

※ 注意：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。

Answer the following 4 questions. You may respond in Chinese or English. (100 points total)

題目 1. 認知 (40 分)

Recent studies have shown that neurogenesis occurs even in late adulthood in the hippocampus amongst other brain regions. Answer the following questions based on this discovery.

(1a). Define and describe the process of neurogenesis. (4 points).

(1b). State other brain region(s) that show neurogenesis. (2 points).

(1c). Describe the function(s) of the hippocampus. In your description, provide detailed examples of cognitive processes and behaviors that are dependent on hippocampal function. Describing supportive evidence from scientific experiments would also be helpful. (14 points).

(1d). Based on its anatomical structure and location in the brain, explain why the hippocampus is a suitable locus for the function(s) you described above. (6 points).

(1e). From the perspective of information processing, suggest how neurogenesis is relevant to the hippocampal function(s) you described above? Provide detailed arguments and examples to explain your ideas. (14 points).

題目 2. 情緒 (20 分)

Emotional events are remembered better than neutral ones.

(2a). Can you make two examples with different emotional valences to exemplify the effect of emotion on long-term declarative memory? (10 points)

(2b). During different stages of long-term memory, when does this modulation happen? (3 points)

(2c). Which brain region plays a crucial modulatory role in this phenomenon? (3 points)

(2d). What are the two hormones used in this phenomenon? (4 points)

題目 3. 知覺 (20 分)

(3). Cognitive operation of sensory stimulation is a two-way street, which contains top-down and bottom-up processing. Please explain both kinds of processing and select a sense to give an example for each process. (20 points)

題目 4. 語言 (20 分)

(4a). 語言的習得可以分為那五個時期? 請描述每個時期的特點? (10 points)

(4b). 那些認知假說可以解釋語言的習得? (10 points)

試題隨卷繳回