MTH302 FINAL TERM PREPARATION

BY BRAINY SQUAD 100+ MCQ'S

MCQ 1:

Question: An arrangement of data by successive time periods is called a:
Options:

- Exponential Smoothing
- **Time Series ✓**
- Combination
- Permutation

MCQ 2:

Question: What is the probability of choosing a vowel from the alphabet?
Options:

- **5/26 ✓**
- 21/26
- 1/21
- 2/21

MCQ 3:

Question: What is the probability of scoring 11 when you roll two dice?
Options:

- **1/18 ✓**
- 2/18
- 1/36
- 3/18

MCQ 4:

Question: If the sign of rrr is negative, then it indicates:
Options:

- Direct relationship between X & Y
- **Indirect relationship between X & Y ✓**
- X & Y equal
- X & Y are square

MCQ 5:

Question: The answer of the SUMIF function in the above diagram is:
Options:

- 763
- 663
- **613 ✓**
- 513

MCQ 6:

Question: Two dice are rolled and the numbers are added together. The probability of the total being 12 is:
Options:

- True
- **False ✓**

MCQ 7:

Question: Twelve randomly chosen students were asked how many times they had missed class during a certain semester, with this result: 2, 1, 5, 1, 1, 3, 4, 3, 1, 1, 5, 18. For this sample, which measure of central tendency is least representative of the "typical" student?
Options:

- **Mean ✓**
- Median
- Mode
- Midrange

MCQ 8:

Question: The experimental region is the range of the previously observed values of the dependent variable.
Options:

- False
- **True ✓**

MCQ 9:

Question: _____ should be of equal size.
Options:

- **Intervals ✓**
- Table
- Frequency
- Mean

MCQ 10:

Question: Let's assume that you are receiving 1000 Rs. every year, and you invested each payment at 5%. The amount you would have at the end of five years is referred to as:
Options:

- Final Value
- Cumulative interest
- **Accumulated value ✓**
- Principal value

MCQ 11:

Question: The point where a straight line cuts the X-axis is called:
Options:

- Slope
- Starting point
- Y-intercept
- **X-intercept ✓**

MCQ 12:

Question: Which ratio is equal to 15:20?
Options:

- 21:28
- **5:10 ✓**
- 18:25
- None of these

MCQ 13:

Question: Reduction from original selling price is called ……
Options:

- Loss
- List price
- Profit
- **Markdown ✓**

MCQ 14:

Question: This example returns the present value of an investment that pays Rs. 100 at the end of every year for 10 years. The money paid out will earn 5.25% annually.
Options:

- **=PV(5.25%/1, 10*1, 100, 0) ✓**
- =PV(5.25%/1, 10*1, 100, 1)
- =PV(5.25%/12, 10*1, 100, 0)

- =PV(5.25%/1, 10*12, 100, 1)

MCQ 15:

Question: Which is the correct syntax for the determinant of a matrix given by the following array?
Options:

- =DETERM(B4:E7)
- =MDTERM(B4:E7)
- **=MDETERM(B4:E7) ✓**
- =MDETERM(B4;E7)

MCQ 16:

Question: While using the Frequency function, one always selects:
Options:

- one cell more than the data array.
- **one cell more than the bins array. ✓**
- at most 20 cells.
- a random number of cells.

MCQ 17:

Question: Coefficient of variation shows dispersion of the:
Options:

- **Standard deviation about mean. ✓**
- Standard deviation about mode.
- Variance about mean.
- Variance about mode.

MCQ 18:

Question: The result of BINOMDIST is #NUM. Why?
Options:

- One parameter is missing.
- Fourth parameter is FALSE.
- **The number of successes should not be negative. ✓**
- Probability of success on each trial should be less than 1.

MCQ 19:

Question: For two-tail test, when α=0.10\alpha = 0.10α=0.10, the value of Z is:
Options:

- ±1.96\pm 1.96±1.96

- ±1.645\pm 1.645±1.645
- ±2.326\pm 2.326±2.326
- **±2.575\pm 2.575±2.575 ✓**

MCQ 20:

Question: For the set of data 2,1,3,1,4,5,2,6,82, 1, 3, 1, 4, 5, 2, 6, 82,1,3,1,4,5,2,6,8, the median is:
Options:

- 4
- 1
- 2
- **3 ✓**

MCQ 21:

Question: The variable plotted on the horizontal or X-axis in a scatter diagram is called the:
Options:

- **Independent variable ✓**
- Dependent variable
- Correlation variable
- Scatter variable

MCQ 22:

Question: For two-tail test, when α=0.05\alpha = 0.05α=0.05, the value of Z is:
Options:

- **±1.96\pm 1.96±1.96 ✓**
- ±1.645\pm 1.645±1.645
- ±2.326\pm 2.326±2.326
- None of these

MCQ 23:

Question: No Linear Programming problem with an unbounded feasible region has a solution.
Options:

- True
- **False ✓**
- May or may not
- None of these

MCQ 24:

Question: The Linear Programming Model maximizes or minimizes the:
Options:

- Line
- Both linear and quadratic functions
- None of these
- **Quadratic function ✓**

MCQ 25:

Question: From the given scenario, the output of SUMIF(A3:A12, "Away", A3:A12) function will be:
Options:

- 10
- 14
- 0
- **#NAME? ✓**

MCQ 26:

Question: The equation for the correlation coefficient is:
Options:

- −1≤ρ≤1-1 \leq \rho \leq 1−1≤ρ≤1
- 1≤ρ≤01 \leq \rho \leq 01≤ρ≤0
- ρ=Cov(X,Y)σxσy\rho = \frac{\text{Cov(X,Y)}}{\sigma_x \sigma_y}ρ=σxσyCov(X,Y)
- **−1≤ρxy≤1-1 \leq \rho_{xy} \leq 1−1≤ρxy≤1 ✓**

MCQ 27:

Question: A scatter diagram is a chart:
Options:

- (i) In which the dependent variable is scaled along the vertical axis.
- (ii) In which the independent variable is scaled along the horizontal axis.
- (iii) That portrays the relationship between two variables.
- **All (i), (ii), and (iii) are true. ✓**

MCQ 28:

Question: If the estimating equation is Y=a−bXY = a - bXY=a−bX, which of the following is true?
Options:

- The intercept is bbb.
- Slope of line is positive.
- **There is an inverse relationship. ✓**
- There is a direct relationship.

MCQ 29:

Question: Evaluate 6!/(0!(6−6)!)6! / (0!(6-6)!)6!/(0!(6−6)!):
Options:

- 0
- 10
- 120
- **720 ✓**

MCQ 30:

Question: The Empirical Rule is based on the assumption of a:
Options:

- (i) Normal distribution
- (ii) Binomial distribution
- (iii) Poisson distribution
- **(i) Normal distribution ✓**

MCQ 31:

Question: In a school, 14% of students take drama and computer classes, and 67% take drama class. What is the probability that a student takes computer class given that the student takes drama class?
Options:

- 23%
- **21% ✓**
- 25%
- None of these

MCQ 32:

Question: What is the probability of scoring 11 when you roll two dice?
Options:

- **1/18 ✓**
- 1/36
- 2/18
- None of these

MCQ 33:

Question: A statistical _____ is an assertion about the distribution of one or more random variables.
Options:

- Correlation
- Regression

- **Hypothesis ✓**
- Time Series

MCQ 34:

Question: The class frequency is:
Options:

- **The number of observations in each class. ✓**
- The difference between consecutive lower class limits.
- Always contains at least 5 observations.
- Usually a multiple of the lower limit of the first class.

MCQ 35:

Question: Twelve randomly-chosen students were asked how many times they had missed class during a certain semester, with this result: 2, 1, 5, 1, 1, 3, 4, 3, 1, 1, 5, 18. For this sample, the CCC is approximately:
Options:

- 4.75
- 4.55
- 3.03
- **3.75 ✓**

MCQ 36:

Question: If the regression equation is equal to 23.6−54.2X23.6 - 54.2X23.6−54.2X, then 23.6 is the _____ while 54.254.254.2 is the _____ of the regression line.
Options:

- Slope, intercept
- **Intercept, slope ✓**
- Slope, regression coefficient
- Radius, intercept

MCQ 37:

Question: The moving averages of the prices 30, 45, 90, 110 are:
Options:

- 60, 85.45
- 45, 88.36
- **55, 81.67 ✓**
- 65, 78.45

MCQ 38:

Question: 0.20%=0.20\% =0.20%=
Options:

- 0.2
- 0.02
- **0.002 ✓**
- 0.0002

MCQ 39:

Question: If a matrix has four columns and five rows, then its dimensions are:
Options:

- 20
- 4x5
- **5x4 ✓**
- 5x5

Question No: 40 (Marks: 1) - Please choose one
Transformation of 3/16 as a percent is
► **5.33%** ✅
► 18.75%
► 0.001875
► 0.1875

Question No: 41 (Marks: 1) - Please choose one
VDB returns the depreciation of an asset for
► Zero period
► One period
► Two period
► **Any arbitrary period** ✅

Question No: 42 (Marks: 1) - Please choose one
All of the following are measures of central tendency except the
► **range** ✅
► mode
► mean
► median

Question No: 43 (Marks: 1) - Please choose one
Binomial expansion for (3 2) x y − is equal to
► 1
► (3 2) x y −
► (0 3 2) x y × −
► **(3 0 2) x y − ×** ✅

Question No: 44 (Marks: 1) - Please choose one
The Excel function =POISSON (2, 5, True) is used to calculate
► Normal Distribution
► Binomial Distribution
► **Poisson Distribution** ✅
► Cumulative Poisson Distribution

Question No: 45 (Marks: 1) - Please choose one
For the set of data 1, 2, 3, 4, 5, 2, 1, 6, 8, the mode is given by
► **1 and 2** ✅
► 1
► 2
► 3

Question No: 46 (Marks: 1) - Please choose one
Chi-distribution is used to decide whether or not certain variables are
► **Dependent** ✅
► Independent
► Discrete
► Continuous

Question No: 47 (Marks: 1) - Please choose one
Badri has 9 pairs of dark Blue socks and 9 pairs of Black socks. He keeps them all in the same bag. If he picks out three socks at random, what is the probability he will get a matching pair?
► **(2 * 9C2 * 9C1) / 18C3 = 0.794** ✅
► (9C2 * 9C1) / 18C3
► 1
► 0

Question No: 48 (Marks: 1) - Please choose one
Is the percent symbol (%) used as Excel arithmetic operator?
► **True** ✅
► False

Question No: 49 (Marks: 1) - Please choose one
Which of the given functions returns the normal distribution for the specified mean and standard deviation?
► NORMSDIST
► NORMDIST315
► NORMSINV
► **NORMINV** ✅

Question No: 50 (Marks: 1) - Please choose one
A hypothesis specifying the population distribution is called
► composite hypothesis
► test statistic

► alternative hypothesis
► **simple hypothesis** ✅

Question No: 51 (Marks: 1) - Please choose one
What will be the simple interest earned on an amount of Rs. 16,800 in 9 months at the rate of 14% p.a?
► Rs. 787.50
► Rs. 812.50
► Rs. 860
► **Rs. 887.50** ✅

Question No: 52 (Marks: 1) - Please choose one
A company distributes _____ of profit it earns as dividend
► All
► Half
► 10%
► **Some part (depending on the company policy)** ✅

Question No: 53 (Marks: 1) - Please choose one
A standard normal distribution is a distribution with
► **mean = 0 and standard deviation = 1** ✅
► mean = 0 and standard deviation = 0
► mean = 1 and standard deviation = 0
► mean = 1 and standard deviation = 1

Question No: 54 (Marks: 1) - Please choose one
A rule or formula that provides a basis for testing a null hypothesis is called
► population statistic
► confidence coefficient
► size of the test
► **test statistic** ✅

Question No: 55 (Marks: 1) - Please choose one
If the maximum number of data points are close to the mean, then the standard deviation is
► 0
► **Small** ✅
► Large
► Middle value

56. As the regression line equation is y = ax + b, where a is

- ✓ **The slope**
- The x-intercept
- The y-intercept
- None of these

57. The correlation used when there is a degree of association

- Between two variables
- **✓ Among three variables**
- Among four variables
- None of these

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58. 45% of what is 9?

- 20
- 40
- 30
- **✓ 10**

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59. When there is no linear correlation between two variables, what will the value of r be?

- -1
- +1
- **✓ 0**
- A very small negative number

---

60. Evaluate

- 60
- 30
- 40
- **✓ 50**

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61. The equation of the regression line is 2y + 5x - 3 = 0. What will be the slope and intercept of the line?

- Slope = -5, intercept = 3
- Slope = 5, intercept = -3
- **✓ Slope = -2.5, intercept = 1.5**
- Slope = 2.5, intercept = -1.5

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62. In which Trust Fund, the company does not deduct, but only contribute 1/11th of Basic Salary of the employee per month?

- Provident Fund
- **✓ Gratuity Fund**
- Charity Fund
- None of the above

63. The midrange is not

- False
- ✓ **True**
- Greatly affected by outliers

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64. In a symmetric distribution

- ✓ **The mean, median, and mode are equal**
- The mean is the largest measure of location
- The median is the largest measure of location
- The standard deviation is the largest value

---

65. Which of the following is NOT a possible probability?

- 25/100
- ✓ **1.25**
- 1
- 0

---

66. The ---------- is an arithmetic average.

- Mode
- ✓ **Mean**
- Median
- Quartile

---

67. The Standard Deviation of 60, 60, 80, 70 is

- 9.29
- 8.29
- 7.29
- ✓ **6.29**

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68. If Sale Price = Rs. 3810 and Original Price = Rs. 7270 then the Markdown Rate is equal to

- ✓ **47.59 %**
- 45.57 %
- 43.53 %
- 48.9 %

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69. Umair's greeting card business sells a card for Rs. 30. To make his desired profit, Umair needs a 35% Markup on Selling Price. What does a greeting card Cost Tanveer?

- Rs. 9.5
- **✓ Rs. 19.5**
- Rs. 29.5
- Rs. 22.5

---

70. Given Net price of shirt = $20, Discount = 10%, List price will

- **✓ $22**
- $24
- $26
- $30

---

71. If an operation A can be performed in m ways and B in n ways, then the two operations can be performed together in ------ ways.

- m + n
- m - n
- **✓ m * n**
- n / m

---

72. Coefficient of variation shows dispersion of the

- Standard deviation about mean.
- Standard deviation about mode.
- Variance about mean.
- Variance about mode.
- **✓ C.V = s.d/mean * 100**

---

73. 100

- **✓ 100**
- 10000
- 0
- 1

---

74. If $\mu 0 = 130$, $\bar{x} = 150$, $\sigma = 5$, and $n = 10$, what test statistic is appropriate?

- **✓ Z**
- t
- F

- χ^2

---

75. Formula = e-λ λx / x! is used to calculate----------

- Normal Distribution
- Binomial Distribution
- ✓ **Poisson Distribution**
- Cumulative Poisson Distribution

---

76. Which of the following is a continuous distribution?

- Binomial Distribution
- Poisson Distribution
- ✓ **Normal Distribution**
- Hypergeometric Distribution

---

77. Chi-distribution is used to decide whether or not certain variables are

- ✓ **Dependent**
- Independent
- Discrete
- Continuous

---

78. No Linear Programming problem with an unbounded feasible region has a solution.

- ✓ **True**
- False
- May or may not
- None of these

---

79. Probability of a person's death in a year

- 1/365
- 0
- 1
- ✓ **Undetermined**

---

80. Which of the following statements is true if a particular event has a probability of 10%.

- ✓ **There is a one-in-ten chance it will happen.**
- It is not likely to happen.
- There is no one-in-ten chance it will happen.
- None of these

81. Which method of trend analysis is useful for data not having a pronounced trend or seasonality?

- Multiplicative model
- Decomposition model
- Ratio-to-moving average method
- **✓ Exponential smoothing method**

---

82. When a scalar k is multiplied with a matrix then

- It is multiplied with the row of the matrix
- It is multiplied with the column of the matrix
- **✓ It is multiplied with all elements of the matrix**
- None of these

---

83. If a speed of a car is changed from 25km/h to 40km/h then the percentage change in its speed is?

- 15%
- 50%
- **✓ 40%**
- 60%

---

84. Because only a subset of the entire population is sampled and used to estimate a finding for the entire population, we use

- Alternative hypothesis
- Standard error of percentage
- **✓ Confidence interval**
- Level of significance

---

85. Variance is calculated by taking square root of----------

- Mean
- Median
- Mode
- **✓ None**

86. If Sxy = -3.27, Sx = 2.416 and r = -0.091, then Standard deviation of Y is

- 12.85
- **15.88** ✔
- 14.87
- 13.86

87. The intercept of a line passing through origin is

- finite
- positive
- **zero** ✔
- does not exist

88. If sx=2, sy = 4 and sxy =10 then correlation coefficient 'r' is

- 1.12
- 0.80
- **1.25** ✔
- 3.54

89. In the regression line equation Y=a+bX; b is called the _____.

- **Slope** ✔
- X-intercept
- Y-intercept
- None of these

90. If Sxy = -5.5 , Sy = 2.35 and r = -0.08, then Standard deviation of X is

- 15.77
- **20.47** ✔
- 29.25
- 12.85

91. What does the term "outlier" mean in the context of a scatter plot with regression analysis?

- **A data point that deviates significantly from the overall pattern** ✔
- A data point that lies close to the regression line
- The slope of the regression line
- The intercept of the regression line

92. If the correlation is negative perfect, what will be the value of r?

- 1
- **-1** ✔
- 0
- None of these

93. If scores of openness to experience tend to be higher for students who have higher interest for adventure, which of the following is a reasonable correlation between openness to experience and interest for adventure?

- -0.78
- +0.21
- **+0.78** ✔
- -0.21

94. The regression model explains the _____ between two or more variables in the given population.

- **Association** ✔
- Connection
- All of these
- Relation

95. Intercept of the regression line can be defined using the equation a=Y−bX.

- False
- **True** ✔

96. If the estimating equation is Y = a – b X, which of the following is true?

- The y intercept is b
- **There is inverse relationship** ✅
- Slope of line is positive
- All of these

97. The predicted rate of response of the dependent variable to changes in the independent variable is called ……..

- **Slope** ✅
- Error
- Intercept
- Coefficient of determination

98. Suppose that samples of polythene bags from two manufacturers A and B are tested by a buyer for bursting pressure. Following results on the basis of sample have been observed: Manufacturer A: Mean = 21, Standard Deviation = 4.875 and Coefficient of Variation = 23.32%
Manufacturer B: Mean = 21.81, Standard Deviation = 7.074 and Coefficient of Variation = 32.44%
Which manufacturer's bag has more uniform pressure?

- Manufacturer B
- **Manufacturer A** ✅

99. Which statistical test is commonly used to assess the significance of a correlation coefficient?

- Pearson correlation test
- Chi-square test
- None of these
- **t-test** ✅

100. In regression equation Y = a + bX,

- **b represents the slope of the line.** ✅
- b represents the dependent variable.
- b represents the value of the intercept.
- b represents the independent variable.

101. If scores of openness to experience tend to be higher for students who have higher interest for adventure, which of the following is a reasonable correlation between openness to experience and interest for adventure?

- +0.21
- -0.21
- -0.78
- **+0.78** ✅

102. Seasonal variation is defined as _____.

- **Actual – trend** ✅
- Actual × trend
- None of these
- Actual + trend

103. Equation of line having slope 0 and passing through the point A (0, 0) is

- Y = X
- **Y = 0** ✅
- X = 0
- X - 1 = 0

104. The moving averages of the Prices 20, 30, 40, 50, 60 are

- 30, 40, 50
- 20, 40, 60
- **40, 40, 40** ✅
- 35, 45, 55

105. Fashion styles buy shirts for Rs. 500 and sell them for Rs. 1200. Find the rate of markup based on the cost?

- Rs. 714%
- **Rs. 140%** ✅
- Rs. 40%
- Rs. 417%

106. What is the relationship between selling price, cost and markup?

- Cost = Selling price + Markup
- Selling price = Cost - Markup
- Markup = Selling price + Cost
- **Selling price = Cost + Markup** ✅

107. The correct relation among % markup on sale, cost price, and selling price is...

- Selling Price = Cost price + (Selling price x %Markup on sale)
- None of these
- **Selling Price = Cost price + (cost price x %Markup on sale)** ✅
- Cost Price = Cost price + (Selling price x %Markup on sale)

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