1) A variable which can assume finite or countably infinite number of values is known as____.
   a) continuous
   b) discrete
   c) qualitative
   d) Quantitative

2) For Probability mass function , following condition /conditions satisfied
   a) $P(x_i) \geq 0$
   b) $\sum P(x_i) = 1$
   c) $P(x_i) \geq 0$ and $\sum P(x_i) = 1$
   d) $P(x_i) \geq 0$ or $\sum P(x_i) = 1$
3) The cumulative distribution function ranges from _____.
   a) 0 to ∞
   b) 0 to 1
   c) -1 to 1
   d) $-\infty \; to + \infty$

4) Which of the following statement is false for cumulative distribution function F(x)?
   a) F(x) is non-decreasing function
   b) F(x) ranges from 0 to 1
   c) F(x) = P (X $\geq$ x)
   d) F(x) = P (X $\leq$ x)
5) The value of expected value E(x) is equal to ___
   a) Mean
   b) Variance
   c) Standard deviation
   d) Covariance
6) Which of the following statement is false for Variance?
   a) Var (a x) = a^2 Var (x)
   b) Var (c) = 0, where c is constant
   c) Var (ax + b) = a Var (x)
   d) Var (x+ b) = Var (x)
7) In Binomial probability distribution, the successive trials are _____.
   a) Dependent
   b) Independent
   c) mutually exclusive
   d) fixed
8) which of the following is true for normal curve.
   a) Only symmetric
   b) Only unimodal
   c) Only bell-shaped
   d) Symmetric, unimodal, bell-shaped

9) If 'm' is the mean of a Poisson Distribution, the variance is given by _____
   a) $1/m$
   b) m^2
   c) m
   d) m/2
10) t distribution has ____parameter.
   a) Two
   b) Only one
   c) Zero
   d) No fixed
11) Any hypothesis which is tested for the purpose of rejection under the assumption that it is true is called_____
   a) Null hypothesis
   b) Alternative hypothesis
   c) Statistical hypothesis
   d) Composite hypothesis
12) The probability of rejecting the null hypothesis when it is true is _____
   a) Level of confidence
   b) Level of significance
   c) Power of the test
   d) Difficult to tell
13) Test of hypothesis Ho: μ = 50 against H1: μ > 50 leads to_____
   a) Left-tailed test
   b) Right-tailed test
   c) Two-tailed test
   d) Difficult to tell
14) The probability associated with committing type-I error is___
   a) β
   b) α
   c) 1 – β
   d) 1 – α
15) Analysis of variance is a statistical method of comparing the _____ of several populations.
   a) standard deviations
   b) variances
   c) means
   d) proportions
16) The number of independent values in a set of values is called:
   a) Test-statistic
   b) Degree of freedom
   c) Level of significance
   d) Level of confidence
17) In Student's - t distribution , H0 is accepted if ____.
   a) P < α

b) $P > \alpha$
c) $P \leq \alpha$
d) $P \geq \alpha$

18) When testing for serial randomness, we can use_____.
a) Mann-Whitney U test
b) sign test
c) Run test
d) Kruskal wallis test

19) Parametric test _____Standard Deviation.
a) Always follow
b) Never follow
c) May follow
d) Difficult to tell

20) Following test is used when population Standard deviation is unknown.
a) t-test
b) F-test
c) Chi-square test
d) Z-test

21) Which of the following statement is true for Non-parametric tests?
a) follows standard distribution
b) Less accurate than non-parametric tests
c) Used for large sample size
d) Used for ratio data

22) Which of the following non-parametric is equivalent of an un-paired samples t-test ?
a) Sign test
b) Wilcoxon sign -rank test
c) Mann- Whitney U test
d) Kruskal-Wallis test

23) In testing for the difference between two population, it is possible to use_____
a) Wilcoxon rank-sum test
b) Sign test
c) Either Wilcoxon rank-sum test or sign test
d) Neither Wilcoxon rank-sum test nor sign test

24) Non-parametric tests not include

a) Student's t-test
b) Chi-squared test
c) Wilcoxon signed rank test
d) Mann-Whitney U test

25) χ^2 variable for 2x2 table is defined as,

a) $\chi^2 = \frac{n(ad-bc)^2}{(a+c)(b+d)(a+b)(c+d)}$

b) $\chi^2 = \frac{(ad-bc)^2}{(a+c)(b+d)(a+b)(c+d)}$

c) $\chi^2 = \frac{n(ad-bc)}{(a+c)(b+d)(a+b)(c+d)}$

d) $\chi^2 = \frac{(ad-bc)}{(a+c)(b+d)(a+b)(c+d)}$