

تعداد سؤالات: تستی: ۱۵ تشریحی: ۲۲

زمان آزمون: تستی: ۶۰ تشریحی: ۶۰ دقیقه

آزمون نمره منفی دارد ○ ندارد ⊗

نام درس: زبان تخصصی

رشته تحصیلی و کد درس: آمار

۱۱۱۷۰۳۰

مجاز است.

استفاده از ماشین حساب

کد سری سؤال: یک (۱)

امام علی^(ع): برتری مردم به یکدیگر، به دانش‌ها و خردهاست؛ نه به ثروت‌ها و تبارها.

A. Choose the correct item (A, B, C or D) for each sentence to complete its meaning according to the passage.

(۵/۲۵ نمره)

1. Deductive statistics is

- | | |
|-------------------------------------|--------------------------------------|
| a. The concept of logical induction | b. The analysis of population |
| c. The analysis of sampling process | d. The definition of random sampling |

2. Descriptive statistics is mainly concerned with

- a. statistical evaluation and making generalizations
- b. summary calculations and graphical displays
- c. logical deduction and thorough conclusions
- d. making inferences and decision making

3. Sample frequency distribution is ...

- a. the resulting summary for the inspection times
- b. grouping data into contiguous blocks
- c. manipulating data in meaningful fashion
- d. the falling of each interval into observation

4. The median is not suitable for... data.

- | | | | |
|----------|-------------|------------|------------|
| a. ratio | b. interval | c. ordinal | d. nominal |
|----------|-------------|------------|------------|

5. In a test, when the mean score is 98, a score of 95 is ...

- | | |
|--------------------------|------------------------|
| a. possibly a high grade | b. a meaningless score |
| c. possibly a low grade | d. an excellent score |

تعداد سؤالات: تستی: ۱۵ تشریحی: ۲۲

زمان آزمون: تستی: ۶۰ تشریحی: ۶۰ دقیقه

آزمون نمره منفی دارد ○ ندارد ⊗

نام درس: زبان تخصصی

رشته تحصیلی و کد درس: آمار

۱۱۱۷۰۳۰

مجاز است.

استفاده از ماشین حساب

کد سری سؤال: یک (۱)

6. is any collection of outcomes of an experiment.
- a. A variable b. An event c. An observation d. An outcome
7. The two parameters which specify the location and scale of a normal curve are...
- a. μ and σ b. α and β c. z and k d. θ and δ
8. The ...shows the direction and strength of the relationship between two variables.
- a. association b. calculation c. correlation d. observation
9. This statistical formal terms, $H_o = \mu_1 - \mu_2 = 0$, is referred to as ...
- a. alternative hypothesis b. null hypothesis
- c. expected conclusion d. unexpected conclusion
10. If tests are used to analyze experiments in which the dependent variable is ranks, they are called ...
- a. parametric b. nonparametric c. nominal d. ordinal
11. The probability of rejecting the null hypothesis when it is false
- a. power of test b. critical region
- c. significant value d. rejection point
12. To find any statistically significant differences among sample means, researchers use
- a. two treatment levels b. one-way analysis of variance
- c. all disciplines analysis d. one dependent variable experiments
13. Normality is a basis in F test that assumes ...
- a. the independent variable is normally distributed
- b. the distribution of dependent variable is not skewed
- c. the within -groups estimate is low
- d. the between groups estimate is large

تعداد سوالات: تستی: ۱۵ تشریحی: ۲۲

زمان آزمون: تستی: ۶۰ تشریحی: ۶۰ دقیقه

آزمون نمره منفی دارد ○ ندارد ⊗

نام درس: زبان تخصصی

رشته تحصیلی و کد درس: آمار

۱۱۱۷۰۳۰

مجاز است.

استفاده از ماشین حساب

کد سری سؤال: یک (۱)

14. A process involving a series of trials with two complementary outcome is called the ...process.

- a. Poisson b. Bernouli c. Uniform d. Gaussian

15. If A and B are, so are A and B .

- a. Independent b. disjoint c. Subset d. Equal

B. Write the meaning of the following words in English. (نمره ۲/۵)

Sample	Illustrate
Deviation	Occur
Expected value	Stochastic
Overall	Assumption
Hypothesis	Central value

C. Write the meaning of the following words in Farsi. (نمره ۲/۵)

Bounds	Derive
Determine	Investigator
Appropriate	Recommend
Approximately	With respect to
Revised	Simultaneous

D. Translate the following text in to Farsi.

D1 (۲ نمره)

Having graduated from college, you are considering offers from two companies, one in sales and the other in management. The pay is about the same in both. After checking out the statistics for salespersons and managers at the library, you find that those who have been working for 5 years also have similar averages.

تعداد سؤالات: تستی: ۱۵ تشریحی: ۲۲
 زمان آزمون: تستی: ۶۰ تشریحی: ۶۰ دقیقه
 آزمون نمره منفی دارد ○ ندارد ⊗

نام درس: زبان تخصصی
 رشته تحصیلی و کد درس: آمار
 ۱۱۱۷۰۳۰
 کد سری سؤال: یک (۱)

استفاده از ماشین حساب مجاز است.

D 2 (نمره ۱,۷۵)

In Analysis of variance, the results are conveniently displayed in a so-called analysis of variance table in the following form.

Source of Variation	Sum of Squares	Degree of Freedom	Mean sum of squares	F -ratio
Between	BSS	K-1	$\frac{BSS}{(K-1)}$	$\frac{\frac{BSS}{(k-1)}}{\frac{WSS}{(n-k)}}$
Within	WSS	n-k	$\frac{WSS}{(n-1)}$	
Total	TSS	N-1		