

※ 考生請注意：本試題 可 不可 使用計算機

Answer any 5 questions as your choice. Total scores are 100.

1. Briefly describe cellular membranes structure and transmembrane transport of solutes and water. (20%)
2. Discuss the generation and conduction of action potentials in neurons.
 1. Shape of the action potential (10%)
 2. Ionic mechanisms of the action potential (10%)
3. Briefly describe the mechanisms involve in regulating the cardiac output. (20%)
4. Define the roles of following hormones in female menstrual cycle and its effects on female reproductive organs. (20%)
 1. FSH
 2. LH
 3. Estrogen
 4. Progesterone
5. Discuss Renin-Angiotensin System in terms of formation and physiological response to angiotensin II. (20%)
6. Describe the function of the following cells. (20%)
 1. oligodendrocyte
 2. mast cell
 3. leydig cell
 4. parafollicular cell