

※ 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。

Please describe the statements shown below (10% for each question)

- (1) Please describe the relationships of effects of corticotroph releasing hormone, corticotroh (adrenocorticotophic hormone) and cortisol with regard to hormonal secretion, particularly at the level of negative feedback regulation.
- (2) Please describe the ionic equilibrium across surface membrane, particularly potassium ions across (contribution of electrical and chemical gradients to flux of potassium ions)
- (3) Please describe membrane-delimited pathway in terms of signal-transduction process.
- (4) Please describe the possible consequence of binding to muscarinic and nicotinic receptors
- (5) Please describe the regulation of heart rate by autonomic function
- (6) Please describe the generation of neuronal action potentials
- (7) Please describe contribution of inwardly rectifying potassium channels to resting membrane potential in heart cells
- (8) Please describe the function of basal ganglia involved in Parkinson's disease
- (9) Please describe Franklin-Starling law of the heart and pressure-volume loop.
- (10) Please describe the underlying mechanisms regarding absorption of glucose into intestinal epithelial cells (i.e., the role of primary and secondary active transports)