

考試科目	統計 心理測驗 心理實驗法	系所別	心理學系	考試時間	2月18日(一)第一節
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(一) 統計 (35%)，共七題，每題 5%。

1. 請問進行變異數分析(ANOVA)時如違反各組「變異數同質性」之前提假設時對結果推論的影響為何? 如何檢驗此「變異數同質性」的假設(說明方法和判斷標準)?
2. 如進行變異數分析(ANOVA)時的「變異數同質性」前提假設違反時，請舉出「兩種」處理此一狀況的方法和步驟，並說明各方法所根據之原理邏輯。
3. 請說明「相關 (correlation)」和「迴歸(regression)」分析之間的相同處和相異處，並各舉一個適合的應用實例。另「相關」和「迴歸」分析，何者能幫助研究者做「因果」推論?
4. 請說明「標準常態分配」和「student's t -分配」之間的 1)相同處、2)相異處、3)兩分配之間的關聯、4)兩分配何時會「相等」及 5)兩分配的各自適用時機。
5. 請問以皮爾森卡方檢定(Pearson χ^2 test) 進行兩變項間「獨立性」檢定時所設定的虛無(H_0)和對立(H_1)假設各為何? 請問這個檢定的步驟及其所根據原理為何?
6. 請問如何決定一個研究需要多大的樣本數? 影響一個研究所需「樣本數」大小的相關因素有那些? 這些因素又如何影響一個研究所需的樣本數?
7. 請舉出心理學研究中資料有「遺漏值(missing data)」的兩個可能原因? 並請舉出三個處理遺漏值的方法和其根據原理。

(二) 心理測驗 (25%)，共五題，每題 5%

8. 請問「校標參照測驗(Criterion-Referenced Test)」和「常模參照測驗 (Norm-Referenced Test)」的意義內涵各為何? 並列出這兩類測驗的各自最適用時機。
9. 如欲檢驗一個為單向度的性格測驗之「內部一致性(Internal Consistency)」，請舉出三個可能的做法和每一作法所根據的原理和邏輯。
10. 請問項目分析中進行「題目鑑別度」(Item Discrimination) 檢驗的目的為何? 如一測驗題目採用李克特式(Likert type)量尺，對此測驗每個題目的進行鑑別度檢驗的步驟和判斷標準為何?
11. 請問設計一個「速度測驗(Speed Test)」和一般「成就測驗(Achievement Test)」的主要差異和注意事項為何? 該如何對一個「速度測驗」進行信度分析，並有何特別考量和注意事宜?
12. 請列出五個編寫「中文測驗題目」時，在文字、詞彙，用語或語句描述上應注意的地方。

備

註

- 一、作答於試題上者，不予計分。
- 二、試題請隨卷繳交。

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(三) 心理實驗法 (40%，每題 2.5 分)

1. In signal-detection theory, the position of the criterion is determined by
 - A. the decision process.
 - B. the sensory process.
 - C. the stimulus intensity.
 - D. the mean of the signal distribution.
2. A control variable is
 - A. under the control of the subject.
 - B. a potential independent variable that is held constant in an experiment.
 - C. a potential independent variable that is manipulated by the experimenter.
 - D. expected to change as the result of an experimental manipulation.
3. Parallel distributed processing (PDP) refers to
 - A. an early method for measuring reaction time.
 - B. the use of fMRI to study brain activity.
 - C. a modern model of cognition.
 - D. a method of statistical analysis.
4. When the time between two signals to respond is very short, the response to the second stimulus
 - A. speeds up.
 - B. is more accurate.
 - C. slows down.
 - D. remains the same compared to longer intervals.
5. An experimenter presents a subject with a standard weight of 100 grams followed by a comparison weight of 20 grams; the subject is asked if the two weights are the same or different. The standard is repeated followed by a comparison weight of 30 grams; the subject is again asked if the two are the same or different. This procedure continues with a comparison weight 10 grams heavier on each presentation until the subject says that both weights are the same. These steps are repeated starting with a comparison weight of 190 grams and decreasing it by 10 grams on each trial until the subject says the two weights are the same. What is the experimenter trying to measure?
 - A. absolute threshold
 - B. perceptual defense
 - C. method of limits
 - D. difference threshold
6. In a multiple-baseline design
 - A. the length of the baseline period is the same for all of the subjects in the experiment.
 - B. the behavior of the subjects is expected to revert to baseline levels after the removal of the

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- independent variable.
- C. the length of the baseline period is different for different subjects or different behaviors prior to the introduction of the independent variable.
- D. the occurrence of carryover effects cannot be assessed.
7. The view that the perceiver picks up the information afforded by the environment naturally and essentially, without reflecting upon them, is referred to as
- A. top-down perception.
- B. the indirect approach to perception.
- C. sensational perception.
- D. the bottom-up approach to perception.
8. The method of limits can be used to determine
- A. an absolute threshold.
- B. a difference decision.
- C. a response threshold.
- D. a decision threshold.
9. On an implicit word fragment completion test, 47 percent of the fragments in the studied condition were completed and 23 percent of fragments in the non-studied condition were completed. The amount of priming is _____ percent.
- A. 70
- B. 24
- C. 23
- D. 47
10. Theory in psychology serves to both organize data and to
- A. Generate prediction for untested situations.
- B. allow psychology to be termed a natural science.
- C. validate psychological findings.
- D. ensure the reliability of data.
11. An experimenter computing the correlation between age and memory span would
- A. be able to show that old age produces a decrease in memory span.
- B. be able to determine that a third variable was involved.
- C. make an error because age and memory span are measured on different scales.
- D. be able to determine whether there is a relationship between age and memory span.
12. When is it acceptable for a researcher to dispense with obtaining the informed consent of research participants?
- A. Whenever there is no deception involved in the research
- B. Whenever the risk of harm to the participants is minimal, they participate voluntarily, and

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<p>their confidentiality is ensured</p> <p>C. Whenever the participants are being paid for their participation</p> <p>D. Whenever the research has been approved by an IRB</p> <p>13. The primary danger in within-subjects designs is in the presence of</p> <p>A. the effects that testing subjects in one condition might have on their later behavior.</p> <p>B. the failure to establish a baseline of behavior.</p> <p>C. the minimization of the amount of variability caused by differences among subjects.</p> <p>D. The employment of few subjects, which leads to skewed results.</p> <p>14. The typical Stroop task</p> <p>A. involves naming the color of ink that a word is printed in.</p> <p>B. involves naming the color of an object as it would normally occur (e.g., saying "yellow" to "lemon").</p> <p>C. requires participants to read words aloud as they are presented.</p> <p>D. requires participants to read profane words aloud.</p> <p>15. In explaining how people process overlapping tasks, central bottleneck models</p> <p>A. postulate sequential processing of one task at a time.</p> <p>B. postulate a common resource needed for mental operations.</p> <p>C. assume that a mental module can be added or deleted without altering the processing duration of the other modules.</p> <p>D. assume that there are no limits to processing capacity.</p> <p>16. In the ABA design, the B is the</p> <p>A. discriminative stimulus.</p> <p>B. matched group.</p> <p>C. baseline.</p> <p>D. condition after therapy.</p>			
備 註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。		