

請務必於試卷紙上作答，違者該科不於計分。

每題 10 分

1. 如果某人有長期血糖過高的症狀出現, 你覺得有哪些可能的病因?
2. 試述 PTH, 1,25-(OH)₂D, calcitonin 如何調控血液中鈣離子的衡定
3. 試述 glucocorticoid 之生理效應、藥理效應、及病理效應
4. 請敘述女性排卵前荷爾蒙的變化及其調控排卵的機制
5. 試述腎臟的生理功能及尿毒症者引起多種症狀的原理
6. 試述人體調控細胞外液之容積及滲透壓衡定的機制
7. 以內分泌系統為例, 解釋何謂 positive feedback & negative feedback
8. 何謂條件式基因剔除(conditional knock out), 請舉例說明如何應用此技術探討醫學研究
9. 請提出你過去研讀生理學時, 一直無法理解的問題
10. 請將下列文字翻譯成中文 (註: 不懂的專有名詞可以不用翻譯)

Research in humans and animals has shown that exercise improves mood and cognition. Physical activity also causes a robust increase in neurogenesis in the dentate gyrus of the hippocampus, a brain area important for learning and memory. The positive correlation between running and neurogenesis has raised the hypothesis that the new hippocampal neurons may mediate, in part, improved learning associated with exercise.