The Hong Kong College of Anaesthesiologists
Intermediate Fellowship Examination
Written Paper in Pharmacology

Friday, 20 July 2012, 14:00 - 16:00

The questions carry equal marks. Answer ALL questions.

1. Anaesthesia for a 15kg child is induced by inhalation of sevoflurane. Describe the factors that will determine the speed of onset of anaesthesia.

2. What drugs are used for the management of angina? Compare their mechanisms of action.

3. Describe the mechanisms of action of anticonvulsants, giving examples of drugs used.

4. Describe how action of neuromuscular agents in critically ill patients may differ from healthy individuals.

5. Based on a two compartment model, describe a dosing regime to rapidly achieve and maintain a constant plasma concentration of a hypothetical anaesthetic agent. Discuss its limitations in clinical practice.

6. What is a receptor? How are receptors classified? Describe the different mechanisms in which a drug interacts with its receptor to produce a response.

7. Compare with spontaneous recovery of neuromuscular block, what are the advantages and disadvantages of the reversal of neuromuscular block with anticholinesterase?

8. What are the most common causes of local anaesthetic systemic toxicity? Outline the measures to prevent local anaesthetic systemic toxicity in their clinical practice.

9. Write short notes on the pharmacology of naloxone. Discuss the role of selective peripheral opioid antagonist in the perioperative patient management.

10. Outline the subtypes of histamine receptors. Discuss clinical use of pharmacological agents that antagonize these sites.

11. Write short notes on ROC (Receiver operating characteristic) curves? What information can be derived from these curves?

12. Classify oral hypoglycaemic drugs. Give examples and describe the mechanism of action of each class.

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