

1. 請說明心肌細胞的興奮與收縮的生理調控作用。(9%)
2. 請說明腎素-血管張力素系統如何調節血壓上升的生理作用。(8%)
3. 請簡要說明細胞膜磷脂質合成前列腺素的路徑。(8%)
4. 請說明腎小管各段的解剖名稱及主要功能為何。(8%)
5. 請說明造成排卵的 LH surge 形成的機制。(6%)
6. 請條列出 Progesterone 的作用。(12%)
7. 請闡述在進食白米飯後，身體的消化系統如何進行消化及吸收，使其成為供身體利用的營養物質。(15%)
8. According to the Nernst equation, if temperature is held at 25 °C, then the equilibrium potentials for non-gated potassium channel and non-gated sodium channel are -75 mV and +55 mV, respectively. However, the resting membrane potential of a neuron is around -60 mV. May you explain why the resting membrane potential of this neuron is at -60 mV, and how the resting membrane potential is established? (9%)
9. When the graded potentials summarized to reach threshold potential at the axon hillock, the action potential will be generated and transmitted to the axon terminal. Please describe the synaptic transmission in details. (8%)
10. Please describe the phototransduction within the disc of the cone cell in retina, and how does the receptive field of the cone cell organize to transmit signal to the ganglion cell? (9%)
11. Please describe the neuronal pathways (circuits) to transmit pain and tactile sensations in details. (8%)

試題隨卷繳回