

系所組別： 護理學系甲組

考試科目： 生理學

考試日期：0223，節次：3

※ 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。

一、選擇題：(每題兩分，共二十分)(答案請寫在答案紙上)

1. The largest peripheral resistance existing in the circulatory bed is located at
(a) heart (b) arterioles (c) capillaries (d) aorta
2. Assuming that blood flow is Q, peripheral resistance is R, and pressure difference is P, then their relationship will be
(a) $Q=P/R$ (b) $P=Q/R$ (c) $R=P*Q$ (d) $Q=P*R$
3. Which of the following is NOT the sign of cerebellar dysfunction?
(a) nystagmus (b) ataxia (c) tremor (d) coma
4. Which of the following will produce metabolic alkalosis?
(a) severe vomiting (b) severe diarrhea (c) thiazide overdose (d) morphine intoxication
5. Which of the following hormones shown below can reduce plasma glucose level?
(a) glucagon (b) cortisol (c) insulin (d) epinephrine
6. Which of the following statements is NOT correct regarding the function of sodium-potassium ATPase existing in cell membrane?
(a) It require the consumption of ATP.
(b) It will pump sodium out of the cell against the sodium chemical gradient.
(c) It will transport sodium ions down the cell interior with no requirement of ATP.
(d) It will allow the cell to be hyperpolarized as the pump is stimulated.
7. In a chemical synapse,
(a) neurotransmitters can be taken up by the presynaptic terminal.
(b) neurotransmitter can cause ligand-gated ion channels to open.
(c) action potentials in the presynaptic terminal cause voltage-gated calcium channels to open
(d) all of the above.
8. If aldosterone secretions increase
(a) blood sodium levels decrease.
(b) blood volume decreases.
(c) acidosis results.
(d) blood potassium levels decrease.
9. The layer of the uterus that undergoes the greatest change during the menstrual cycle is the
(a) endometrium (b) myometrium (c) broad ligament (d) perimetrium.

(背面仍有題目，請繼續作答)

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10. The hormone involved in milk production is

- (a) oxytocin (b) prolactin (c) progesterone (d) estrogen

二、簡答題 (每題十分) (請任選八題，共八十分) (答案請寫在答案紙上)

Please briefly describe (or illustrate) the terms or definitions of each question shown below. Please select eight out of ten questions.

- (1) glomerular filtration rate
- (2) acute respiratory acidosis
- (3) gastrin
- (4) substantia nigra
- (5) vascular function curve
- (6) thyroid hormone
- (7) luteinizing hormone
- (8) Broca's area
- (9) second messenger
- (10) cholinergic muscarinic receptor