



تعداد سوالات: تستی: ۳۰ تشریحی: ۰

زمان آزمون (دقیقه): تستی: ۶۰ تشریحی: ۰

سری سوال: یک ۱

عنوان درس: زبان تخصصی

رشته تحصیلی/کد درس: آمار ریاضی، آمار (کاردانی) ۱۱۷۰۳۰

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1-Deductive statistics is

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|--------------------------------------|--|
| 1. the concept of logical induction | 2. the analysis of sampling process |
| 3. the definition of random sampling | 4. the application of probability theory |

2-A and B are 2 mutually exclusive events and C and B are 2 independent events. The probability of $A \cap B \cap C$ equals to

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|------|--------|------|---------|
| 1. 0 | 2. 0.5 | 3. 1 | 4. 0.75 |
|------|--------|------|---------|

3-To describe nominal data, we use

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|------------------------|----------------|
| 1. graphs and measures | 2. histogram |
| 3. counts and percents | 4. a stem plot |

4- A median is a parameter.

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|------------------|-------------|----------|---------------|
| 1. extreme value | 2. location | 3. scale | 4. dispersion |
|------------------|-------------|----------|---------------|

5-The mean is inappropriate for data.

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|------------|-------------|----------|-----------|
| 1. nominal | 2. interval | 3. ratio | 4. no one |
|------------|-------------|----------|-----------|

6-A disadvantage of using the mean is that it

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|-----------------------------------|-----------------------------|
| 1. is sensitive to deviations | 2. balances the deviations |
| 3. is sensitive to extreme values | 4. ignores some of the data |

7-when the distribution is severely skewed, it is not better to use a

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|-------------|---------|-----------|---------|
| 1. midpoint | 2. mode | 3. median | 4. mean |
|-------------|---------|-----------|---------|

8-Logic inferntial statistics mainly deals with

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|---------------|------------------|----------------|---------------|
| 1. treatments | 2. probabilities | 3. populations | 4. assumption |
|---------------|------------------|----------------|---------------|

9-A random variable is

1. a nonsense story told by statisticians
2. a map from discrete probabilistic experiment to noninformative codes
3. a map from probability function to an experiment
4. a function from space of possible outcomes to real numbers

10-A discrete random variable gives positive mass to avalues.

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|-------------|--------------|-----------|----------------|
| 1. discrete | 2. countable | 3. finite | 4. uncountable |
|-------------|--------------|-----------|----------------|



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11- Most commonly random experiments involve elementary events which are

1. valued tossing
2. equally probable
3. actually possible
4. balanced dropping

12- Let X be the number of throws of a coin until a head appears. The distribution of X is

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

13- A process involving a series of trials with two complementary outcomes is called the process.

1. Gaussian normal
2. Banach
3. Bernouli
4. Poisson

14- Skewed means.....

1. having a symetric shape.
2. a shape split into two mirror shape.
3. having a shape which is not normal.
4. having no symmetric shape.

15- Let X be a random variable with distribution $\text{bin}(n, p)$, then

1. the variance is of X is $n(1-p)$
2. the variance of X is np
3. the expected value of X is np
4. the mean of X is p

16- An exponential distribution has parameter.

1. null
2. one
3. none
4. no

17- The negative binomial distribution is similar to the

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

18- A bivariate distribution is a distribution with two

1. parameters
2. medians
3. modes
4. variables

19- The most commonly used measure of relative variability is

1. standard deviation
2. variance
3. coefficient of variation
4. range

20- The shows the direction and strength of the relationship between two variables.

1. calculation
2. observation
3. correlation
4. association



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21-The best and most effective methods to show the relationship between two numerical variable are

1. regression model
2. pearson correlation
3. scatter plot
4. 2 and 3

22-On a scatter plot, each individual in the data is illustrated as a

1. plan
2. plot
3. pattern
4. point

23-The relationship between two variables is strong, when

1. the simple pattern is quite common
2. the points are near the straight-line
3. the points are widely scattered
4. the direction and strength are difference

24-If tests are used to analyze experiments in which the dependent variable is ranks, they are called.

1. parametric
2. nonparametric
3. nominal
4. ordinal

25-In a statistical test of hypothesis the value of the test statistics that separates the rejection and acceptance regions is called the

1. acceptance region
2. acceptance value
3. critical region
4. critical value

26-The smallest value of α for which test results become statistically significant is called the

1. type I error
2. type II error
3. p-value
4. power of the test

27-This statistical formal terms, $H_0 : \mu_1 - \mu_2 = 0$, is referred to as

1. unexpected conclusion
2. expected conclusion
3. null hypothesis
4. alternative hypothesis

28-If the differences between two groups are very probable by chance, it can be concluded that the differences are

1. expected
2. unexpected
3. subtracted
4. distributed



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29- The purpose of multiple regression is to help researchers explain variable.

1. the effect of the repressors on a dependent
2. the variance of the dependent
3. the effect of the dependent variables on regressors
4. the variance of independent

30- Adding the frequency of each class to the sum of frequencies is called

1. frequency distribution
2. cumulative frequency
3. contiguous blocks
4. interval width