
- ☐ c. Nominal
- ☐ d. Ordinal

The correct answer is: Ratio

Question **32**

Incorrect

Mark 0.00 out of 1.00

_____ is the square root of the sum of square deviations of various values from their arithmetic mean divided by the sample size minus one.

Select one:

- ☐ a. Standard Deviation
- ☒ b. Varaince ✖
- ☐ c. Mean absolute deviation

The correct answer is: Standard Deviation

Question **33**

Incorrect

Mark 0.00 out of 1.00

In a Multiple Regression Function how will you interpret the significance of individual independent variable

Select one:

- ☐ a. You need to interpret the sign of B coefficient, B coefficient value keeping other variables constant and the p value of the concerned independent variable
- ☐ b. By interpreting the B coefficient value and the R Squared Value but not the F statistic Probability value
- ☒ c. By interpreting the p value ✖
- ☐ d. By interpreting the B coefficient value keeping the B coefficient value of other independent variables constant and also by interpreting the p value to study the statistical significance

The correct answer is: You need to interpret the sign of B coefficient, B coefficient value keeping other variables constant and the p value of the concerned independent variable

Question **34**

Incorrect

Mark 0.00 out of 1.00

Which of the following does NOT contribute to the Error Term

Select one:

- ☒ a. Vagueness of Theory and unavailability of data ✖
- ☐ b. Poor Proxy Variables and the Principle of Parsimony
- ☐ c. Linear in the variable but not in the parameter
- ☐ d. Improper Functional Form and Measurement Error
- ☐ e. Intrinsic Randomness in Human Behavior

The correct answer is: Linear in the variable but not in the parameter

Question **35**

Incorrect

Mark 0.00 out of 1.00

Imagine a researcher is probing the inflation in Indian Economy from 2019-20 to 2020-21 (Two Observations) considering the following variables

1. Inflation - Dependent Variable
2. Money Supply (M3) - Independent Variable
3. Gross Domestic Product (GDP) - Independent Variable
4. Imports (Independent Variable)
5. Price of Petrol (Independent Variable)

Here which assumption of Classical Linear Regression Model is violated

Select one:

- ☐ a. The number of observations - n must be greater than the number of parameters to be estimated
- ☒ b. Homoscedasticity ✖
- ☐ c. No Perfect Multicollinearity
- ☐ d. No Auto Correlation

The correct answer is: The number of observations - n must be greater than the number of parameters to be estimated