**S .Y. B. Sc. (IT) (Semester-IV)**

**Semester Examination**

**Sample Questions**

**Year 2021-2022**

**Subject: Computer oriented Statistical Techniques**

**Multiple Choice Questions**

1. If the median is 12, mean is 15 and the standard deviation of data is 3 then Karl Pearson's coefficient of skewness is

a.17

b.27

c.15

d.3

2. If the values of skewness and arithmetic mean is given as 4 and 17 respectively then mode of the values is

a.68

b.4.25

c.21

d.13

3. In kurtosis, the frequency curve which looks more peaked than normal curve of bell shaped distribution is classified as

a.mega curve

b.mesokurtic

c.leptokurtic

d.platykurtic

4. In statistical procedures, the skewness is used to measure the

a.amount of variance

b.amount of upper tail values

c.amount of dispersion

d.direction of dispersion

5. The statistical measures such as average deviation, standard deviation and mean are classified as part of

a.deciles system

b.moment system

c.percentile system

d.quartile systems

6. The measurement techniques used to measure the extent of skewness in data set values are called

a.measure of distribution width

b.measure of median tail

c.measure of tail distribution

d.measure of skewness

7. Any population which we want to study is referred as?

a. standard population

b. final population

c. infinite population

d. target population

8. The sampling error is defined as?

a. difference between population and parameter

b. difference between sample and parameter

c.difference between population and sample

d. difference between parameter and sample

9. In systematic sampling, population is 240 and selected sample size is 60 then sampling interval is \_\_\_\_\_\_\_\_

a. 240

b. 60

c. 4

d. 0.25

10. A sample was formed consisting of 8 students from a total of 56 students for certain task. Find the sampling fraction of the population of students.

a. 1/7

b. 7

c. 49

d. 1/49

11. A box contains 26 pairs of napkins. If 3 pairs of napkins are selected at random with a replacement then the number of possible samples is \_\_\_\_\_\_\_

a. 17675

b. 17566

c. 17576

d. 17556

12. A population contains N items out of which n items are selected with replacement. Find the probability of the sample being selected.

a. 1/N

b. 1/nN

c. 1/NCn

d. 1/Nn

13. Alternative Hypothesis is also called as?

a.Composite hypothesis

b. Hypothesis

c. Simple Hypothesis

d. Null Hypothesis

14. Type 1 error occurs when?

a. We reject H0 if it is True

b. We reject H0 if it is False

c. We accept H0 if it is True

d. We accept H0 if it is False

15. The rejection probability of Null Hypothesis when it is true is called as?

a. Level of Confidence

b. Level of Significance

c. Level of Margin

d. Level of Rejection

16. If the null hypothesis is false then which of the following is accepted?

a. Null Hypothesis

b. Positive Hypothesis

c. Negative Hypothesis

d.Alternative Hypothesis.

17. A hypothesis which defines the population distribution is called?

a. Null Hypothesis

b. Statistical Hypothesis

c. Simple Hypothesis

d. Composite Hypothesis

18. Which of these distributions is used for a testing hypothesis?

a. Normal Distribution

b. Chi-Squared Distribution

c. Gamma Distribution

d. Poisson Distribution

19. A paired T test consists of n pairs of observations. What is the number of degrees of freedom of the test?

a. 2n-1

b. 2n

c. n-1

d. n

20. The range of Level of Significance lies between \_\_\_\_\_\_\_\_\_\_\_\_

a. -∞ and 0

b. -∞ and 1

C. 0 and ∞

d. 0 and 1

21. A Null Hypothesis has Level of Significance 9%. For what values of Level of Significances it will be rejected?

a. 0.99

b. 0.009

c. 0.099

d. 0.9

22. If all values are same then the measure of dispersion will be

a. 1

b. 0

c. Mean

d. Mode

23. The measure of Dispersion can never be

a. Positive

b. Negative

c. 0

d. 1

24. Variance is always calculated from

a. Mode

b. Variance

c. Geometric Mean

d. Median

25. The variance of a constant is

a. Zero

b. Constant

c. Negative

d.positive

26. Which of these is a relative measure of dispersion

a. Standard Deviation

b. Variance

c. Coefficient of Variation

 d. mean

27. If the standard deviation of the values 2, 4, 6, 8 is 2.58, then the standard deviation of the values 4, 6, 8, 10 is

a. 2.58

b. 5

c. 4.66

d. 2.33

28. The mean deviation of the values, 18, 12, 15 is

a. 6

b. Zero

c. 3

d. 2

29. The standard deviation is always \_\_\_\_\_\_\_\_\_ than the mean deviation

a. Greater

b. Less

c. Equal

 d. positive

30. Mean of a constant ‘a’ is \_\_\_\_\_\_\_\_\_\_\_

a. 0

b. a

c. a/2

d. 1

31. The median in the set 6, 4, 2, 3, 4, 5, 5, 4 would be

a. 3

b. 6

c. 5

d. 4

32. The ..........curve is a curve which is neither very peaked nor very flat

a. normal

b. plane

c. parallel

d. increasing

33. A set consisting of all possible outcomes that can results from a random experiment can be defined as the

a. sample space

b. event

c. compound event

d. random experiment

34. If a card is drawn from an ordinary deck of 52 playing cards ,find the probability that the card is a red card?

a. 1/3

b. 1/2

c. 1/4

d.2

35. The median of 5,8,9,7,12,15,21,10,7 is....

a. 5

b. 7

c. 8

d. 9

36. ..........is a value which occurs the most frequent times in a series.

a. Mean

b. Median

c. Mode

d. Frequency

37. Geometric mean is the ......th root of the product of n items of a series.

a. 2

b. n

c. 3

d 1

38. It is the difference between the value of the extreme items of a data.

a. Mean

b. mode

c. median

d. range

39. In statistical procedures, the skewness is used to measure the

a. amount of variance

b. amount of upper tail values

c. amount of dispersion

d. direction of dispersion

40. The mean of square deviation is known as..........

a. Variance

b. Standard deviation

c. frequency

d. mode

41. If the absoluts dispersion is the standard deviation and if the average in the mean ,then the relative dispersion is called........

a. Coefficient of variation

b. coefficient of dispersion

C. coefficient of mean

d. coefficient of range

42. In kurtosis, the frequency curve which looks more peaked than normal curve of bell shaped distribution is classified as

a. mega curve

b. mesokurtic

c. leptokurtic

d. platykurtic

43. Considering the mean, mode and skewness of data, the value of skewness will be negative if

a. mean>mode

b. mean<mode

c. mean<median

d. mean>median

44. The summary statistics which measure the middle or center of the data are called

a. logarithms

b. measures of central tendency

c. measures of dispersion

d. proportions

45. The average of all observations in a set of data is known as

a. median

b. range

c. mean

d. mode

46. If the mean of 6 4 7 P and 10 is 8 find the value of P.

a. 13

b. 10

c. 31

d. 1

47. \_\_\_\_\_\_ is the value of middle term and divides the series into equal parts.

a. Mean

b. median

Mode

d. Range

48. Adding the frequencies one by one give you \_\_\_\_\_\_\_

a. Frequency

b. (n+1)th term

c. Cumulative frequency

d. Statistics

49. Which among the following relation is true?

a. A.M<G.M<H.M

B. A.M=G.M=H.M

C. A.M>G.M>H.M

D. A.M+G.M+H.M=0

50. Root mean square is also known as \_\_\_\_\_\_

a. Standard Deviation

b. Mean Square

c. Quartile Deviation

d. Quadratic Mean

51. The quartile which divides the upper half of the series is called as \_\_\_\_\_\_\_\_

a. Lower quartile

b. Upper Quartile

c. Quartile deviation

d. None of the above

52. Deciles divides the series into \_\_\_\_\_\_ equal parts.

a. ten

b. four

c. hundred

d. one

53. Find the range in the series 80,90,60,63,68,61,67,65,102,105,99,50

1. 45
2. 50
3. 55
4. 60

54. \_\_\_\_\_\_\_\_\_ is the mean of deviation of the items from an average

a. Mean

b. Deviation

c. Mean deviation

d. Standard deviation

55. Find coefficient of mean deviation if mean deviation is 1.37 and mean is 9.

a. 15%

b. 15.1%

c. 15.2%

d. 15.3%

56. \_\_\_\_\_\_\_\_ is defined as the arithematic mean of various powers of deviation of deviation of the variable taken from zero.

a. Moments

b. Central moments

c. Raw moments

 d. None of the above

57. Which of the following statement is not true about Skewness?

a. It is used in the opposite sense of Symmetry.

b. It is lack of symmetry of frequency distribution.

c. Skewness is concerned with the shape of the curve.

d. Skewness is concerned with size of the curve.

58. Compute Sk if Mean=108, Mode=99, S.D=5

a. 1.8

b. 0.375

c. 0

d. 1

59. In a negative skewed distribution, the order of mean, median and mode is as

a. mean<median>mode

b. mean>median>mode

c. mean<median<mode

d. mean>median<mode

60. The quality r is called coefficient of............

a. correlation

b. regression

c. variation

d. least square.

61. Which among the following is a not a type of Kurtosis?

a. Karll pearson’s kurtic

b. Platy kurtic

c. Lepto Kurtic

d. Platy Kurtic

62. A fair die is thrown. What is the Probability of getting a number multiple of 3?

a. 1

b. ½

c. 1/3

d. ¼

63. \_\_\_\_\_\_\_ is useful in identifying whether the observed difference between two samples is due to chance variation or they are really significant.

a. Estimation

b. Sampling theory

c. Error.

d. Population

64. The standard deviation of a sampling distribution of a static is often called as \_\_\_\_\_

a. Sampling theory

b. Population

c. Standard Error

d. finite population

65. A confidence interval is a type of interval estimation that is calculated from the \_\_\_\_\_

a. Series

b. Observed data

c. population

d. interval

66. A hypothesis based on the experience or the one that is believed to be true is known as \_\_\_\_\_\_

a. Hypothesis

b. Alternative hypothesis

c. Statistical decision theory

d. Null hypothesis

67. If Ho is not true then also we accept it then it is known as \_\_\_\_

a. Type I error

b. Type II error

c. No error

d. None of the above

68. The simplest type of approximating curve is a straight line, whose equation is \_\_\_\_\_\_

a. y=a+bx

b. y=ax+b

c. y=a+b

d. y=a+b+c

69. Find slope of the line that passes through the points (3,4) and (2,-2)

a. 1

b. 2

c. 3

d. -2

70. If 3x+2y=18, find x when y=3

a. 4

b. 6

c. 9

d. 10.5

71. If y tends to increase as x increases, the correlation is called as \_\_\_\_\_\_

a. No correlation

b. Negative correlation

c. inverse correlation

d. Positive correlation

72. The standard deviation is always \_\_\_\_\_\_\_\_\_ than the mean deviation

a. Greater

b. Less

c. Equal

 d. positive

73. A process in which we obtain the values of unknown population parameters with the help of sample data.

a. Estimate

b. Estimation

c. Estimator

d. Hypothesis

74. When we decide to make decision about population on the basis of sample information, such decisions are called as \_\_\_\_\_\_\_\_

a. Sampling theory

b. Statistical decision theory

c. Estimation theory

d. None of the above

75. The only way to reduce both types of error is to \_\_\_\_\_\_

a. increase the sample size

b. decrease the sample size

c. keep sample size as it is

d. ignore the sample size

76. The maximum probability with which we would be willing to risk a Type – I error is called \_\_\_\_\_\_

a. Level of significance

b. Sample size

c. Error

d. None of the above

77. Small sampling theory where study is conducted for small samples of \_\_\_\_\_\_\_

a. N<10

b. N<20

c. N< 50

d. N<30

78. Find the arithmetic mean of 10, 20, 30, 50, and 60

a. 30

b. 32

c. 35

d. 34

79. Find the median 34, 32, 48, 38, 24, 30, 27, 21, 35.

a. 34

b. 32.

c. 48

d. 38

80. Find G.M of 40, 10, and 160.

a. 64

b. 40

c. 35

d. 16

81. Find H.M of following data.

a. 19

b. 19.1

c. 19.2

d. 19.3

82. Find the R.M.S of the following data -2, 5, -8, 9, -4

a. 6

b. 6.16

c.6.5

d. 7

83. Two events A and B of a single experiment are said to be ...........iff they cannot both occur at the same time.

a.exhaustive events

b.mutually exclusive events

c.occurrence events

d.simple events.

84. The numbers that describe the characteristics of the population.

a.statistic

b.parameter

c.inferential

d.estimate

85. The numbers that describe the characteristics of scores in the sample.

a.statistic

b.parameter

c.inferential

d.estimate

86. An estimator with smaller variance is called..........

a.efficient

b.unbiasedness

C.consistency

d.sufficiency

87. An estimator is said to be............,if it conveys all information the sample can furnish for the estimation of the parameter being estimated.

a.efficient

b.unbiasedness

C.consistent

d.sufficient

88. If P value is less than or equal to alpha then null hypothesis is .......in favour of alternative hypothesis.

a.accepted

b.rejected

c.right

d.left

89. If the absolute dispersion is the standard deviation and if the average in the mean ,then the relative dispersion is called........

a. Coefficient of variation

b. coefficient of dispersion

C. coefficient of mean

d. coefficient of range

90. In statistical procedures, the skewness is used to measure the

a.amount of variance

b.amount of upper tail values

c.amount of dispersion

d.direction of dispersion

91. In measures of skewness, the absolute skewness is equal to

a.mean+mode

b.mean-mode

c.mean+median

d.mean-median

92. The summary statistics which measure the middle or center of the data are called

a.logarithms

b.measures of central tendency

c.measures of dispersion

d.proportions

93. If the null hypothesis is false then which of the following is accepted?

a. Null Hypothesis

b. Positive Hypothesis

c. Negative Hypothesis

d. Alternative Hypothesis.

94. The probability of Type 1 error is referred as?

a. 1-α

b. β

c. α

d. 1-β

95. If the median is 12, mean is 15 and the standard deviation of data is 3 then Karl Pearson's coefficient of skewness is

a.17

b.27

c.15

d.3

96. Any population which we want to study is referred as?

a. standard population

b. final population

c. infinite population

d. target population

97. The mean of the squared deviations of some observations from their arithmetic mean is called

a.standard deviation

b.variation

c.median

d.mode

98. Sum of the deviations of a variable from its mean is always

a.0

b.1

c.2

d.5

99. Type 1 error occurs when?

a. We reject H0 if it is True

b. We reject H0 if it is False

c. We accept H0 if it is True

d. We accept H0 if it is False

100. The point where the Null Hypothesis gets rejected is called as?

a. Significant Value

b. Rejection Value

c. Acceptance Value

d. Critical Value