

一、單選題(每題一分，請選出最佳答案)

1. Several studies have found a moderate correlation between the amount of violence watched on TV and aggression; i.e., the more televised violence children watch, the more aggressive they are. The correlation most consistent with these findings is
a. 0.00.
b. + 0.40.
c. -0.10.
d. -0.40.
2. In Freud psychoanalytic theory, throwing a temper tantrum to get what you want immediately is an expression of the wishes of the
a. id.
b. ego.
c. eclecticator.
d. superego.
3. For children, a spanking is a(n) _____, while praise from an adult serves as a(n) _____.
a. punisher/reinforcer
b. observation/participation
c. mesosystem/microsystem
d. assimilator/accommodator
4. Following varied experiences in other academic disciplines, Piaget's earliest job in psychology was in the area of
a. intelligence testing.
b. military applications.
c. primate behavior.
d. investigating psychics.
5. The heritability coefficient is calculated from
a. means for the groups being compared.
b. the variabilities for the groups being compared.
c. correlations within identical twin pairs and within fraternal twin pairs.
d. trait estimates by mothers and fathers.
6. A person's genotype, as well as the reactions of others to the phenotype, influence the quality of _____ genotype/phenotype correlations.
a. active (niche-building)
b. selectively bred
c. passive
d. evocative
7. Through active niche building, similarities within pairs of fraternal twins _____ as they mature from childhood to adulthood.
a. weaken
b. remain stable
c. strengthen
d. become difficult to assess
8. _____ is a strong predictor of postpartum depression.
a. Positive maternal interaction with the infant
b. The mother's lack of social support within the family
c. A maternal diet consisting mainly of greasy foods
d. The presence of cats within the home

9. The evoked potential method for studying sensation relies on the measurement of _____
a. conditioned responses.
b. deferred imitation of what is seen.
c. the infant's conscious but unspoken thoughts.
d. brain waves from the sensory projection areas.
10. Fear of heights develops in an infant _____
a. when parents tell stories about their own falls.
b. when the infant gains experience at crawling.
c. at a genetically timed maturational age of six months.
d. when the infant observes others' falls, regardless of its own personal experiences.
11. The "optical flow" is experienced when the baby _____
a. shakes its head from side to side.
b. moves forward through the environment.
c. looks alternately at near vs. far objects.
d. walks around an object while gazing at it.
12. The intersensory redundancy hypothesis suggests that _____
a. through experience with objects, the infant's perceptual system will advance from an amodal to an intermodal state.
b. information from various senses can be redundant when it represents the same object.
c. sensory information is not to be integrated.
d. integration of sensory information can be too complex for young children.
13. Most neurons in the young brain have already been formed as early as _____
a. the time of conception.
b. the end of the second trimester of pregnancy.
c. the age of four years.
d. the age of six years.
14. "First ya binge, then ya purge" would be a slogan for which eating/dietary disorder? _____
a. Bulimia nervosa.
b. Marasmus.
c. Anorexia nervosa.
d. Kwashiorkor.
15. When malnutrition or illness is neither prolonged nor severe, an interval of _____
a. overeating and obesity will follow.
b. poor appetite continues, which retards growth.
c. rapid compensatory growth happens, returning the child to the genetically programmed growth trajectory.
d. stable growth occurs without making up earlier deficits.
16. At age four, Freddy and his friends wear their firefighter uniforms and drag hoses around the backyard, pretending to put out imaginary fires. This is _____
a. symbolic play.
b. identity training.
c. sensorimotor play.
d. competitive social play.
17. The preoperational principle called centration means that the child _____
a. receives help from parents on difficult tasks.
b. attends to each object's single most salient feature.
c. seeks perceptual balance on objects' spatial layouts.
d. looks directly at objects, so that images are centered.

- ____ 18. Piaget's estimates of preschoolers' abilities
- overestimated their capabilities.
 - underestimated their capabilities.
 - accurately estimated their capabilities.
 - were qualitatively inaccurate because of Piaget's overreliance on animals.
- ____ 19. "Domain specificity" of mental performance means that
- performance is best for areas of one's expertise.
 - performance increases broadly while the child matures.
 - errors are common among children in everything they do.
 - expertise applies broadly to many types of tasks.
- ____ 20. Injury to the brain's ____ would be expected to yield harmful effects on attention span.
- parietal lobe of the cerebral cortex
 - reticular formation
 - corpus callosum
 - medulla
- ____ 21. When ADHD children mature into adulthood, they are more likely than others of their age to
- have a happy and successful marriage.
 - experience disruption and instability.
 - seek gender-reassignment surgery (transsexualism).
 - calm down and behave normally, after growing out of ADHD.
- ____ 22. Scruffy, age eight, says, "Spanky is smarter than Zowi, and Zowi is smarter than Gummy, so Spanky is smarter than Gummy." Scruffy applied a(n)
- cardinality count.
 - transitive mapping.
 - span of apprehension.
 - elaboration memory strategy.
- ____ 23. Which of these infantile measures is known to identify neurological disorders or signs of mental retardation?
- Circular reactions that are oval in shape.
 - Low DQ score on the Bayley Scales.
 - Low IQ score on the Stanford-Binet.
 - Low IQ score on the WISC-III.
- ____ 24. The child's earliest sentences form ____, so named because all nonessential words are left out.
- telegraphic speech
 - grammatical morphemes
 - holophrastic connections
 - referential communications
- ____ 25. Mothers who are rigid, self-centered, and rejecting tend to guide their infant to develop a(n) ____ temperament.
- resistant
 - disorganized/disoriented
 - avoidant
 - secure
- ____ 26. Situational inconsistencies in qualities of one's self become noticeable during the ____ age level.
- adolescent
 - gradeschool/middle childhood
 - preschool/early childhood
 - toddlerhood

- _____ 27. Which of these is the correct developmental sequence for children's self-evaluations of their own achievements, from earliest to latest?
- Use of standards :: approval seeking :: joy in mastery.
 - Approval seeking :: use of standards :: joy in mastery.
 - Approval seeking :: joy in mastery :: use of standards.
 - Joy in mastery :: approval seeking :: use of standards.
- _____ 28. Children who are high achievers and are most successful have parents who apply the _____ parenting style.
- neglectful/noninvolved
 - permissive
 - authoritarian
 - authoritative
- _____ 29. Teenage children of immigrants do well in school, despite language problems and poverty. They excel because _____
- their parents practice authoritarian parenting.
 - they are ostracized socially by native-born Americans.
 - their families strongly encourage educational success.
 - they read the inscription on the Statue of Liberty.
- _____ 30. The gist of psychological androgyny is that _____
- the best features of male and female gender roles should be encouraged in all children.
 - religious sources should be consulted when making major decisions about gender and childrearing.
 - animals should be observed naturalistically to learn about gender-typing.
 - rigidly defined gender roles are good because they encourage uniformity and reduce anxiety among children.
- _____ 31. List each of Piaget's four stages of cognitive development, noting the ages when each stage occurs, and the main types of schemes associated with each stage.
- _____ 32. Outline the basics of enrichment theory and differentiation theory.

二、簡答題：(每題五分)

三、問答題：(十分)

33. A team of researchers set out to study aggressive behavior in preschool children in two different play settings, one where only large playground equipment was present and another where only small toys were present. Aggressive behavior was defined as arguing, taking toys by force, and fighting. The researchers hypothesized that the large playground equipment would produce more sharing, whereas the small toys would produce more aggression, due to the nature of the toys. To test their hypothesis, the researchers created two groups of children, one for each play area. More aggressive behavior was observed in the small-toy play area. (a) What research methods and techniques were employed? (b) What procedures might have been employed to ensure accuracy in the observing of aggressive behavior? (c) Can we say for sure that the small toys caused aggressive behavior?

四、

名詞解釋：(30%)

- 睡眠者效應(Sleeper Effect)
- 個人主義與集體主義(Individualism & Collectivism)
- 接觸假說(contact hypothesis)
- 社會賦閒 (social loafing)
- 團體極化 (group polarization)
- 霍桑效應 (Hawthorne effect)

五、

簡答題：

請說明社會兩難 (social dilemmas) 的定義、類型、及其理論基礎(20%)

I. 單選題：每題3分。

- Alpha (α) stands for
 - the probability of any statistical test resulting in a Type I error.
 - the probability that a statistical test involving a true null hypothesis will result in a Type I error.
 - the proportion of statistical significant results for which the null hypothesis is true.
 - the proportion of experiments that will attain statistical significance.
 - the proportion of experiments for which the null hypothesis is false that will attain statistical significance.
- If we are measuring the height of a child with a ruler in which the centimeters are divided into tenths, which of the following values is correctly reported? And which of the following values representing the average height of the male adults is adequately reported?
 - 100.257 cm; 170 cm
 - 89.12 cm; 168.54389 cm
 - 78.357 cm; 171.1 cm
 - 93.2 cm; 172.431 cm
 - 58 cm; 173.55674 cm
- Suppose that the scores of a particular English examination are normally distributed in the undergraduate population with mean =150 and standard deviation =30. Suppose also that there is a training program that increases a person's score on the English exam, and to demonstrate that, a random sample of 100 prospective exam takers receiving the training program and then taking the exam has the score mean = 155. Which of the following statements is correct?
 - The claim that the training program can increase a person's score on the English exam is rejected at the one-tailed 0.05 level but accepted at the two-tailed 0.05 level.
 - The degree of freedom for the test statistic is 99.
 - The standard error of the mean is 3.
 - The observed value of the test statistic is 5.
 - The standard deviation of the sample mean is 30.
- In what way would the result in Question 3 differ if only 65 trainees complete the training program, suppose that the sample mean does not change?
 - The effect size would decrease.
 - The power of the statistical test would increase.
 - The probability of making a Type I error would decrease.
 - The probability of making a Type II error would not change.
 - The claim that the training program can increase a person's score on the English exam would be rejected at the 0.05 level.
- If we measured data at the ordinal level of measurement from two dependent samples we should analyze the data with the
 - Wilcoxon T test
 - Mann-Whitney U test
 - Chi-square test of independence
 - Kruskal-Wallis H test
 - Spearman's rho test
- Suppose that s_1 is the standard deviation of a sample of size 15 that was drawn from a population whose mean and standard deviation are unknown. Further suppose that s_2 is the standard deviation of a sample of size 25 that was drawn from the same population. Which of the following statements is true?
 - s_1 is a better point-estimate of the population standard deviation than is s_2 .
 - s_2 is a better point-estimate of the population standard deviation than is s_1 .
 - The pooled variance is a better estimate of the population variance than is either s_1^2 or s_2^2
 - Both A and C are true.
 - Both B and C are true.

II. 填充題：每空格4分。請於答題卷上清楚標示各答案對應之空格編號，若無法辨認則不計分。

1. Suppose we are studying the effects of caffeine on cognitive performance. The following is the summary table for this study.

Source of Variation	Sum of square	df	Mean square	F	p
Dosage of Caffeine (D)	825.8	2	412.9	1.025	0.388
Gender of Participants (G)	434.1	1	434.1	1.079	0.319
D*G	2995.8	2	1497.9	3.721	0.055
error	4830.1	12	402.5		

- A. The experimental design for this study is a _____ (a) _____ design.
B. How many participants are there in this study? _____ (b) _____
C. The "p" value stands for _____ (c.) _____
D. If the distribution of the score of cognitive performance is not normally distributed, how should we analyze the data? _____ (d) _____

2. A researcher found that higher running speed is associated with higher resting heart rate, and he obtained the following summary table.

Source of Variation	Sum of square	df	Mean square	F	p
Regression	216.0	1	216.0	7.875	0.014
Residual	384.0	14	27.4		

- A. The correlation between the running speed and resting heart rate is _____ (e) _____
B. How many participants are there in this study? _____ (f) _____
C. Assume that the sample variance of the resting heart rate is 10, the slope of the regression line would be _____ (g) _____, the covariance would be _____ (h) _____.

III.

- 一、何謂 standards for psychological testing? 請舉例說明。(5%)
二、信度(reliability)的估計方法有那些? 對速度測驗(speed tests)來說, 應採用何種信度估計方法較合適? 請說明原因。(15%)
三、何謂 predictive validity? 請說明其在實務應用上的限制。(15%)
四、何謂 item response theory(IRT)? 相較古典測驗理論, IRT 有那些優缺點。(15%)

一、解釋名詞 (每題4分，共40分)

- (1). Bipolar II disorder
- (2). Schizophreniform disorder
- (3). Pediatric psychologists
- (4). Down syndrome
- (5). Adaptive functioning
- (6). Allostatic load
- (7). Safety behaviors
- (8). Bulimia nervosa
- (9). Borderline personality disorder
- (10). HPA axis

二、申論題 (每題15分，共60分)

- (1). Please describe the common features across different family therapies which have been supported by evidence in preventing relapse for patients with schizophrenia?
- (2). Please describe the advantages and disadvantages of using behavioral observations in the assessment of children?
- (3). Please describe the theoretical base and treatment strategies of behavior medicine.
- (4). Please list the common risk factors across the anxiety disorders and explain the mechanisms these factors contribute to.

國立中正大學100學年度碩士班招生考試試題
系所別：心理學系、心理學系臨床心理學 科目：認知心理學與生理心理學

第1節

第1頁，共1頁

I.

1. 篩選瓶頸理論(filter/bottleneck model)、後期選擇理論(late-selection theory)、以及容量理論(capacity theory)為針對注意力所提出的三個不同理論。
 - (a) 請簡述並比較這三個注意力理論 (6%)。
 - (b) 你認為哪一個理論最能夠說明人類的注意力行為？請舉出實徵研究證據並論述之 (4%)。
2. 近代認知心理學家主張長期記憶系統包含了許多功能分離的子系統，請以Squire(2004)針對長期記憶系統所發展的模式為基礎，說明：
 - (a) 長期記憶包含了哪些子系統？並請簡述這些子系統的功能 (6%)。
 - (b) 請舉出能支持這些子系統存在且分離的實徵研究證據 (4%)。
3. 中文字系統與拼音文字系統在形音對應上，有相同也有相異的設計，這些形音對應設計上的特性，使得讀者在閱讀中文與拼音文字時，也運用了一些相同與相異的認知處理歷程。
 - (a) 請舉出實徵研究證據說明，在閱讀中文與拼音文字時，需要動用哪些相同的認知處理歷程 (4%)？
 - (b) 請舉出實徵研究證據說明，在閱讀中文與拼音文字時，分別需要動用哪些不同的認知處理歷程 (4%)。
4. 期望效用理論(expected utility theory)與展望理論(prospect theory)為兩個針對人類決策判斷行為所提出的理論。
 - (a) 請簡述這兩個不同的理論 (4%)。
 - (b) 你認為哪一個理論最能夠說明人類的決策判斷行為？請舉出實徵研究證據並論述之 (4%)。
5. 請在認知心理學的範疇中，舉出一個重要卻尚未被解決的研究問題，並說明：
 - (a) 該研究問題為何 (2%)？
 - (b) 該研究問題在認知心理學領域中的重要性為何 (3%)？
 - (c) 請設計一個可能解決此研究問題的實驗 (包含實驗假設、實驗設計、獨變項、依變項、實驗控制、以及實驗程序等)，並說明為何這一個實驗可以解決你的研究問題 (6%)。
 - (d) 你預期的實驗結果為何？並請說明做出此預期的理由 (3%)。

II.

1. 請描述一下，哺乳類動物神經元如何依靠Axon上面覆披著Myelin來增加Action Potential的傳導速率。(10分)
2. 關於Long Term Potentiation [LTP] 這個現象，請描述一下：
 - a. 我們如何在大鼠Hippocampus切片上面進行實驗以觀察LTP現象？(8分)
 - b. 請設計一個實驗來證明LTP現象跟大鼠的空間學習有關。(7分)
3. 當你坐在這個教室寫這份考卷的時候，你的大腦正在進行許多項複雜的認知神經運作，以解答考卷上提出的各個問題。請你綜合描述一下，從你的眼睛看到試題開始，一直到你的手寫出答案為止，資訊如何在你的大腦中傳播，哪些大腦部位可能參與，而又有哪些認知神經機制在運作。(25分)