

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

1. Describe in detail the sequence of events between a motor neuron action potential and skeletal-muscle fiber contraction. (15%)
2. Explain how electrical stimulation of periventricular nuclei in the hypothalamus suppresses pain signals entering dorsal horns of the spinal cord. (20%)
3. Describe how gallstones are formed and the consequences of blocking the common bile duct with a gallstone. (15%)
4. What happens to arterial PO_2 , PCO_2 , and H^+ concentration during moderate and severe exercise? List other factors that may stimulate ventilation during exercise. (15%)
5. Describe the compensatory mechanism of arterial baroreceptor reflex and how the kidney responds to hemorrhage shock. (20%)
6. Describe the effects of estrogen and progesterone on the endometrium, myometrium, cervical mucus, and breasts. (15%)