

題號： 75

國立臺灣大學 107 學年度碩士班招生考試試題

科目： 知覺與生理心理學

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知覺與生理心理學：三大題（生心兩大題，知覺一大題），生心與知覺各佔 50 分，共計 100 分

一、生心名詞解釋題（7 題，每題 2 分，共計十四分）：請簡單扼要回答重點並簡要說明其意涵（英翻中不給分）

1. Epigenetics
2. Neuropsychopharmacology
3. Optogenetics
4. Neuroplasticity
5. Neuroleptics
6. Ionotropic receptor
7. Melatonin

二、生心問答題（4 題，每題 9 分，共三十六分）：請簡單扼要回答但務求詳盡。

1. 請比較與說明神經系統與內分泌系統的相似與差異處。(9 分)
2. 2016 年台北內湖發生了震驚各界的「小燈泡」事件，殺人兇嫌王景玉經鑑定罹患了思覺失調症。請問何謂思覺失調症 (schizophrenia)? 患者通常會出現哪些臨床症狀? 就目前所知致病之先天與後天可能成因有哪些? 有哪些假說? 根據這些假說又該如何提供患者相對應的治療來減輕或改善相關症狀? (9 分)
3. 何謂生物心理學 (Biopsychology)? 請說明生物心理學或行為神經科學的研究對於心理學或探討心智功能之必要性與重要性為何? 並請舉出具體的研究結果來加強你的論述。(9 分)
4. 承上題，請舉一個你感興趣或想要研究的心理現象或是精神疾病為例，具體設計實驗來說明如何透過生物心理學的相關知識與技術，來探討及釐清其中的奧妙並進而解決問題? (9 分)

三、知覺問答題（10 題，每題 5 分，共五十分）

1. What is the hard problem of consciousness, and what is the easy problem?
2. How does the size-distance scaling equation explain the Muller-Lyer illusion? What would be the evidence arguing against this explanation?
3. Describe one similarity of vision, audition, and touch, in the framework of perceptual processes as depicted by Goldstein and Brockmole (2017).
4. How to measure infant visual acuity? How is it compared to adults? What's the mechanism underlying the differences between infant and adults?
5. How to measure rod's and cone's spectral sensitivity curves, and use this to explain Purkinje shift?
6. Explain how Hartline and colleagues used limulus as the animal model and found the mechanism of lateral inhibition, and try to use lateral inhibition to explain the Chevreul Illusion. What might be the problem of this kind of explanation?
7. Describe the ways that human brain is organized, in terms of maps, columns, streams, and modules, and how a tree in front of you is being processed by your brain according to this organization.
8. Use one study to illustrate the finding of "neural mind reading".
9. Find one example of each to explain the effect of attention on perception: 1) attention speeds response, and 2) attention affects appearance.
10. Describe one common perceptual grouping principle that can be applied to vision, audition, and smell.

試題隨卷繳回