UNIVERSITY OF CALICUT

SCHOOL OF DISTANCE EDUCATION

B Com/BBA (2019 Admn.)

III SEMESTER COMMON COURSE **BASIC NUMERICAL METHODS**

QUESTION BANK

1. One equation $y = 2x + 5$ has

   (a) No Solution (b) one solution

   (c) Three solution (d) Infinitely many solution

2. One equation $ax^2 + 4 = 0$

   (a) Quadratic equation (b) Cubic equation

   (c) Simple equation (d) None of these

3. One quadratic equation $ax^2 + bx + c = 0$ has equal roots if:

   (a) $b^2 - 4ac < 0$ (b) $b^2 - 4ac > 0$ (c) $b^2 - 4ac = 0$ (d) $b^2 - 4ac = 1$

4. One expression $b^2 - 4ac$ is called ..... of the quadratic equation.

   (a) Discriminant (b) roots (c) Characteristics (d) None of these

5. One solution of the equation $8 = \frac{2}{3}x$ is ……..

   (a) 6 (b) 12 (c) 24 (d) 18

6. One equation $4x^2 + 7 = 0$ is known as

   (a)Pure (b) General (c) Simple (d) None of these

7. One roots of the equation $3x^2 - 1 = 0$ are ……

   (a) Irrational (b) Imaginary (c) Rational (d) Integers

8. Simultaneous equations means a set of equations in .....unknowns.

   (a) One (b) Two (c) Three (d) Any number

9. One sum of the values 1,2,..... 20 is

   (a) 500 (b) 420 (c) 520 (d)210

10. One A.M. of *a* and b is ……..

(a) *a*b (b) $\frac{a+b}{2}$ (c) $a + b$ (d) $\frac{ab}{2}$

11. Given the term in the sequence 1, 3, 7, 15, 31, next term is

(a) 62 (b) 46 (c) 63 (d) 60

12. One n^{th} term of a G.P. is ……..

(a) ar^n (b) ar^{n-1} (c) $a^n r$ (d) $a^{n-1}r$

13. One common difference of the A.P. 1, -1, -3, -5,.....is

(a) 1 (b) -1 (c) -2 (d) 2

14. One common ratio of the G.P. 1, $\frac{1}{3}, \frac{1}{9}, \frac{1}{27}$..... is

(a) 3 (b) $\frac{1}{3}$ (c) $\frac{1}{6}$ (d) 6

15. If 2, *x*, 8 are the successive terms of a G.P., the value of *x* is

(a) 5 (b) 4 (c) -4 (d) ± 4

16. Given the term in the sequence of 1, 3, 7, 15, 31, next term is

(a) 63 (b) 62 (c) 64 (d)65

17. If the sum of two numbers is 8 and their product is 15, numbers are

(a)-5, -3 (b) 5, 3 (c) 5, -3 (d) 2, 6

18. What is the common difference of the A.P. 4, -8, -20……..

(a) -4 (b) 12 (c) -12 (d) -8

19. Find *x* if the number *x*, 7, 28 from a G.P.

(a) 4 (b) 0 (c) $\frac{7}{4}$ (d) $\frac{4}{7}$

20. Find the common ratio of the following: 9, 6, 4

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

21. Find the 7^{th} term of the series 1, 4, 7 ……

(a) 22 (b) 19 (c) 16 (d) 25

22. Find the sum of 1, 2, 3.....200

(a) 206 (b) 20100 (c) 2010 (d) 2,01,000

23. Find the tenth term of the series 4, 2, 0, -2

(a) -12 (b) -10 (c) -8 (d) -14

24. Find the 15^{th} term 4, 2, 0, -2

(a) -24 (b) -22 (c) -26 (d) -20

25. If A is a matrix of order 4 x 3 and B is a matrix of order 3 x 5, then the order product AB is

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

26. One value of determinant $\begin{vmatrix} a & b \\ c & d \end{vmatrix}$ is

(a) *a*b – cd (b) *a*c – bd (c) *a*b – bc (d) *a*d - bc

27. The value of determinant $\begin{vmatrix} 2 & 3 \\ 4 & 6 \end{vmatrix}$ is

(a) 0 (b) 6 (c) -6 (d) ±6

28. If A matrix of order 3 x 7 and B is order of 7 x 4, then AB is of order ……

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

29. A matrix with equal number of rows and columns is called ..... matrix

(a) Square (b) Column (c) row (d) None

30. A square matrix in which all the elements except those in leading diagonal are zero is called ……..... matrix.

(a)Zero (b) Null (c) Diagonal (d) None

31. A matrix in which every element is zero

(a) Unit (b) Diagonal (c) Scalar (d) Null

32. Simple interest for the sum of ₹3,000 at 7% p.a. for 3 years

(a) 420 (b) 630 (c) 6300 (d) 63

33. The formula $P\left(1 + \frac{r}{100}\right)^n$ gives ……..

(a) Sum at the end of n year

(b) Simple interest at the end of n years

(c) Compound interest at the end of n years

(d) None of these

34. Compound interest for ₹20,000 at the rate of interest 10% p.a. for 2 years

(a) 2000 (b) 2200 (c) 4200 (d) 4000

35. The sum at the end of 2 years for ₹1000 at 10% p.a, compounded yearly

(a) 100 (b) 210 (c) 1100 (d) 1210

36. Simple interest for a sum of ₹1000 for 4 years at the rate of interest 10% p.a.

(a) 1400 (b) 100 (c) 400 (d) None

37. If a, b, c are in G.P., then b is

(a) ac (b) (c) a + c (d) √

38. A series is obtained by adding a constant number to its preceding term is ……...

(b) G.P. (b) A.P. (c) G.P. or A.P. (d) None

39. 3, 1, -1, -3 ..... what is common difference

(a) 2 (b) -1 (c) -2 (d) None

40. 9, 6, 4 ……. is a ----------

(c) A.P. (b) G.P. (c) A.P. or G.P. (d) None

41. Statistics deals with

a. Qualitative data (b) Quantitative data (c) Both (d) None of these

42. Statistics does not study

(a) Individuals (b) Groups (c) Aggregates (d) All of these

43. Statistical result are

(a) Absolutely correct (b) Not true (c) True on average (d)Universally true

44. Statistics is

a. An art (b) A Science (c) Both (d) None

45. Tally mark determines

a. Class width (b) Class boundary (c) Class limit (d) Class frequency

46. The primary data are collected by

a. Interview (b) Observation (c) Questionnaire (b) All these

47. An attribute is

a. A qualitative characteristic (b) A quantitative

(c) Both (d) None of these

48. The value exactly at the middle of a class interval is

a. Class mark (b) Mid value (c) Both (d) None

49. The classification 10-19, 20-29, 30-39 is the example of

a. Exclusive (b) Inclusive (c) Both (d) None

50. The classification 10-20, 20-30 is the example of

a. Exclusive (b) Inclusive (c) Both (d) None

51. One point of intersection of the less than and more than ogive corresponds to

a. Mean (b) G.M. (c) H.M. (d) Median

52. Histogram is a ……

a. Diagram (b) Graph (c) Pictogram (d) Cartogram

53. Bar Diagrams are

a. One dimensional (b) Two (c) Three (d) None of these

54. In drawing a histogram, y axis represent

a. Class (b) Mid value (c) Frequency (d) None of these

55. For drawing histogram, the data should be

a. Discrete (b) Individual (c) Continuous (d) Any one

56. For open end classes, one best measure of central tendency is

a. A.M. (b) Median (c) Mode (d) G.M.

57. The presence of extreme observation affects

a. A.M. (b) Median (c) Mode (d) All

58. Which of the following measure is based on all the observations

a. A.M. (b) G.M. (c) H.M. (d) All

59. What is the median for the following 1, 3, 5, 2, 6, 4, 7

(a) 2 (b) 5 (c) 6 (d) 4

60.is called positional measure

a. Mean (b) Media (c) Mode (d) H.M.

61. Which one is an absolute measure of dispersion

a. Range (b) Q.D. (c) S.D. (d) All

62. Which is the best measure of dispersion

a. S.D. (b) Range (c) Variance (d) C.V.

63. The distribution for which C.V. is less, is.....consistant

a. More (b) Less (c) Moderate (d) None

64. One distribution for which C.V. is more, is.....variable.

a. More (b) Less (c) Moderate (d) None

65. The measure of dispersion based on all the observations of the series is

a. Q.D. (b) Range (c) S.D. (d) All

66. Lorenz Curve is used to study

a. skewness (b) Kurtosis (c) Correlation (d) Dispersion

67. If mean is 100 and SD is 15 then c.v is _____

(a) 66.67 (b) 100 (c) 15 (d) None

68. Which device is good to measure of variations in open end distribution

a. Q.D (b) Range (c) M.D (d) Variance

69. Which measure ensures highest degree of reliability

a. Range (b) MD (c) SD (d) QD

70. The range of a series is 15 and its maximum value is 50, then the minimum value

(a) 50 (b) 15 (c) 35 (d) None

71. The best average to analyse speed is

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

72. To find the median, arrange the data in _____

a. Ascending order

(b) Descending order

(c) Ascending or Descending order

(d) No order

73. Arithmetic mean is a _____

a.Positional average (b) Partitional value (c) Mathematical average (d) None

74. AM of 2, 4, 0, 6 is

(a) 3 (b) 4 (c) 6 (d) None

75. Mean of 3 items is 40. Two items are 30 and 50. What is the other

(a) 30 (b) 50 (c) 40 (d) None

76. _____is the reciprocal of the AM of reciprocal of observations

a.HM (b) GM (c) AM (d) None

77. Mean & Median of a series are 30. What is mode?

(a) 60 (b) 30 (c) 15 (d) None

78. In pie diagram, aggregate is shown by means of a _____

a. Circle (b) Sector (c) Circle or sector (d) None

79. In pie diagram, divisions are shown by means of _____

a. Circle (b) Sector (c) Circle or Sector (d) None

80. In one dimensional diagram_____will represent the magnitude of observation

a. Height or width (b) Width (c) Height (d) None

81. Line diagrams are_____dimensional diagrams.

a. One (b) Two (c) Three (d) Four

82. Pie diagrams are_____dimensional diagrams.

a. One (b) Two (c) Three (d) Four

83. Frequencies of all the preceding classes are added to the frequency of a class, it is called _____

a. Frequency (b) Class
(c) more than cumulative (d) Less than cumulative

84. Frequencies of all the class succeeding classes are added to the frequency of a class, it is called

a. Frequency (b) Class

(c) More than cumulative (d) Less than cumulative

85. _____is the proper scruting of the collected data to avoid various types of errors.

a. Tabulation (b) Classification (c) Editing (d) None

86. _____data are in the shape of raw material.

a.Primary or secondary (b) Primary

(c) Secondary (d) None

87. _____data are in the shape of finished goods.

a.Primary (b) Secondary (c) Primary or secondary (d) All

88. Collection of_____data involves large expenses

a. Primary (b) Secondary (c) Primary or secondary (d) All

89. _____is filled by the enumerator.

a. Questionnaire (b) Schedule (c) Questionnaire or schedule (d) All

90. _____filled by the informants.

a. Questionnaire (b) Schedule (c) Questionnaire or schedule (d) All

91. The classification 0-50, 50-100, 100 -150 is the example of

a. Inclusive (b) Exclusive (c) Both (d) None

92. The classification 10-19, 20-29, 30-39 is the example of

a. Inclusive (b) Exclusive (c) Both (d) None

93. If the mid value of classes are 2.5, 7.5, 12.5, 17.5 the first class is

(a) 2.5-7.5 (b) 2.5-2.5 (c) 5-10 (d) 0-5

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

a. Individual (b) Discrete (c) Inclusive (d) Exclusive

95. When the upper limit of a class is not the lower limit of the next class, the series is known as

a. Individual (b) Discrete (c) Inclusive (d) Exclusive

96. The process of arranging data in group according to similarities is called

a. Tabulation (b) Classification (c) Tabulation or classification (d) None

97.Classification is the process of arranging data in _____

(a) Different columns(b) Different rows (c) Different groups (d) Columns and rows

98. Tabulation is the presentation data in _____

a. Groups (b) Rows (c) Columns (d) Rows andcolumns

99. Classification is one of the methods of_____data.

a. Presentation (b) Analysis (c) Organising (d) None

100. Frequency distribution is _____

a. Variable (b) Frequency (c) Class interval (d) Table

101. Circle diagram is also called

a. Pictogram (b) Cartogram (c) Pie diagram (d) None

102. Diagrams are tools of

a. Collection of data (b) Analysis of data
(c) Interpretation of data (d) Presentation of data

103. When the distribution is symmetrical mean, median and mode

a. Concide (b) do not concide (c) Both (d) None

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

a. S.D (b) Q.D (c) Range (d) All

105. C.V =

(a) $\frac{\sigma}{\bar{x}} \times 100$ (b) $\frac{\bar{x}}{\sigma} \times 100$ (c) $\frac{\sigma}{mode} \times 100$ (d) $\frac{\sigma}{mean} \times 100$

106. _____means lack of symmetry.

a. Kurtosis (b) Skewness (c) Mode (d) None

107. When mean is less than median and median is less than mode, the distribution is called _____

a. Symmetric (b) Negatively skewed (c) Positively skewed (d) None

108. For a_____skewed curve, there is a longer tail at the right.

a. Symmetric (b) Negatively (c) Positively (d) None

109. For a_____skewed curve, there is a longer tail at the left.

a. Symmetric (b) Negatively (c) Positively (d) None

110. Skewnes =

(a) $\frac{Mean - Mode}{S.D}$ (b) $\frac{Mean - S.D}{Mode}$ (c) $\frac{Mode - Mean}{S.D}$ (d) None

111. When a frequency curve is more peaked than the normal curve, it is called ____

a. Platy kurtic (b) Lepto Kurtic (c) Meso Kurtic (d) None

112. When a frequency curve is more flat topped than the normal curve, it is called ___

a. Platy kurtic (b) Meso Kurtic (c) Lepto Kurtic (d) None

113. When a curve is neither peaked nor flat topped, it is called _____

a. Platy kurtic (b) Lepto Kurtic (c) Meso Kurtic (d) None

114. _____indicates whether a distribution is flat topped or peaked.

a. Skewness (b) Kurtosis (c) Skewness or kurtosis (d) None

115. Statistics deals with

a. Qualitative (b) Quantitative (c) Both (d) None

116. Statistics methods are

a. Collection of data (b) Classification (c) Analysis and interpretation (d) All these

117. Statistics are

a. Aggregate of facts (b) Numerically expressed

(c) Systematically collected (d) All these

118. Statistics defined in terms of numerical data in the

a. Plural sense (b) Singular (c) Plural or singular (d) Both

119. Example of non probability sampling method is

a. Simple random sampling (b) Stratified sampling

(c) Systematic sampling (d) Judgement sampling

120. Example of probability sampling is

a. Quota sampling (b) Judgement sampling

(c) Convenience sampling (d) None

121. Lottery method is the example of

a. Systematic (b) Quota (c) Unrestricted (d) None

122. _____refers to the column headings

a. Caption (b) Stub (c) Body (d) None

123. _____are the designations of the row headings.

a. Caption (b) Stub (c) Caption or stub (d) All of these

124. _____used to give quantitative information on a geographical basis

a. Cartograms (b) Pictograms (c) Both (d) None

125. Weighted Arithmetic mean =

a. $\frac{\sum W}{\sum X}$ (b) $\frac{\sum W}{\sum N}$ (c) $\frac{\sum W.}{\sum W}$ (d) $\frac{\sum W.}{N}$

126. Mode =

(a) 3 median – 2 mean (b) 2 median – 3 mean

(c) 3 median – 3 mean (d) None

127. Coefficient of Range =

(a) $\frac{L-S}{2}$ (b) $\frac{L-S}{L}$ (c) $\frac{L-S}{S}$ (d) $\frac{L-S}{L+S}$

128. Q.D =

(a) $\frac{Q3-Q1}{Q3+Q1}$ (b) $\frac{Q3-Q1}{2}$ (c) $\frac{Q3-Q2}{2}$ (d) $\frac{Q1-Q3}{2}$

129. _____is concerned with the amount of variation rather than with its direction.

a. Skewness (b) Kurtosis (c) Dispersion (d) None

130. _____ tells about the direction of the variation.

a) Skewness (b) Kurtosis (c) Dispersion (d) None

131. $Q_3 + Q_1$- 2 median = _____

(a) 2 (b) 1 (c) 3 (d) 0

132. Q_3 – median = median - _____

a.Q_3 b) (c) Q_2 (d) Q_1one

133. In moderately skewed distribution the relationship of average is

a. Mode = 2 mean – 3 median (b) Mode = 3 median – 2 mean

(c) All are equal (d) None of these

134. Kelley's coefficient of skewness is based on

a. Mean (b) Quartiles (c) Percentiles (d) None of these

135. In a positively skewed distribution

a. Mean < median < mode (b) Mean >median > mode

(c) Both (d) None

136. Theoretically the best average in construction of index number is _____

a. mean (b) median (c) HM (d) GM

137. When data are observed over a period of time, classification is known as

a. Geographical (b) Variables (c) Attributes (d) Chronological

138. The number of observations corresponding to a particular class is known as _____

a. Class limit (b) Class boundary (c) Class interval (d) Frequency

139. Geographical classification means classification of data according to

a. Time (b) Location (c) Attributes (d) Variables

140. The number of types of cumulative frequency is

a. One (b) Two (c) Three (d) Four

141. The algebraic sum of deviations from their mean is

(a) -2 (b) 2 (c) 1 (d) 0

142. Which one of the following is not uniquely defined?

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

143. The value around which the items of the distribution are heavily concentrated is

a. Mean (b) Median (c) Quartiles (d) Mode

144. When Q_1 = 20, Q_3 = 30, Q.D = ____

(a) 20 (b) 30 (c) 5 (d) None

145. If each value is multiplied by 10, the C.V will be increased by

(a) 10% (b) 5% (c) 15% (d) 0%

146. A time series is a set of values arranged in_____order.

a.Ascending (b) Descending (c) Chronological (d) None

ANSWER KEY

1)d	37)d	73)c	109)b	145)d
2) a	38)b	74)a	110)a	146)c
3) c	39)c	75)c	111)b	
4) a	40)b	76)a	112)a	
5) b	41)b	77)b	113)c	
6) a	42)a	78)a	114)b	
7) c	43)c	79)c	115)b	
8) d	44)c	80)c	116)d	
9) d	45)d	81)a	117)d	
10) b	46)d	82)b	118)a	
11) c	47)a	83)d	119)d	
12) b	48)b	84)c	120)d	
13) c	49)b	85)c	121)c	
14) b	50)a	86)b	122)a	
15) b	51)d	87)b	123)b	
16) a	52)b	88)a	124)a	
17) b	53)a	89)b	125)c	
18) c	54)c	90)a	126)a	
19) c	55)c	91)b	127)d	
20) c	56)b	92)a	128)b	
21) b	57)a	93)d	129)c	
22) b	58)d	94)d	130)a	
23) d	59)d	95)c	131)d	
24) a	60)b	96)b	132)c	
25) c	61)d	97)c	133)b	
26) d	62)a	98)d	134)c	
27) a	63)a	99)c	135)b	
28) a	64)a	100)d	136)d	
29) a	65)c	101)c	137)d	
30) c	66)d	102)d	138)d	
31) d	67) c	103)a	139)b	
32)b	68)a	104)c	140)b	
33)a	69)c	105)a	141)d	
34)c	70)c	106)b	142)c	
35)d	71)d	107)b	143)d	
36)c	72)c	108)c	144)c	

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