QUESTION BANK

BA Economics

(CUCBCSS – 2014 Admission onwards)

Semester III

Core Course of BA Economics

Quantitative Methods for Economic Analysis – I

SCHOOL OF DISTANCE EDUCATION

UNIVERSITY OF CALICUT

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Quantitative Methods for Economic Analysis – I

1. The ordered pair (3,0) is found:
   a) on the y-axis b) in the first quadrant c) in the four quadrant d) on the x-axis.

2. Which of the following is NOT exponential function
   a) $f(x)=e^x$ b) $f(x)=1^x$ c) $f(x)=2^x$ d) $f(x)=(0.5)^x$

3. A logarithm of base '10' is called
   a) Natural exponential function b) Natural logarithm c) The common logarithm d) Natural Base

4. The y-intercept of the function $y = b^x$ is
   a) 0 b) It has no y-intercept c) 1 d) −1

5. Write the function in standard form: $y = (x + 5)(x - 7)$
   a) $x^2 - 2x - 35$ b) $x^2 + 2x + 35$ c) $x + 2x - 35$ d) $x - 2x - 35$

6. Factor: $x^2 + 2x - 15$
   a) (x−3)(x−5) b) (x+5)(x+3) c) (x+5)(x−3) d) (x+5)(x−3)

7. Solve by factoring: $x^2 + 5x - 14 = 0$
   a) −7, 2 b) 7, 2 c) 7, −2 d) −7, − 2

8. Factor $36x^2 - 84x + 49$
   a) (6x − 7)(6x+7) b) (6x−7)(6x−7) c) (6x+7)(6x+7) d) (6x+7)(6x−7)

9. Find the x-intercepts: y = 3 (x+5)(x−9)
   a) at 3 b) at 5 and −9 c) at −5 and 9 d) at −4

10. Solve the quadratic equation $6x^2 + 7x - 3 = 0$
    a) x = 1/3 or −1.5 b) −1/6 or 3 c) x = 1/6 or −3 d) x = −1/3 or 1.5

11. 2^{-1} equals :
    (a) 2 (b) $\frac{1}{2}$ (c) −2 (d) None of these.

12. The solution for the equation $3^{x-1} + 3^{x+1} = 90$ is:
    (a) 3 (b)1 (c) −3 (d) None of these.

13. The solution for the equation $4^{2x+1} = 8^{x+3}$ is:
    (a) 4 (b)8 (c) 2 (d) 7

14. $x^{a-b} \times x^{b-c} \times x^{c-a}$ is equal to :
    (a) 1 (b)0 (c) x^{a+b+c} (d)x^{abc}

15. $8^{-2/3}$ equals:

(a) 4 (b)8 (c)$\frac{1}{4}$ (d) $\frac{2}{3}$

16. If $16=2^4$, then $log_{2^{16}}$ is :

(a) 4 (b)2 (c) 1 (d) 16

17. If $log_{a^{64}} = 3$,then a is equal to

(a) 3 (b)4 (c) 2 (d) None of these.

18. 343 to the base 7 is :

(a) 3 (b)4 (c) 5 (d) 7

19. 216 to the base $\sqrt{6}$ is :

(a) 6 (b) $\frac{2}{6}$ (c) $\sqrt{-3}$ (d) None of these.

20. Number of digits in 2^{35} is :

(a) 11 (b)10 (c) 8 (d) 7

21. In the logarithm of a number the mantissa part is always:

(a) Positive (b)Negative (c) Neither positive nor negative (d) None of these.

22. The logarithm of a negative number is:

(a) Positive (b)Negative (c) Cannot determined (d) None of these.

23. The logarithm of a number to the base 'e' is called :

(a) Common logarithm (b)Natural logarithm (c) Anti logarithm (d) None of these

24. Common logarithms are logarithms with base

(a) e (b)1 (c) 10 (d) 0

25. If (2x +1) (4x-1)=0 , the roots are:

(a) 1,-1 (b) $\frac{1}{2}, \frac{1}{4}$ (c) $\frac{-1}{2}, \frac{1}{4}$ (d) 2,2.

26. The value of $\begin{bmatrix} 1 & -5 \\ 0 & -4 \end{bmatrix}$ is:

(a) 4 (b)-4 (c) 0 (d) 1

27. Matrix A is said to be idempotent matrix when:

(a) $A^{-}A^{-1}$ (b) $A^{-}A^{2}$ (c) $A = A^{I}$ (d) $A = IA$

28. The slope of the equation $-2y = -3x$ is:

(a) 1.5 (b)-3 (c) -2 (d) 2

29. $X^m + X^n =$:

a) X^{m+n} (b) X^{mn} (c) $X^{\frac{m}{n}}$ (d) X^{m-n}

30. X^0 =------

(a) X (b) 0 (c) 1 (d) None of these

31. $8^{-2/3}$ =----------

(a) 8 (b) 2 (c) $\frac{1}{4}$ (d) $\frac{2}{3}$

32. Logarithm of 25 to the base 5 is:

(a) 5 (b) 125 (c) 2 (d) $\frac{1}{3}$

33.Logarithm of unity to any base is :

(a) Unity (b) ∞ (c) $zero$ (d) None of these

34. $4log_{16^2}$ = ----------

(a) 1 (b) log 1 (c) log_{16^8} (d)4

35. If $log_{a^{\sqrt{3}}} = \frac{1}{4}$, then the value of a= ----------

(a) 3 (b) $\frac{3}{4}$ (c) 9 (d) $3^{1/4}$

36. If $log_{a^{64}} = 3$ then a = ----------

(a) 2 (b) 4 (c) 3 (d) 12

37. The equation $X^2 + 4 = 0$ is a :

(a) Cubic equation (b) Simple equation

(c)Quadratic equation (d)Nome of these.

38. The solution of the equation $\frac{2}{3}x = 4$ is :

(a) 6 (b) 12 (c) 8 (d) 16

39. The value of the determinant $\begin{bmatrix} 5 & 6 \\ 3 & 4 \end{bmatrix}$ is ----------

(a) 2 (b) 38 (c) -2 (d) -38

40. If the rows and columns of a determinant are interchanged , then the determinant value ----------.

(a) remains the same (b) the sign of the value change

(c) becomes zero (d) none of these.

41. The equation of a line having slope 'b' and y-intercept 'a' is given by:

(a) $y = b + ax$ (b) $y = x + ab$ (c) $y = a + bx$ (d) $y = \frac{a}{bx}$

42. $y = mx + c$ is ---------- of a straight line.

(a) general form (b) slope form (c) Intercept form (d) equation

43. A demand function is ----------

(a) continuous function (b) constant function

(c) decreasing function (d) increasing function

44. A straight line and a parabola intersect at :

(a)2 points (b)1 point (c)no point (d)at origin

45. The common root of $x^2 - 5x + 6 = 0$ and $3x^2 - 5x - 2 = 0$ is :

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

46. The value of the determinant $\begin{bmatrix} a & 0 & b \\ 0 & b & 0 \\ b & 0 & c \end{bmatrix}$ is equal to :

(a)abc (b)$abc - b$ (c)$abc - b^2$ (d)$abc - b^3$

47. In a determinant if two rows or columns are identical its value is :

(a)0 b)1 (c)-1 (d)none of these

48. The solutions of the equations by determinants method is called:

(a) *inverse method* (b)*rank method*

(c)*cramer's rule* (d)*none of these*

49. When two rows (or columns) are interchanged the value of the determinant:

(a) remain unchanged (b) changed

(c)changed by sign (d)none of these

50 . Which of the following is a singular matrix :

(a) $\begin{bmatrix} 1 & 3 \\ 2 & 4 \end{bmatrix}$ (b) $\begin{bmatrix} 3 & 6 \\ 1 & 2 \end{bmatrix}$ (c) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ (d) $\begin{bmatrix} 1 & 3 \\ 2 & 5 \end{bmatrix}$

51. Let B be the inverse of a matrix A having determinant 3, then the determinant of B is :

(a) 9 (b) 3 (c) 1/3 (d) 0.

52. The matrix A = $\begin{bmatrix} 0 & 0 & 1 \\ 0 & 0 & 0 \\ -1 & 0 & 0 \end{bmatrix}$ is :

(a) Symmetric (b) Diagonal (c) Skew Symmetric (d) Triangular.

53. A square matrix A is said to be skew symmetric, if:

(a) $A = A^T$ (b) $A = A^{-1}$ (c) $A = -A^T$ (d) $A = -A^{-1}$

54. The rank of a matrix is defined as the maximum number of :

(a) linearly independent rows of a matrix (b) linearly independent columns of a matrix

(c) both a & b (d) neither a nor b

55. A diagonal matrix in which all the diagonal elements are equal is called:

(a) unit matrix (b) null matrix (c) scalar matrix (d) triangular matrix

56. If A is an mxn matrix, and B is an nxk matrix ,then product AB is of order :

(a) mxn (b) nxk (c) nxn (d) mxk

57. A square matrix A is said to be orthogonal if :

(a) $AA^T = A^2$ (b) $AA^T = I = A^T A$ (c) $A + A^T = A^T + A$ (d) none of these

58. Let A and B be skew symmetric matrix, then AB is symmetric if and only if :

(a) $AB = BA$ (b) AB=0 (c) $A = B^T$ (d) $A = -B^T$

59. A square matrix B is orthogonal if :

(a) $B = -B^T$ (b) $B = B^T$ (c) $B^T = B^{-1}$ (d) $B^T = -B^{-1}$

60. If A and B are square matrices such that AB=BA , then A and B are called :

(a) anti commutative (b) commutative (c)associative (d) periodic

61. Two matrices A and B are said to be conformable for multiplication only if :

(a) The number of rows of A is equal to the number of rows of B

(b) The number of columns of A is equal to the number of columns of B

(c) The number of rows of A is equal to the number of columns of B

(d) The number of columns of A is equal to the number of rows of B

62. Matrix addition is:

(a) Commutative (b) Associative (c) Have additive identity (d) all the above.

63. Transpose of a matrix A of order mxn is of order:

(a) mxm (b) nxn (c) nxm (d) none of these.

64. Determinants are possible only when :

(a) number of rows > number of columns. (b) number of rows < number of columns

(c) number of rows = number of columns (d) none of these.

65. Trace of a matrix is defined as:

(a) sum of principal diagonal elements (b) sum of off diagonal elements

(c) sum of row elements (d) sum of column elements

66. In the function Y = f(X), X is the :

(a) dependent variable (b) independent variable (c)constant (d) none of these

67. The function g(x)= $2x^2 - x + 7$ is :

(a) linear (b) biquadratic (c) quadratic (d) constant function.

68. The function log y = a+ bx is called:

(a) linear function (b) double log function

(c)exponential function (d) semi log function .

69. The function$y = x^3 + 3x$, is:

(a) an odd function (b) an even function (c) quadratic function (d) linear function.

70. The graph of a quadratic function is a:

(a) line (b) hyperbola (c) parabola (d) none of these

71. In a rectangular hyperbola, the relationship between X and Y is:

(a) direct (b) indirect (c) linear (d) no relationship.

72. The parabola $X^2 = -4py$ lies completely:

(a) above the X axis (b) right side of the Y axis

(c) below the X axis (d) left side of Y axis.

73. For equilibrium price and quantity demanded , the condition is :

(a) demand > supply (b) demand < supply

(c) demand = supply (d) none of these.

74. The indifference curve analysis is developed by:

(a) Edgeworth (b) R A fisher (c) Cobb-Douglas (d) Wilfredo pareto

75. An indifference map is a:

(a) Collection of demand curves (b) Collection of supply curves

(c) Collection of indifference curves (d) none of these.

76. An important tool of indifference curve analysis is:

(a) Marginal propensity to consume (b) Marginal rate of substitution

(c) Marginal propensity to save (d) Marginal utility.

77. Average revenueis given by:

(a) total revenue /output (b)marginal revenue/output

(c) total revenue/price (d)none of these.

78. Breakeven point is a point at which :

(a) TR=TC (b)TR=AR (c) TC=AC (d) none of these.

79. In the consumption function C = a+by, the constant b denotes:

(a) elasticity (b) MPS (c) MPC (d) none of these.

80. Total cost is equal to:

(a) TVC+TFC (b) AFC+AVC (c) AVC (d)AFC

81. Statistics deals with :

(a) qualitative information (b)quantitative information

(c) both (d) none.

82. Statistical results are:

(a) absolutely correct (b) not true

(c) true on an average (d) universally true.

83. Statistics are:

(a) aggregate of facts (b) numerically expressed

(c) systematically collected (d) all of these

84. Statistical methods are:

(a) collection of data (b) classification

(c) analysis and interpretation of data (d) all of these.

85. An attribute is:

(a) a qualitative characteristic (b) a quantitative characteristic

(c) a measurable characteristic (d) all these.

86. Tally marks determine:

(a) class width (b) class boundary (c) class limit (d) class frequency

87. When the upper limit of a class is the lower limit of the next class, the series is known as :

(a) Exclusive (b) inclusive (c) individual (d) discrete

88. Pie diagram is used for :

(a) comparing different components and their relations to total

(b) representing qualitative data in a circle

(c) representing quantitative data in a circle

(d) either b or c

89. Diagrams are tools of:

(a) collection of data (b) analysis of data

(c) Summarization of data (d) Presentation of data

90. Ogives are useful to locate:

(a) mean (b) median (c) mode (d) weighted mean.

91. Histogram is useful to determine:

(a) mean (b) median (c) mode (d) all these.

92. For open-end classification, the best measure of central tendency is:

(a) AM (b) GM (c) Median (d) Mode

93. The most commonly used measure of central tendency is:

(a) AM (b) Median (c) Mode (d) HM.

94. Quartiles can be determined graphically using:

(a) Histogram (b) Frequency Polygon (c) Ogive (d) Pie chart.

95. The value of the middle most item when they are arranged in order of magnitude is called:

(a) Quartile (b) mean (c) mode (d) median

96. The value which occurs with the maximum frequency is called:

(a) median (b) mode (c) mean (d) none

97. For calculation of ---------- we have to construct cumulative frequency distribution.

(a) mode (b) median (c) mean (d) none

98. The measure of central tendency which is based on all the observations of a series is:

(a) mean (b) median (c) mode (d) deciles

99. Average is a measure of :

(a) central tendency (b) dispersion (c) symmetry (d) concentration

100. To find median, arrange the data in :

(a)ascending order (b) descending order

(c) ascending order or descending order (d) no order

101. ----------percentage of values of a series are less than Q_1

(a) 50 (b) 75 (c) 25 (d) 10

102. For a moderately asymmetrical distribution:

(a) mean = median = mode (b) mode = 3median - 2mean

(c) mean = 2mode - 3median (d) median = 2mean - 3 mode

103. The best average to analyze speed is:

(a) HM (b)Mode (c) GM (d) AM

104. Measures of central tendency are called averages of the ---------- order

(a) first (b) second (c) third (d) fourth

105. The class having the maximum frequency is called:

(a) modal class (b) median class (c) mean class (d) none

106. The value of a variate that occurs most often is called:

(a) median (b) mean (c) mode (d) decile

107. Dispersion means:

(a) the scatterness of a set of observations (b) the concentration of a set of observations

(c) both a and b (d) neither a nor b.

108. To compare two or more distributions, we use:

(a) absolute measure of dispersion (b) relative measure of dispersion

(c) both a and b (d) either a or b.

109. Which measure of dispersion is the quickest to compute?

(a) standard deviation (b) quartile deviation (c) range (d) all

110. The most commonly used measure of dispersion is:

(a) range (b)standard deviation

(c) coefficient of variation (d) quartile deviation

111. Measures of dispersion are called the averages of the ---------- order.

(a)1^{st} (b)2^{nd} (c) 3^{rd} (4) 4^{th}

112. Coefficient of standard deviation is:

(a) SD/Median (b) SD/Mean (c) SD/Mode (d) AM/SD.

113. If the same amount is added to or subtracted from all the values , standard deviation shall be:

(a) Changed (b) unchanged (c) both (d) none

114. Sum of squares of the deviations about mean is :

(a) maximum (b) minimum (c) zero (d) one

115. Which device is good to measure variation in open-end distribution:

(a)quartile deviation (b) range (c) mean deviation (d) variance

116. Skewness refers to:

(a) symmetry (b)asymmetry (c) flatness (d) peakedness

117. For a positively skewed distribution :

(a) mean> mode> median (b) mean> median> mode

(c) mode> mean> median (d) mean< mode <median.

118. When the measure of kurtosis is less than 3, the distribution is:

(a) mesokurtic (b) leptokurtic (c) platy kurtic (d)symmetric

119. The range of simple correlation coefficient is:

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

120. Probable error is used for :

(a) measuring the error in r (b) testing the significance of r

(c) both a and b (d) neither a nor b

121. If correlation between the two variables is unity, there is:

(a) perfect correlation (b) perfect positive correlation

(c) perfect negative correlation (d) no correlation

122. Correlation can be:

(a) Positive only (b)Negative only (c) Positive or Negative (d)Perfect

123. Correlation coefficient measures:

(a) variability (b) location (c) concentration (d) relation.

124. For perfect correlation, the coefficient of correlation should be:

(a) 0 (b) +1 (c) -1 (d) ± 1

125. The term regression was introduced by:

(a) R A Fisher (b) Sir Francis Galton (c)Karl Pearson (d)None of these .

126. If X and Y are two variables, there can be at most:

(a) one regression line (b) two regression lines

(c) three regression lines (d) an infinite number of regression lines.

127. If the correlation between the two variables X and Y is negative, the regression coefficient of Y on X is:

(a)Positive (b)Negative (c) Not certain (d) None of the above

128. The idea of product moment correlation was given by:

(a) Fisher (b) Galton (c) Pearson (d) Spearman

129. When the measure of kurtosis is greater than 3, the distribution is:

(a) mesokurtic (b) leptokurtic (c) platy kurtic (d) symmetric

130. Quartile deviation is called:

(a) semi inter quartile range (b) inter quartile range (c) both (d) none.

131. A is a 3 × 2 matrix

B is a 2 × 3 matrix

C is a 2 × 2 matrix

D is a 3 × 3 matrix

Which of the following products does not exist?

a)AB (b)AC (c)BD (d) CD

132. ___ matrix has 1s on the diagonal and 0s everywhere else

(a) Identity (b) Idempotent (c) Square (d) Null

133. If every element in a row (or column) is 0, the value of the determinant is _____

(a) 5 (b) 7 (c) 0 (d) Insufficient information

134. The sample correlation coefficient ranges between_____

(a) −1 and +1 (b) +1 and infinity
(c) −1 and infinity (d) can have any value

135. The_____, denoted r,ranges between -1 and +1 and quantifies the direction and strength of the linear association between the two variables

a)standard deviation (b) quartile Deviation
c) regression coefficient (d) sample correlation coefficient

136. The sign of the _____ indicates the direction of the association. The magnitude of the correlation coefficient indicates the strength of the association.

(a) standard deviation (b) quartile Deviation
(c) correlation coefficient (d) regression coefficient

137. Correlation of r = _____ suggests a strong, positive association between two variables

(a) −0.9 (b) 0.9 (c) 0 (d) −7

138. Correlation of r = ____ suggest a weak, negative association.

(a) −0.2 (b) 0.9 (c) 0 (d) 2

139. Correlation close to _____ suggests no linear association between two continuous variables.

(a) −0.9 (b) 0.9 (c) 0 (d) −7

140. In correlation, if the coefficient is a_____, then the dependent variable will move in the same direction as the independent variable
(a) positive number b) negative number (c) 0 (d) infinite

141. If the coefficient is _____, then the dependent variable will move in the opposite direction of the independent variable.
(a) positive number (b) negative number (c) 0 (d) infinite

142. Correlation refers to
(a) the causal relationship between two variables (b)how two variables covary
(c) the proportion of variance that two variables share (d)data analysis

143. For the following correlation coefficients, which of the following indicates the strongest relation?
(a) r = 0.5 b) r = 0.09 (c) r = −0.6 (d) r = 0.2

144. A researcher finds a correlation of 0.40 between personal income and the number of years of college completed. Based upon this finding he can conclude that
(a) a person who attended four years of college will have an annual income of Rs. 40,000
(b) more years of education causes higher income
(c) personal income is a positively skewed variable
(d) more years of education are associated with higher income

145. Which of the following may have an adverse effect on a correlation coefficient
(a) too many people in your experiment (b) restricting the range of possible scores
(c) the scores on one variable have larger numbers than the other variable
(d) a negative relationship between your X and Y variables

146. Which of the following would not allow you to calculate a correlation?
(a) a negative relationship between X and Y
(b) a positive relationship between X and Y
(c) a curvilinear relationship between X and Y
(d) a linear relationship between X and Y

147. If two variables are highly correlated, what do you know?
(a) that they always go together
(b) that high values on one variable lead to high values on the other variable
(c) that there are no other variables responsible for the relationship
(d) that changes in one variable are accompanied by predictable changes in the other

148. A study designed to establish the relationship between two variables is best described as
(a) descriptive (b) correlational (c) experimental (d) single subject

149. Which of the following is NOT a purpose of correlational research?
(a) to determine if a relation exists between two variables
(b) to make predictions (c) to establish causal relationships
(d) to determine the degree to which a relationship exists between two variables

150. What would you expect the correlation between daily calorie consumption and body weight to be?
(a) moderate to large positive (b) small positive
(c) zero or near zero (d) small negative

151. The square of the correlation coefficient or r^2 is called the
(a) covariance (b) variance (c) coefficient of determination (d) cross-product

152. What would you expect the correlation between consumer cost and consumer satisfaction to be?
(a) zero or near zero (b) moderate to large negative
(c) small positive (d) small negative

153. Sanju calculated a correlation coefficient of 0.75. Which of the following reflects the best interpretation of this
(a) weak negative (b) strong negative (c) weak positive (d) strong positive

154. In a study of the relationship between math anxiety and math aptitude, which of the following correlation coefficients is reasonable to expect
(a) +1.00 (b) +0.67 (c) –0.67 (d) – 1.00

155. A scatterplot of a correlation of 0.10 would look most like a
(a) straight line (b) ellipse (c) circle (d) square

156. When there is a single continuous dependent variable and a single independent variable, the analysis is called a simple _____regression analysis
(a) linear (b)nonlinear (c) curvilinear (d) rectangular

157. _____analysis involves identifying the relationship between a dependent variable and one or more independent variables
(a) Correlation (b) Regression (c) SD (d) MD

158. The estimated ____ equation can be used to predict the value of the dependent variable given values for the independent variables.
(a) Correlation (b) mean deviation (c) standard deviation (d) regression

159. In simple linear regression, the model used to describe the relationship between a single dependent variable Y and a single independent variable X is y = a0 + a1x + k. a0 and a1 are referred to as the model _____
(a) values (b) estimates (c) parameters (d) class

160. In regression, the method of _____ is the most widely used procedure for developing estimates of the model parameters
(a) interpolation (b) least squares (c) extrapolation (d) dumping

Answer Key

1. (d) on the x-axis.
2. (b) $f(x)=1^x$
3. (c) The common logarithm
4. (c) 1
5. (a) $x^2 - 2x - 35$
6. (d) $(x+5)(x-3)$
7. (a) $-7, 2$
8. (b) $(6x-7)(6x-7)$
9. (c) at -5 and 9
10. 10. (a) $x = 1/3$ or -1.
11. (b) $\frac{1}{2}$
12. (a) 3
13. (d) 7
14. (a) 1
15. (c) $\frac{1}{4}$
16. (a) 4
17. (b) 4
18. (a) 3
19. (a) 6
20. (a) 11
21. (a) Positive
22. (c) Cannot determined
23. (b) Natural logarithm
24. (c) 10
25. (c) $\frac{-1}{2}, \frac{1}{4}$
26. (b) -4
27 (b) $A = A^2$
28. (a) 1.5
29. (a) X^{m+n}
30. (c) 1

31. (c) $\frac{1}{4}$

32. (c) 2

33. (c) *zero*

34. (a) 1

35. (c) 9

36. (b) 4

37. (c) Quadratic equation

38. (a) 6

39. (a) 2

40. (a) remains the same

41. (c) $y = a + bx$

42. (b) slope form

43. (c) decreasing function

44. (a) 2 points

45. (b) 2

46. (d) $abc - b^3$

47. (a) 0

48. (c) *cramer, s rule*

49. (c) changed by sign

50. (b) $\begin{bmatrix} 3 & 6 \\ 1 & 2 \end{bmatrix}$

51. (b) 3

52. (c) Skew Symmetric

53. (c) $A = -A^T$

54. (c) both a & b

55. (c) scalar matrix

56. (d) mxk

57. (d) none of these

58. (a) $AB \simeq BA$

59. (d) $B^T = -B^{-1}$

60. (b) commutative

61. (d) The number of columns of A is equal to the number of rows of B
62. (d) all the above.
63. (c) nxm
64. (c) number of rows = number of columns
65. (a) sum of principal diagonal
66. (b) independent variable
67. (c) quadratic
68. (d) semi log function .
69. (a) an odd function
70. (c) parabola
71. (b) indirect
72. (c) below the X axis
73. (c) demand =supply
74. (a) Edgeworth
75. (c) Collection of indifference curves
76. (b) Marginal rate of substitution
77. (a) total revenue /output
78.(a) TR=TC
79. (c) MPC
80. (a) TVC+TFC
81. (b) quantitative information
82. (c) true on an average
83. (d) all of these
84. (d) all of these.
85. (a) a qualitative characteristic
86. (d) class frequency
87. (a)Exclusive
88. (a) comparing different components and their relations to total
89. (d) Presentation of data
90. (b) median
91. (c) mode

92. (c) Median
93. (a)AM
94. (c) Ogive
95. (d) median
96. (b) mode
97. (b) median
98. (a) mean
99. (a) central tendency
100. (c) ascending order or descending order
101. (c) 25
102. (b) mode=3median-2mean
103. (a) HM
104. (a) first
105. (a) modal class
106. (c) mode
107. (a) the scatterness of a set of observations
108. (b) relative measure of dispersion
109. (c) range
110. (b) standard deviation
111. (b) 2^{nd}
112. (b) SD/Mean
113. (b) unchanged
114. (b) minimum
115. (a) quartile deviation
116. (b) asymmetry
117. (b) mean> median> mode
118. (c) platy kurtic
119. (d) -1 to 1
120. (b) testing the significance of r
121. (b) perfect positive correlation
122. (c) positive or negative

123. (d) relation.
124. (d) ± 1
125. (b) Sir Francis Galton
126. (b) two regression lines
127. (b)negative
128. (c) Pearson
129. (b) leptokurtic
130. (a) semi inter quartile range
131. (d) CD
132. (a) Identity
133. (c) 0
134. (a) −1 and +1
135. (d) sample correlation coefficient
136. (c) correlation coefficient
137. (b) 0.9
138. (a) −0.2
139. (c) 0
140. (a) positive number
141. (b) negative number
142. (b) how two variables covary
143. (c) r = − 0.6
144. (d) more years of education are associated with higher income
145. (b) restricting the range of possible scores (because When range is restricted, r is almost always too small)
146. (c) a curvilinear relationship between X and Y
147. (d) that changes in one variable are accompanied by predictable changes in the other
148. (b) correlational
149. (c) to establish causal relationships
150. (a) moderate to large positive
151. (c) coefficient of determination
152. (b) moderate to large negative

153. (d) strong positive
154. (c) –0.67 (There is reason to suspect that higher levels of math anxiety are related to lower math achievement scores)
155. (c) circle (The scatterplots for low correlations are circular; moderate and strong correlations have elliptical and straight line scatterplots)
156. (a) linear
157. (b) Regression
158. (d) regression
159. (c) parameters
160. (b) least squares