

※ 注意：請於試卷上「非選擇題作答區」標明題號並依序作答。

1. 請依哺乳動物睡眠的不同時期，敘述腦內 neuromodulators 以及腦波的變化 (20 分)。
2. 請敘述控制眼球運動的六條肌肉分別與眼球運動的關係(10 分)
3. 請敘述吞嚥與呼吸時，咽部的協調運動之運作過程(20 分)
4. Specialized conduction system of the heart is responsible for the initiation and organization of cardiac contractions. Please briefly describe the major location of pacemaker cells within heart and the order of the propagation of cardiac action potential. (10 points)
5. Please briefly describe the steps in the synthesis and release of thyroid hormones in follicular cells. (10 points)
6. The actions of the catecholamines involve the regulation of various physiological functions through different type of adrenergic receptors. Please give at least 10 examples to describe responses of target tissues to catecholamines through what kind of receptor. (20 points)

Target Tissue	Receptor Type	Responses
Bronchial muscle	β_2	relaxation

7. Please describe the function of 5 major classes of steroid hormones and list what kind of tissue and cells produce them. (10 points)