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Candidate's Seat No :_____

MBA in BI Sem.-1 Examination

BI-106

DAS

January-2024

Time : 1-30 Hours] **[Max. Marks : 70**

Instructions :(1) This paper contains **Thirty Five** questions.
(2) Each Question is of 2 Marks.
(3) Each Question is of multiple choices.
(4) All questions are compulsory.

NO.	QUESTION	Marks
Q.1	Which of the following statements about the trend line function in Excel is correct? a) Trend lines can only be applied to bar charts. b) The trend line equation and R-squared value are automatically displayed on the chart. c) Trend lines cannot be customized in terms of color and style. d) Trend lines are limited to linear relationships only	2
Q.2	What is the purpose of the R-squared value in the context of a trend line in Excel? a) It represents the slope of the trend line. b) It indicates the strength of the correlation between the data and the trend line. c) It is used to set the intercept of the trend line. d) It determines the color of the trend line.	2
Q.3	Which type of trend line in Excel is suitable for exponential growth or decay? a) Linear trend line b) Polynomial trend line c) Exponential trend line d) Moving average trend line	2

P.T.O

Q.4 What does an R-squared value of 0 indicate in the context of simple linear regression? **2**

a) Perfect positive correlation between variables.
b) No correlation between variables.
c) Perfect negative correlation between variables.
d) Strong linear relationship between variables.

Q.5 If the R-squared value is 1 in simple linear regression, what does it imply? **2**

a) There is no correlation between the variables.
b) The dependent variable can be perfectly predicted from the independent variable.
c) The model is not a good fit for the data.
d) The residuals are large.

Q.6 How is R-squared interpreted in the context of simple linear regression? **2**

a) It represents the slope of the regression line.
b) It indicates the strength of the linear relationship between the variables.
c) It is the p-value associated with the regression coefficient.
d) It is the standard error of the residuals.

Q.7 If the R-squared value is 0.75, what percentage of the variation in the dependent variable is explained by the independent variable in simple linear regression? **2**

a) 25%
b) 50%
c) 75%
d) 100%

Q.8 What is the range of possible values for R-squared in simple linear regression? **2**

a) 0 to 1
b) -1 to 1
c) $-\infty$ to ∞
d) 0 to ∞

Q.9 To merge names in two columns into one, which function is used? **2**

a) CONCATENATE
b) MERGE
c) COMBINE
d) JOIN

Q.10 When we need to find the area under the curve of a normal distribution, we use the function: **2**

a) NORM.DIST
b) NORM.S.DIST
c) NORM.INV
d) NORM.S.INV

Q.11 When we need to find the point value in a normal distribution for a given cumulative probability, we use the function: **2**

a) NORM.DIST
b) NORM.S.DIST
c) NORM.INV
d) NORM.S.INV

Q.12 To generate random numbers between 10 and 16, which function is used? **2**

a) RAND(10,16)
b) RANDBETWEEN(10,16)
c) RANDOM(10,16)
d) RANDRANGE(10,16)

Q.13 Which of these is not a valid Excel formula? **2**

a) =SUM(A1:B1)
b) =AVERAGE(A1:B1)
c) =CONCATENATE(A1, B1)
d) =IF(A1>B1, "Yes", "No")

Q.14 When you open a new Excel workbook, how many worksheets are there by default at the time of opening? **2**

a) 1
b) 2
c) 3
d) 4

Q.15 An LP problem needs the variables to be _____ in relation. **2**

a) Dependent
b) Correlated
c) Independent
d) Multiplicative

Q.16 To create a formula in a cell in Excel, which is the first step? **2**

a) Press Enter
b) Type the formula
c) Click the cell
d) Press Tab

P.T.O

Q.17 In Excel Solver, the variables which you need to calculate to achieve the objective function are called: **2**

a) Constants
b) Parameters
c) Constraints
d) Changing Cells

Q.18 In descriptive statistics, you first choose: **2**

a) Mean
b) Median
c) Range
d) Data Set

Q.19 Which of the following does not appear when you use descriptive statistics? **2**

a) Mean
b) Standard Deviation
c) Histogram
d) Mode

Q.20 Which of the following appears when you use descriptive statistics? **2**

a) Regression Analysis
b) Scatter Plot
c) Confidence Interval
d) Quartiles

Q.21 To make a cell 1 or 0 in Solver, we use the constraint: **2**

a) =1
b) =0
c) <=1
d) >=0

Q.22 Why are standard residuals useful in regression analysis? **2**

a) To calculate the total sum of residuals
b) To identify outliers that may bias the results
c) To determine the mean value of residuals
d) To establish the range of residuals

Q.23 What do standard residuals in regression analysis describe? **2**

a) The mean value of residuals
b) How far each residual is from its mean in units of standard deviations
c) The total sum of residuals
d) The range of residuals

Q.24 How is linearity typically checked in regression analysis? **2**

a) By examining a histogram of residuals
b) By using formal goodness-of-fit tests
c) By examining a scatter diagram of the data or residual plot
d) By assessing normality of errors

Q.25 What does a randomly scattered pattern of residuals around zero indicate in regression analysis? **2**

a) Linearity
b) Homoscedasticity
c) Normality of errors
d) Independence of errors

Q.26 How can normality of errors be verified in regression analysis? **2**

a) By examining a histogram of the standard residuals
b) By assessing homoscedasticity
c) By using formal goodness-of-fit tests
d) By examining a scatter diagram of the data

Q.27 What is homoscedasticity in the context of regression analysis? **2**

a) Residuals having a bell-shaped distribution
b) Residuals exhibiting a linear trend
c) Constant variation about the regression line for all values of the independent variable
d) Independence of errors

Q.28 How can homoscedasticity be evaluated in regression analysis? **2**

a) By examining a scatter diagram of the data
b) By assessing normality of errors
c) By using formal goodness-of-fit tests
d) By examining the residual plot for consistent variances

Q.29 What caution is advised when looking at residual plots for homoscedasticity? **2**

a) Use formal goodness-of-fit tests for accurate evaluation
b) Consider that the model is derived from limited data
c) Ignore variations in the variances
d) Focus only on the mean of residuals

Q.30 What is the independence of errors assumption important for in regression analysis? **2**

a) Linearity
b) Homoscedasticity
c) Cross-sectional data
d) Time as the independent variable

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Q.31 What is autocorrelation in the context of regression analysis? **2**

a) Residuals having a bell-shaped distribution
b) Clusters of residuals with the same sign
c) Constant variation about the regression line
d) Independence of errors

Q.32 When does autocorrelation become a concern in regression analysis? **2**

a) When examining a histogram of residuals
b) When assessing homoscedasticity
c) When time is the independent variable
d) When residuals exhibit a linear trend

Q.33 How is autocorrelation evaluated more formally in regression analysis? **2**

a) By examining a scatter diagram of the data
b) By using formal goodness-of-fit tests
c) By assessing normality of errors
d) By the Durbin–Watson statistic

Q.34 What is the name for correlation among successive observations over time in regression analysis? **2**

a) Heteroscedasticity
b) Autocorrelation
c) Multicollinearity
d) Independence of errors

Q.35 What should be considered if the independence of errors assumption is seriously violated in regression analysis? **2**

a) Use formal goodness-of-fit tests
b) Continue with least squares estimation
c) Employ techniques other than least squares
d) Ignore the violation as it is not a serious issue

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