

تعداد سوالات: تستی: ۲۹ تشریحی: ۰

زمان آزمون (دقیقه): تستی: ۹۰ تشریحی: ۰

سری سوال: یک ۱

عنوان درس: زبان تخصصی

رشته تحصیلی/کد درس: آمار، ریاضیات و کاربردها ۱۱۷۰۳۰

1-The results of most scientific experiments are based on ..... statistic.

1. mathematical                      2. inferential                      3. descriptive                      4. basic

2-Generalizing about the whole from knowledge of just the part is known as ..... .

1. deduction                      2. sample                      3. population                      4. induction

3-Finish places of a race are an example of an ..... scale.

1. ratio                      2. ordinal                      3. nominal                      4. interval

4-if A and B are .....so are  $\bar{A}$  and  $\bar{B}$

1. independent                      2. disjoint                      3. subset                      4. equal

5-“skewed” can be described as ..... .

1. A shape split into mirror shape                      2. a shape with four straight lines  
3. having maximum point                      4. having no symmetric shape

6-The sum of frequency of a category falling below particular values is called ..... .

1. Frequency distribution                      2. cumulative frequency  
3. sample size                      4. observation

7-In negative skewed shape, extreme point is on the ..... .

1. right                      2. left                      3. center                      4. both sides

8- ..... is appropriate for any of the four scales of measurement.

1. mode                      2. median                      3. variance                      4. mean

9-a central moment is .....

1. a variance                      2. a correlation                      3. a mode                      4. An average

10-Chebyshev ' theorem indicates that .....  $1 - \frac{1}{k^2}$  of all the population values lies within

the limit  $\mu \pm k \sigma , k > 1$

1. At most                      2. at least                      3. exact                      4. approximately

11-a process with two complementary outcome is called the .....process.

1. poisson                      2. normal                      3. uniform                      4. bernouli

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12- The expression  $\frac{3(\bar{X} - m)}{S}$  is .....

1. coefficient of skewness
2. coefficient of variation
3. correlation coefficient
4. coefficient of determination

13- ..... is any collection of outcomes of an experiment.

1. a Sample space
2. an experiment
3. an event
4. an observation

14- there exists .....permutations of the letters inth word LIFE .

1. 8
2. 2
3. 24
4. 3

15-what does the words "Lopsided" means .....

1. two sided
2. unbiased
3. biased
4. centrality

16-If random variable is continuous then ..... possible get values greater than one.

1. Random variable
2. cumulative probability
3. Probability distribution
4. probability density distribution

17-The .....is useful in the same general class of random experiments as the geometric .

1. geometric distribution
2. normal distribution
3. exponential distribution
4. negative binomial distribution

18-The correlation coefficient takes values between -1 and 1, with the sign indicating the..... Of the leadership and the numerical magnitude its.....

1. Correlation, strength
2. direction, strength
3. association, direction
4. correlation , association

19- The points ..... a straight line show a weak relations between variables.

1. outlying
2. straight
3. axis
4. overall

20-The best and most effective method to show the relationship between two numerical variable is a .....

1. histogram
2. standard deviation
3. scatter plot
4. median score

21-the ... .. of a statistical test is defined as  $1 - \beta$

1. critical
2. significant
3. level
4. power



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22-The following statements are True(T) or False (F)?

a) Inferential statistics merely expresses the probabilities and we can prove any scientific question on its basis.

b) The assumption of no difference in statistics is referred to as null hypothesis.

1. a)T , b)T                      2. a) F , b)T                      3. a) T , b)F                      4. a) F , b)F

23-a disadvantage of mean is that it is .....

1. is less than the mode                      2. ignore some of the data  
3. is more than the mode                      4. is sensitive to extreme score

24-Choose the best option for "Power of the test"

1.  $P(\text{reject } H_0 | H_0 \text{ is False})$                       2.  $P(\text{reject } H_0 | H_0 \text{ is True})$   
3.  $P(\text{reject } H_0 | H_1 \text{ is True})$                       4.  $P(\text{reject } H_0 | H_1 \text{ is False})$

25-if the covariance of two variables is zero, then .....

1. they are independent.  
2. they are correlated  
3. they are independent if thier joint distribution is normal.  
4. the conditional distribution distribution of one given the other is normal.

26-  $r_s = 1 - \frac{6 \sum D^2}{N(N^2 - 1)}$  is

1. pearson correlation cefficient                      2. Kendall tau rank correlation coefficient  
3. Spearman's rank correlation                      4. Wicoxon matched pairs sigend rank

27-Homogeneity of variance means.....

1. Population variances are the same.                      2. Dependent variable scores are large.  
3. Independent variable scores are large.                      4. Population differences are high.

28-..... distribution has two parameter.

1. bernolie                      2. geometery                      3. normal                      4. poisson

29-a list of all the possible outcomes of an experiement is .....

1. event                      2. random                      3. variable                      4. sample space