

一、選擇題 36 分（單選題，每題 2 分，請將答案填入答案卷【選擇題作答區】）

- Please choose the parts of the brain that associate with the following two cognitive functions: the processing of cognitive conflict: ____; inhibitory executive processes: ____
 (A) parietal cortex; anterior cingulate cortex
 (B) prefrontal cortex; orbitofrontal cortex
 (C) basal ganglia; hippocampus
 (D) temporal cortex; orbitofrontal cortex
 (E) anterior cingulate cortex; prefrontal cortex

- Below are four groups of rats which received different classical conditioning procedures. Which group shows conditioning most likely?

| Group\procedures | CS+ | CS+ | CS- | CS- |
|------------------|-----|-----|-----|-----|
| | US+ | US- | US+ | US- |
| A | 50 | 10 | 50 | 10 |
| B | 100 | 20 | 50 | 10 |
| C | 50 | 10 | 10 | 50 |
| D | 20 | 100 | 10 | 50 |

Note: [+]: presence of stimuli; [-]: absence of stimuli. The number in each cell denotes the frequency of trial each group received for each type of procedure.

- Which the following function is not one of the three attentional subsystems proposed by Posner & Rothbart (2007)?
 (A) orienting
 (B) executive control
 (C) selective
 (D) alerting
- Which the following task CANNOT measure implicit memory?
 (A) Direct-forgetting
 (B) Saving score
 (C) Mirror-reading task
 (D) Word completion task
- Subjects perform an experiment similar to Wason and Johnson-Laird (1972). They are shown four cards on a table, with “R”, “A”, “5” and “8” printed on them, respectively. Half the subjects (Group 1) are told to test the hypothesis “If a card has

a vowel on one side, then it has an even number on the other side,” and half the subjects (Group 2) are told to test the hypothesis “If a card has a vowel on one side, then it does not have an odd number on the other side.” Subjects are told to turn over only the cards that will test the hypothesis. Which outcome of this experiment is most likely? And which hypothesis can explain the result?

- (A) Group 1 will perform the task better than group 2; Matching bias
- (B) Group 2 will perform the task better than group 1; Matching bias
- (C) Group 1 will perform the task better than group 2; pragmatic reasoning schema
- (D) Group 2 will perform the task better than group 1; pragmatic reasoning schema

6. The internal structure of _____ categories and _____ are based on the average member; the internal structure of _____ categories and _____ is based on the best (ideal) member.
- (A) goal-driven; expert; taxonomic; novice
 - (B) taxonomic; novice; goal-driven; expert
 - (C) goal-driven; novice; taxonomic; expert
 - (D) taxonomic; expert; goal-driven; novice
7. Which of the following empirical findings is predicted by the distributed connectionist approach of reading aloud?
- (A) Regular nonwords are pronounced faster than irregular nonwords
 - (B) There is no difference on the time taken to pronounce nonwords between consistent and inconsistent nonwords.
 - (C) Pronunciations of irregular nonwords are more variable than those of regular ones.
 - (D) Consistent nonwords are pronounced faster than inconsistent nonwords.
 - (E) There is no difference on the time taken to pronounce nonwords between regular and irregular nonwords.
8. What conversational maxims (Grice, 1967) are violated separately in the following two conversations?
- Conversation 1:**
JOHN: Where's Mom?
TIM: The place she stays.
- Conversation 2:**
EVA: Do you really love me?
JOHN: I love college football, and things that go real fast.
- (A) Conversation 1: maxim of quantity; Conversation 2: maxim of relation

- (B) Conversation 1: maxim of quality; Conversation 2: maxim of quantity
(C) Conversation 1: maxim of relation; Conversation 2: maxim of manner
(D) Both violates maxim of manner
(E) Both violates maxim of quality
9. The self-esteem changes with ages. At what age, children offer most extremely positive descriptions of themselves:
- (A) 2 years
(B) 4 years
(C) 7 years
(D) 12 years
10. What approach on moral development shows that the moral domain, the social convention domain, and the personal sphere domain each have their own distinct rules, and what happens when they are broken?
- (A) the triarchic theory of morality
(B) social domain theory
(C) social-learning theory
(D) social-convention view on moral development
11. According to the gender schema view of development, the gender schema is used to process:
- (A) names of boys and girls
(B) toy preference of girls
(C) knowledge about the family activities of father and mother
(D) all types of information relevant with gender
12. The violation of expectations method is primary used to:
- (A) measure infants' sensory capacities.
(B) assess infants' language comprehension abilities.
(C) measure infants' physical knowledge
(D) predict infants' memory capacity
13. According to the constructive view of cognitive development, when a 2-year-old child uses the word "cat" for a tiger, this is an example of _____.
- (A) accommodation
(B) assimilation
(C) equilibration
(D) scale errors

14. According to “ecological systems theory”, the _____, is the values, customs, and resources of the larger culture that shape what happens in all the settings of the system nested within.

- (A) hypersystem
- (B) exosystem
- (C) mesosystem
- (D) marcosystem

15. Which of the following developments occur in the brain around the 12 months of age?

- (A) The prefrontal cortex undergoes significant reductions in number of synapses.
- (B) The end of the experience-dependent brain development.
- (C) Each neuron has created thousands of connections with other neurons
- (D) The process of synaptic pruning is completed at this age.

16. According to Piaget, one characteristic of the fourth sensorimotor substage is:

- (A) the A-not-B search error.
- (B) repetition of actions that are pleasurable in themselves.
- (C) the ability to combine scheme to achieve a desired effect
- (D) inventing new means of problem solving through symbolic combinations.

17. Five-year-old children have a short memory span than 8-year-old children because:

- (A) the items they want to remember go immediately into working memory, slowing down their ability to recall the items.
- (B) their hearing abilities take longer to process the digits they want to remember.
- (C) the items they want to remember skip over their working memory into their long-term memory; therefore, the 5-year-old children could not use the rehearsal skill to remember items.
- (D) the speaking rate of saying a list of numbers is slower in younger children, so early items on the list are easy to decay.

18. According to Noam Chomsky, a language acquisition device of children:

- (A) is like a specialized organ for language learning.
- (B) is fully developed in preschool-aged children.
- (C) develops later than children’s general cognitive structures.
- (D) is the basis to develop statistical learning mechanism in infancy.

二、 問答題 64分 請於試卷內之「非選擇題作答區」依序作答，並應註明作答之大題及小題題號。

1. Suppose your friend asked you about human cognition and how it can be investigated. She expected that you could shortly describe what cognitive psychology is, including its basic assumptions, major approaches, methods used and the major features of human mind found by cognitive psychologists. What would you say? (20%)
2. What does it mean when psychologists said “memory is constructive”? In addition, please write down a piece of empirical evidence that support this argument. (8%)
3. Please discuss in which ways related old problems could influence the solving of new problems. Your answer should cover how this influence is positive, and how it is negative. (6%)
4. What are differences between a “critical period” and a “sensitive period” in development? From what you have learned about language development, do you think there is a critical period for learning the first and second language? Explain your reasoning. (10%)
5. What experimental tasks could be used to explore if 3- to 5-year-old children are able to think about other people’s mental states? How do children of different ages perform on these tasks? (10%)
6. What is the “strange situation” used to assess patterns of attachment in infancy? Be sure to identify the four major attachment patterns. According to Mary Ainsworth, what factors in the mother-infant relationship are associated with the attachment patterns? (10%)