



سری سوال : یک ۱

زمان آزمون (دقیقه): تستی : ۱۲۰ تشریحی : ۰

تعداد سوالات : تستی : ۳۰ تشریحی : ۰

عنوان درس : زبان تخصصی

رشته تحصیلی / کد درس : آمار، ریاضیات و کاربردها ۱۱۱۷۰۳۰

1- There is always some chance that the results based on the sample do not represent the

.....

1. statistics                      2. population                      3. sample                      4. calculation

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

1. induction                      2. deductive                      3. statistics                      4. date

3- There exists ..... permutations of the letters in the word sky.

1. 3                      2. 2                      3. 1                      4. 6

4- The method of ANOVA uses for testing of .....

1. difference of two means                      2. equality of means  
3. difference of variances                      4. ratio of variances

5- Let 2,3,4,4,4,3,2 be frequencies of seven then they have a ..... shape.

1. bell distribution                      2. symmetric distribution  
3. rectangular distribution                      4. skew distribution

6- When the frequency of score is divided by the total number of scores, the result is called .....

..

1. meadian                      2. cumulative frequency  
3. mean                      4. relative frequency

7- The mean, median, and mode are named .....

1. the location parameter                      2. the scale measures  
3. the dispersion values                      4. the central values

8- Which chart is used for quantitative data?

1. Pie chart                      2. histogram                      3. bar chart                      4. pareto chart

9- When the distribution is severely skewed, it is not better to use a .....

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

10- The color of some books is ..... scale.

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

11- the most frequently occurring value in a set of observation is .....

1. supermom                      2. mean                      3. mode                      4. maximum



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12- ..... indicates that at least  $1 - \frac{1}{k^2}$ , of all population values lie within the limit

$\mu \pm k\sigma$  where  $k > 1$

- |                         |                  |
|-------------------------|------------------|
| 1. Sigma field          | 2. Random sample |
| 3. Chebychov inequality | 4. sample space  |

13-The value of raw score less than the mean minus mean is .....

- |             |            |             |           |
|-------------|------------|-------------|-----------|
| 1. positive | 2. average | 3. negative | 4. normal |
|-------------|------------|-------------|-----------|

14-In a positive skewed shape, the is ..... on the left of the median.

- |         |         |                  |          |
|---------|---------|------------------|----------|
| 1. mode | 2. mean | 3. 75 percentile | 4. a & c |
|---------|---------|------------------|----------|

15-A list of all possible outcome of an experiment is .....

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

16-How many sample points are in the sample space when the three coins are tossed?

- |      |      |      |      |
|------|------|------|------|
| 1. 2 | 2. 4 | 3. 6 | 4. 8 |
|------|------|------|------|

17-If A and B are independent events then :

- |                                |                                |
|--------------------------------|--------------------------------|
| 1. $A \cap B = \phi$           | 2. $P(A \cap B) = P(A) - P(B)$ |
| 3. $P(A \cup B) = P(A) + P(B)$ | 4. $P(A   B) = P(A)$           |

18-Two dies are rolled. The number of elements of sample space is .....

- |       |       |       |      |
|-------|-------|-------|------|
| 1. 64 | 2. 12 | 3. 36 | 4. 4 |
|-------|-------|-------|------|

19-The special case of the negative binomial distribution is .....

- |                                   |                           |
|-----------------------------------|---------------------------|
| 1. positive binomial distribution | 2. geometric distribution |
| 3. normal distribution            | 4. Binomial distribution  |

20-The coefficient of  $xy^3$  in the expansion of  $(x + y)^4$  is .....

- |      |      |      |      |
|------|------|------|------|
| 1. 4 | 2. 6 | 3. 2 | 4. 3 |
|------|------|------|------|

21-What is the another name of normal distribution?

- |                  |                    |
|------------------|--------------------|
| 1. central limit | 2. Gaussian        |
| 3. ordinal       | 4. Natural measure |



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22- The more essential properties of a random variables are provided by its .....

- |         |                               |
|---------|-------------------------------|
| 1. mean | 2. variance                   |
| 3. mode | 4. moment generating function |

23- A statement about relationship between two or more variables is called:

- |                |              |                |               |
|----------------|--------------|----------------|---------------|
| 1. association | 2. induction | 3. Correlation | 4. hypothesis |
|----------------|--------------|----------------|---------------|

24- Regression means :

- |                  |           |             |              |
|------------------|-----------|-------------|--------------|
| 1. Straight line | 2. return | 3. foretell | 4. curvature |
|------------------|-----------|-------------|--------------|

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

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

26- This formula  $v = \frac{s}{\bar{x}}$  is called:

- |                             |              |
|-----------------------------|--------------|
| 1. Skewness                 | 2. Kurtosis  |
| 3. Coefficient of variation | 4. Variation |

27- Inference is stronge when you have .....

- |                                      |                           |
|--------------------------------------|---------------------------|
| 1. the information about mathematics | 2. the mean of population |
| 3. big sample size                   | 4. the random samples     |

28- The ..... of the statistical test is defined as  $1 - \beta$ .

- |          |         |           |          |
|----------|---------|-----------|----------|
| 1. level | 2. rank | 3. moment | 4. power |
|----------|---------|-----------|----------|

29- rank means:

- |         |         |          |          |
|---------|---------|----------|----------|
| 1. mark | 2. sign | 3. grade | 4. first |
|---------|---------|----------|----------|

30- Which one is a parametric test?

- |                  |                         |
|------------------|-------------------------|
| 1. Spearman test | 2. Wilcoxon-Wilcox test |
| 3. Fisher test   | 4. Mann-Whitney test    |