

※ 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. Please describe and contrast feedforward feedback and negative feedback. (10%)
2. How do hormones influence the concentrations of their own receptors and those of other hormones? How does this explain permissiveness in hormone action? (15%)
3. What is hematocrit? What are the determinants of hematocrit? How does variation in hematocrit influence the hemodynamics of blood flow? (15%)
4. Explain [1] threshold, [2] the relative refractory periods and [3] absolute refractory periods in terms of the ionic basis of the action potential. (15%)
5. Please describe the important contribution of pulmonary surfactant to respiration. (15%)
6. Please describe [1] the three basic renal processes that lead to the formation of urine and [2] the sequence of events leading to micturition. (15%)
7. Please [1] list the major constituents of bile and [2] describe the major functions of each in digestion. (15%)