194 編號:

國立成功大學九十七學年度碩士班招生考試試題

共 / 頁 第 / 頁

系所: 醫學工程研究所丙組

科目:生理學

本試題是否可以使用計算機: □可使用 , ☑不可使用

(請命題老師勾選)

考試日期:0301, 節次:3

- 1. Compare the mechanisms by which a rise in cytosolic calcium concentration initiates contractile activity in skeletal- and smooth-muscle fibers. (15%)
- 2. List the sequence of events that occur between the entry of a sound wave into the external auditory canal and the firing of action potentials in the cochlear nerve. (20%)
- 3. Draw a flow diagram illustrating the reflex compensation for hemorrhage. (15%)
- 4. List the three inputs controlling rennin secretion and the sequence of events leading from increased rennin secretion to increased aldosterone secretion. (15%)
- 5. How does renal hydrogen-ion secretion contribute new bicarbonate to the blood? What determines whether a secreted hydrogen ion will achieve these events or will instead cause bicarbonate reabsorption? (15%)
- 6. Describe how plasma glucose, insulin, glucagon, and epinephrine levels change during exercise and stress. What causes the changes in the concentrations of the hormones? (20%)