

※ 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. The synapse plays an important role in the neuronal communication. Please describe and explain how a neural signal is transmitted between two neurons via a synaptic mechanism. (15%)
2. According to the basis of structure, contractile properties and control mechanisms, please compare the major difference among skeletal muscle, smooth muscles and cardiac muscle. (15%)
3. Hypothalamus is an important endocrine organ. Please name the hormones secreted from hypothalamus and describe their major functions. (15%)
4. There are important differences between action potentials of cardiac muscle cells and those in nodal cells of the heart conducting system. Please describe these important differences. (15%)
5. Hemostatic mechanisms are most effective in dealing with injuries in small vessels. Please describe the underlying processes or mechanism involving in hemostasis. (15%)
6. Utilization of oxygen in the metabolism of organic molecules by cells is crucial for normal cell function. Please explain how a liver cell can receive oxygen from air via respiration to play its normal function. (15%)
7. After drinking 1000 ml of lemon tea, please describe the three basic renal processes leading to the formation of urine. (10%)