

慈濟大學 105 學年度 碩博士班、博士學位學程暨碩士在職專班 招生考試命題紙

科目：研究方法

共6頁

一、選擇題(70%)，一題 2.5 分。請針對每一個問題選出最適當的答案

PART I :

1. You make a Type II error when you _____
 - a. fail to reject H_0 when it is false and H_1 is true
 - b. accept H_1 when it is true and H_0 is false
 - c. reject H_0 when it is true and H_1 is false
 - d. fail to reject H_1 when it is false and H_0 is true
2. Degrees of freedom for a statistic refers to the number of _____ that are free to vary when calculating that statistic
 - a. scores in the population
 - b. population parameters
 - c. sample statistics
 - d. scores in the sample
3. If the results of a two-factor between-subjects analysis of variance were summarized as $F(2, 84) = 3.70, p < .05$ for factor A, $F(1, 84) = 2.94, p > .05$ for factor B, and $F(2, 84) = 3.55, p < .05$ for the interaction of factors A and B, then you would know that $N =$ _____
 - a. 90
 - b. 85
 - c. 84
 - d. 89
4. A(n) _____ estimator is a statistic for which, if an infinite number of random samples of a certain size were obtained, the mean of the values of the statistic would equal the parameter being estimated
 - a. consistent
 - b. interval
 - c. unbiased
 - d. point
5. An assumption of the statistical test for the significance of r is that _____
 - a. the variances of X and Y are equal
 - b. the means of the X and Y populations are equal
 - c. both the X and Y scores are normally distributed in the population sampled
 - d. the X and Y scores are statistically independent

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6. If the results of a correlational study were reported as $r(26) = -.53, p < .05$, then which of the following statements is true?
- H_1 was accepted.
 - The X and Y variables are significantly negatively related.
 - The value of N_{pair} was 28.
 - All the above.
7. If scores are measured on an ordinal scale, then the best measure of central tendency for the scores is the _____
- mean
 - median
 - mode
 - correlation coefficient
8. Which of the following considerations influences how well a statistic estimates a parameter?
- The variability of scores in the population
 - The sampling method used
 - The size of the sample
 - All the above
9. The choice of a measure of variability to describe scores is determined by which of the following?
- The scale of measurement
 - The intended further statistical analysis of the data
 - The shape of the frequency distribution
 - All the above
10. One characteristic of the two hypotheses formulated for a statistical test is that the hypotheses must _____
- be written as a sentence
 - be statements about the same sample
 - specify the sample value
 - include all possible values of the parameter in the population
11. Which of the following statistical tests is most appropriate for analyzing the data from a one-factor within-subjects design with two treatment conditions and ordinal measures of the dependent variable?
- Mann-Whitney U

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- b. Chi-square test of independence
 - c. Wilcoxon signed-ranks
 - d. $t_{\text{dependent}}$ test
12. Which of the following is a criticism of statistical hypothesis testing?
- a. The probability of a Type II error cannot be precisely specified.
 - b. The probability of a Type I error cannot be precisely specified.
 - c. Humans are better intuitive judges of statistical significance than are statistical tests.
 - d. Null hypotheses are almost always true.
13. You receive a score of 88 on a statistics examination that has a mean of 76 and a sample standard deviation equal to 8. Your standard score on the test is equal to _____
- a. -1.5
 - b. +1.0
 - c. +1.5
 - d. +0.0
14. From a statistical point of view, results are "significant" because they occur _____
- a. rarely by chance when the alternative hypothesis is true
 - b. frequently because of sampling error
 - c. rarely by chance with small samples
 - d. rarely by chance when the null hypothesis is true

PART II :

1. Which of the following is NOT a typical characteristic of psychological tests?
- a. description of behavior with categories or scores
 - b. use of norms to predict other behaviors
 - c. standardization to a mean of 100
 - d. sampling of behavior
2. Administering a test to a group of individuals, then computing the average intercorrelation among all items on the test demonstrates the _____ method of estimating reliability
- a. Chronbach's alpha
 - b. test-retest
 - c. alternate forms
 - d. split-half

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3. The most useful method of assessing the reliability of highly speeded tests is the
 - a. Chronbach's alpha method
 - b. test-retest method
 - c. split-half reliability method
 - d. alternate forms method
 4. Percentile transformations change the relationship between scores such that scores
 - a. throughout the same distribution have equivalent percentile ranks
 - b. at the extremes of the distribution differ substantially in their percentile ranks
 - c. near the center of the distribution differ substantially in their percentile ranks
 - d. near the center of the distribution are similar in their percentile ranks
 5. To compare two scores, which of the following conditions must be met?
 - a. Their norms have the same form of distribution
 - b. They are on the same scale
 - c. Their norms have the same variance
 - d. All of the others
 6. It is important that the standardization sample be representative of the population for whom the test is intended because
 - a. the high generalizability is no longer a confounding variable
 - b. minority groups must be represented in all samples
 - c. test standards require a standardization sample
 - d. this allows for the examinee's relative standing to be determined
 7. There are reasons why access to psychological tests is restricted. Which of the following is NOT one of them?
 - a. in the hands of an unqualified person, psychological tests can cause harm
 - b. test disclosure is a direct violation of copyright law
 - c. public knowledge of item content reduces the efficacy of a test
 - d. the selection process is rendered invalid for persons who preview the test questions
 8. The single most important principle in the ethics of testing is
 - a. confidentiality
 - b. informed consent
 - c. best interests of the client
 - d. validity of results

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9. If we repeatedly administered the same test to the same individual, the standard deviation of the person's scores would be the
- variance
 - standard error of measurement
 - standard error of the mean
 - reliability of the test
10. Classical Test Theory assumes
- the length of a test has no bearing on its reliability
 - measurement errors occur systematically
 - it is not possible to estimate true scores
 - the distribution of random errors is the same for every respondent
11. A reliability coefficient of .80 suggests that
- 36% of the variance on the test is error
 - the test can be used for clinical purposes but not for research
 - the test can be used for research but not for clinical purposes
 - 20% of the variance on the test is error
12. A multi-trait multi-method matrix provides information about
- reliability
 - convergent validity
 - discriminant validity
 - all of the others
13. The standard error of the estimate is an index of the error of measurement caused by the _____ of a test
- imperfect validity
 - standardization sample
 - Unreliability
 - sampling restriction
14. Item Response Theory provides measures that are
- sample invariant
 - sample specific
 - sample inversed
 - sample indifferent

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二、問答題 30%

1. 請比較 experimental design 和 quasi-experimental design 的優缺點，並舉例說明這兩種研究方法應當如何分別應用在不同的情境與議題上? (30 分)