

Step Academy official

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STUDENT NAME	
PAPER CODE	90886
TIME ALLOWED	
Paper Date	



CLASS	F.Sc / I.C.S (PART-II)
SUBJECT	Statistics
TOTAL MARKS	
Paper Type	

Choose the correct answer.

1. The semi-inter quartile range in the normal distribution is given by:

- (A) 0.7979 (B) 0.329 (C) 0.6745 (D) $\frac{3}{4}$

2. The shape of the normal distribution is:

- (A) Lepto Kurtic (B) Platy Kurtic (C) Meso Kurtic (D) Skewed

3. If "X" is $N(100,5)$ the fourth central moment is:

- (A) 65 (B) 75 (C) 85 (D) 100

4. In a normal Distribution σ^2 is always:

- (A) <0 (B) >0 (C) 3 (D) $=0$

5. For the standard normal distribution, $P(Z > \text{mean})$ is:

- (A) Less than 0.5 (B) More than 0.5 (C) Equal to 0.5 (D) Equal to one

6. In normal distribution $\sigma^2 = 25$ the model is:

- (A) 5 (B) 10 (C) 25 (D) 100

7. Normal curve always

- (A) stay above x-axis (B) touch x-axis (C) goes below x-axis (D) none

8.

In a normal distribution β

$\beta > 1$ and $\beta = 0$ and $\beta < 0$

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- (A) 3 (B) less than 3 (C) greater than 3 (D) none

9. The standard normal variable is denoted by:

- (A) X (B) Z (C) (x) (D) Y

10. The area above the third quartile in a normal curve:

(A) 25% (B) 75% (C) 30% (D) 70%

11. If $Z \sim N(0, 1)$, then is equal to:

(A) 0 (B) 1 (C) 3 (D) 6^4

12. If $X \sim N(100, 64)$, then standard deviation is:

(A) 100 (B) 64 (C) 8 (D) 10

13. If $Z \sim N(0, 1)$, then C.V is:

(A) 0 (B)  (C) 1 (D) 

14. The coefficient of skewness of normal distribution is:

(A) Zero (B) Positive (C) Negative (D) Both positive and negative

15. In normal distribution, maximum ordinate at:

(A) Mean (B) Median (C) Mode (D) All of these

16. Quota sampling belongs to:

(A) Probability sampling (B) Random sampling (C) Non-random sampling (D) Systematic sampling

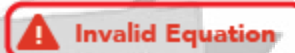
17. The complete list of all the sampling units is called:

(A) Sampling frame (B) Sample design (C) Sampled population (D) Target population

18. A sample which is free from bias is called:

(A) Biased (B) Unbiased (C) Purposive (D) None of these

19. In sampling without replacement:

(A) $n < N$ (B) $n > N$ (C)  (D) None of these

20. Any calculated on sample data is called:

(A) Parameter (B) Statistic (C) Error (D) Mean

21. A value calculated from population is called a:

(A) Statistics (B) Mean (C) Parameter (D) Proportion

22. The simple random sampling is:

(A) Non-probability sampling (B) Probability sampling (C) Systematic sampling (D) Quota sampling

23. The errors caused during processing information are called:

(A) Sampling errors (B) Non-sampling errors (C) Standard errors (D) Bias

24. The collection of information from a part of population is called:

(A) Sample survey (B) Census (C) Population (D) None

25. The term sample space is used for:

(A) All possible outcomes (B) Sample (C) Sample design (D) Sampling

26. Selection of questions by a student to solve a paper is:

(A) Random sampling (B) Non random sampling (C) Probability sampling (D) Sampling with replacement

27. Another name of probability sampling is:

(A) Non random sampling (B) Random sampling (C) Purposive sampling (D) Judgment sampling

28. Procedure of selecting a sample from population:

(A) Sample (B) Sampling design (C) Sampling (D)

29. Probability distribution of a sample statistic is called:

(A) Time (B) Frequency distribution (C) Sampling distribution (D) None of these

30. If sampling is done with replacement number possible samples is:

(A) $\binom{N}{n}$ (B) $N \times n$ (C) $N + N$ (D) $(N)^n$

31. Which one of the following is not probability sampling?

(A) Simple random sample (B) Systematic sample (C) Stratified sampling (D) Judgment sampling

32. Population parameters are usually:

(A) Roman (B) Greek (C) Latin (D) English

33. Systematic components of error is called:

(A) Sampling error (B) Bias (C) Precision (D) Accuracy

34. In sampling without replacement:

(A) $n < N$ (B) $n = N$ (C) $n > N$ (D) None of these

35. The standard deviation of sampling distribution is:

(A) Dispersion (B) Difference (C) Average (D) Standard error

36. The standard error increases when the sample size is:

- (A) Increased (B) Decreased (C) Fixed (D) Small

37. In $N = 4$ and $n = 3$ in the simple random sampling with replacement, then possible samples are:

- (A) 64 (B) 16 (C) 24 (D) 4

38. In sampling without replacement, the number of sample is equal to:

- (A) N (B) n (C) N^n (D) $\binom{N}{n}$

39. The number of samples with replacement are:

- (A) N^n (B) $\binom{N}{n}$ (C) N (D) n

40.

If the critical region is located only on the right side of the sampling distribution of test statistic then the test is called:

- (A) One tailed (B) Three tailed (C) Two tailed (D) None of these

41. The width of a confidence interval is decreased if $(1-\alpha)$ is

- (A) Decreased (B) Increased (C) Equal (D) Unchanged

42. Bias of an estimator can be:

- (A) Negative (B) Positive (C) One (D) A or B

43. A judge acquits an innocent person. It is an example of:

- (A) Type I error (B) Type II error (C) Correct decision (D) None of these

44. A value of an estimator is called:

- (A) Estimation (B) Estimate (C) Variable (D) Constant

45. In interval estimation we always get:

- (A) A single value (B) Two values (C) Range of values (D) Three values

46. A formula or rule used for estimating the parameter is called:

- (A) Estimation (B) Estimate (C) Estimator (D) All of the above

47. How many types of estimation are:

- (A) One (B) Three (C) Two (D) None

48. What would be the alternative hypothesis against the null hypothesis ?

- (A) $\mu < \mu_0$ (B) $\mu > \mu_0$ (C) $\mu \geq \mu_0$ (D) $\mu \neq \mu_0$

49.

An error is made by accepting H_0 is actually true:

- (A) Type II error (B) Type-I error (C) sampling error (D) none of these

50. The probability of rejecting Null Hypothesis what is false is:

- (A) Error (B) Type-I error (C) sampling error (D) Power of test

51. By decreasing the level of confidence, the precision of confidence interval is:

- (A) decresed (B) increased (C) equal (D) unchanged

52. $Z_{0.95}$ is equal to:

- (A) 1.545 (B) 1.645 (C) 1.745 (D) 1.845

53. The simple regression error e_i is an estimate of:

- (A) random error (B) bias (C) statistic (D) population error

54. If $r_{xy}=0.6$, $b_{xy}=1.2$ then $b_{yx}=.....$:

- (A) 0.30 (B) 0.20 (C) 0.72 (D) 0.36

55. If the two variables are un-correlated the value of "r" is:

- (A) -1 (B) 0 (C) +1 (D) factorial

56. In simple linear regreassion the number of unknown content are:

- (A) 1 (B) 2 (C) 4 (D) 3

57. It is possible that two regression coefficient have:

- (A) opposite signs (B) same signs (C) no sign (D) difficult to tell

58. The best fitting trend is one in which the sum of squares of residuals is:

- (A) maximum (B) zero (C) least (D) negative

59. Regression co-efficient independent of:

- (A) scale (B) orion (C) Both a and b (D) none of these

60. The best fitted trend is for which the sum square of errors of:

- (A) maximum (B) minimum (C) positive (D) negative

61. Strength of relationship between two variables is called:

- (A) regression (B) correlation (C) causation (D) none

62. When the production of a thing is decreasing, this stage is called as:

- (A) recession (B) recovery (C) boom (D) depression

63. If H_1 is given by $b > b_0$ we will use test:

- (A) two tail (B) one tail (C) three tail (D) none of these

64. If both regression coefficient are negative the correlation coefficient will be:

- (A) negative (B) positive (C) 1 (D) 0

65. When b_{yx} is negative then b_{xy} will be:

- (A) positive (B) negative (C) zero (D) 0 to 1

66. If $b_{xy} = -2$ and $r_{xy} = -1$ then b_{yx} is equal to:

- (A) -1 (B) -2 (C) 0.5 (D) -0.5

67. If one regression co-efficient is -ve then the other regression co-efficient will be:

- (A) +ve (B) -ve (C) 0 (D) 1

68. If $y = 2 + 2.6x$, then the slope of the line is:

- (A) 2 (B) 2.6 (C) 0.6 (D) 0

69. The value of correlation coefficient lies between:

- (A) 0 and 1 (B) -1 and 0 (C) -1 and 1 (D) 0 and 2

70. In simple linear regression, the number of unknowns are:

- (A) 1 (B) 2 (C) 3 (D) 4

71. A characteristic which varies in quality is called:

- (A) variable (B) statistic (C) attribution (D) parameter

72. In a chi-square test for independence no expected frequency should be..... than:

- (A) greater (B) less (C) both A and B (D) none of these

73. For 3 x 4 contingency table, the degree of freedom will be:

- (A) 6 (B) 12 (C) 3 (D) 9

74. If two attributes A and B are independent, then the co-efficient of association is:

- (A) -1 (B) +1 (C) 0 (D) 0.5

75. The shape of the chi-square distribution depends upon:

- (A) parameter (B) degree of freedom (C) number of cells (D) standard deviation

76. Association measures strength of relationship between:

- (A) attributes (B) variables (C) constant (D) none of these

77. The number of cells in 4 x 3 contingency table are:

- (A) 6 (B) 8 (C) 1 (D) 1

78. A qualitative characteristics is:

- (A) constant (B) quantitative variable (C) attributes (D) none

79. If the attributes A and B are completely associated, then the coefficient of association is equal to:

- (A) 1 (B) 0 (C) -1 (D) none of these

80. The graph of a time series is regarded as:

- (A) Freehand (B) Scatter diagram (C) Histogram (D) Historigram

81. There are main components of a time series:

- (A) 1 (B) 2 (C) 3 (D) 4

82. Methods of secular trend are:

- (A) 2 (B) 3 (C) 4 (D) 5

83. A second degree parabola has:

- (A) two constants (B) three constants (C) 2 or 3 constants (D) less than 2 constants

84. Graph of time series is called:

- (A) Histogram (B) Historigram (C) ogive (D) pie-chart

85. The nature of seasonal variation of:

- (A) regular (B) irregular trend (C) cyclical (D) irregular

86. Increase demand of coolers in summer is:

- (A) trend (B) seasonal (C) cyclical (D) irregular

87. Damages due to flood, strike fires and political disturbances is:

- (A) trend (B) seasonal (C) cyclical (D) irregular

88. When the production of a thing is maximum, this stage is called:

- (A) Boom (B) Recovery (C) recession (D) depression

89. A second degree parabola has:

- (A) one constant (B) two constants (C) three constants (D) no constant

90. The movements in secular trend are:

- (A) smooth (B) steady (C) regular (D) all of these

91. Long term variations are regarded as:

- (A) secular trend (B) seasonal variation (C) cyclical variation (D) irregular variation

92. Method of secular trend is:

- (A) 2 (B) 3 (C) 5 (D) 4

93. The component of time series is:

- (A) 2 (B) 3 (C) 4 (D) 5

94. The number of missing observations in case of 7 years moving average are:

- (A) 7 (B) 6 (C) 8 (D) none

95. The number of instruction processed in one second of time is regarded as:

- (A) data of computer (B) ram of computer (C) rom of computers (D) speed of computers

96. 1 byte=:

- (A) 4 bits (B) 6 bits (C) 8 bits (D) 10 bits

97. Control unit and arithmetic unit are part of:

- (A) CPU (B) program (C) language (D) input

98. The base of Octal system is:

- (A) 2 (B) 10 (C) 8 (D) 17

99. CPU stands for:

- (A) central plain unit (B) central programming unit (C) central processing unit (D) central processing unit

100. ALU stands for:

- (A) arithmetic logic unit (B) all logic unit (C) alone logical unit (D) none

101. Which memory cannot be changed?

- (A) RAM (B) ROM (C) DISK (D) None

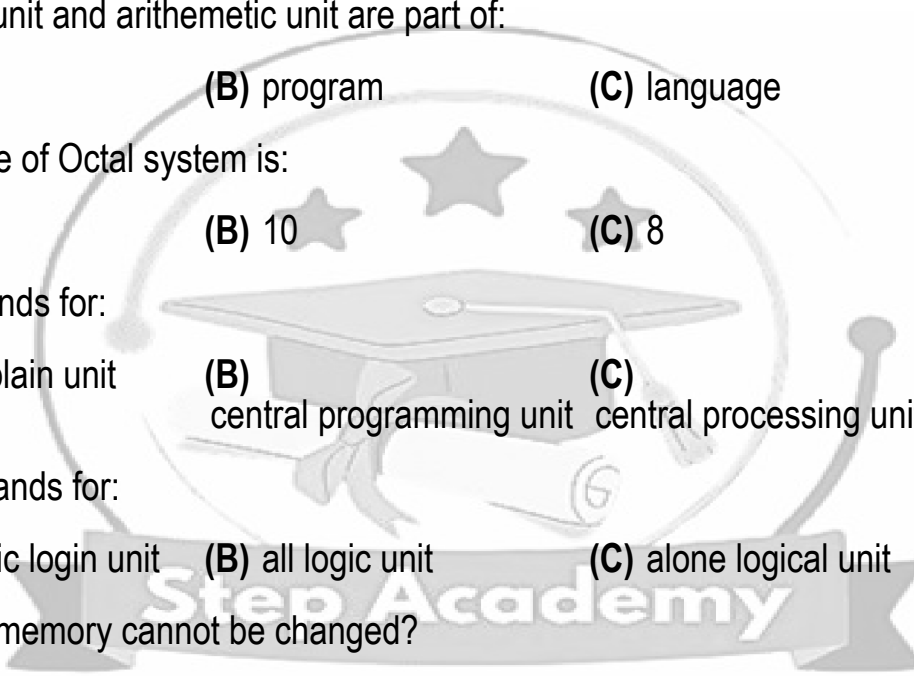
102. The CPU of the computer is:

- (A) output device (B) software (C) hardware (D) input devices

103. Compact disk is an example of:

- (A) primary (B) secondary storage (C) main storage (D) all of these

104. In normal curve, the ordinate is highest at:



- (A) mean (B) variance (C) S.D (D) Q_1
105. The coefficient of skewness of Normal distribution is:
(A) zero (B) positive (C) negative (D) both +ve and -ve
106. In a normal distribution, semi inter quartile range is given by:
(A) 03.2 (B) 0.7979 (C) $3/4$ (D) 0.6745
107. In a normal distribution, all odd order moments about mean are equal to:
(A) one (B) zero (C) additive (D) none of these
108. In a normal distribution if mode = 50 then the value of median is:
(A) 40 (B) 50 (C) 30 (D) 60
109. The total area of the normal density function is equal to:
(A) 0 (B) 0.5 (C) 1 (D) 0.25
110. The points of influence of the standard normal distribution lie at:
(A) -1 and 0 (B) 0 and 1 (C) -1 and +1 (D) μ and α
111. In normal distribution, the value of constant e is:
(A) 2.7183 (B) 2.8173 (C) 2.1792 (D) 1.2345
112. If X is N (100, 64), then S.D is:
(A) 18 (B) 100 (C) 8 (D) 91
113. In normal distribution, is:
(A) Q.D (B) S.D (C) M.D (D) Variance
114. A population about which we want to get some information is called:
(A) Finite population (B) Infinite population (C) Sample population (D) Target population
115. The process of dividing a heterogeneous population into homogeneous subgroups is called:
(A) Stratification (B) Sampling (C) Ranking (D) None
116.
Give N=5 and N=3 in simple random sampling without replacement, how many possible samples are there?
(A) 60 (B) 15 (C) 10 (D) 12
117. A sample of size 'n' is called small sample if 'n' is:

131. In the regression equation $y=a+bx$ 'a' is called:

- (A) x-intercept (B) y-intercept (C) dependent variable (D) none of these

132. In regression $\hat{y}=a+bx$ independent variable is denoted by:

- (A) Y (B) X (C) a (D) b

133. If $b_{xy}=b_{yx}=1$ and $S_x=S_y$, then r_{xy} will be:

- (A) zero (B) -1 (C) +1 (D) 0.5

134. Which of the following values is impossible for a χ^2 statistic:

- (A) <0 (B) >0 (C) =1 (D) =1

135. For a (4×5) contingency table, the number of cells are equal to:

- (A) 4 (B) 5 (C) 20 (D) 16

136. Association measure the strength of relationship between:

- (A) variable (B) attributes (C) constants (D) none

137. Both the coefficient of correlation and coefficient of association lies between:

- (A) 0 and 1 (B) -1 and 0 (C) -1 and +1 (D) -2 and +2

138. A characteristic that varies only in quality is called:

- (A) correlation (B) regression (C) attribute (D) continuous

139. The additive model of time series can be written as:

- (A) $Y=T.S.C.I$ (B) $Y=TS+CI$ (C) $Y=T+S+C+I$ (D) $Y=T+SC+I$

140. Method of moving average eliminates:

- (A) cyclic fluctuation (B) seasonal fluctuation (C) both a and b (D) none of these

141. Set of electronic instruments is:

- (A) software (B) hardware (C) output (D) none of these

142. In computer studies, DOS stands for:

- (A) data operating system (B) disk of system (C) data of support (D) disk operating system

143. Compute came from the word:

- (A) speed (B) compute (C) calculate (D) store

144. Compute came from the word:

- (A) speed (B) compute (C) calculate (D) store
145. Monitor or screen output is a:
- (A) hard copy (B) soft copy (C) software (D) hardware
146. A decimal number system has base:
- (A) 3 (B) 9 (C) 10 (D) 16
147. A business cycle has:
- (A) one stages (B) two stages (C) three stages (D) four stages
148. A business cycle has phases?
- (A) 2 (B) 3 (C) 4 (D) 5
149. For contingency table of order $r \times c$ the no. of degrees of freedom is:
- (A) rc (B) $r+c$ (C) $r-c$ (D) $(r-1)(c-1)$
150. The total of all frequency 'n' is of order:
- (A) 0 (B) 1 (C) 2 (D) 3

