



# The Hong Kong College of Anaesthesiologists

## Intermediate Fellowship Examination

### Written Paper in Pharmacology

Friday, 15 February 2008, 14:00 - 16:00 h

Answer ALL questions

1. Sevoflurane is used for maintenance of anaesthesia in an 80 year old patient. Describe the factors that will effect time to awakening after administration of sevoflurane is ceased.
2. Describe the mechanism of action, effects on the central nervous system and potential adverse effects of clonidine when used as an adjunct to general anaesthesia.
3. In a pregnant patient receiving treatment for pre-eclampsia, describe the pharmacodynamic effects and potential adverse reactions related to magnesium sulphate infusion.
4. Classify antagonists according to their mechanisms of action; illustrate your answer with examples.
5. Outline the role of cytochrome P450 in drug metabolism and variability in drug response.
6. Briefly describe the drug factors that influence the effectiveness and safety of local anaesthetic agents.
7. Briefly describe the pharmacology of ketamine with reference to its use as an analgesic agent in the postoperative period.
8. Outline how the pharmacokinetics of morphine, bupivacaine and suxamethonium differ in the neonate compared to the adult. Briefly describe the clinical implications of these differences
9. In patients at high risk of developing postoperative nausea and vomiting, briefly outline the pharmacological manoeuvres that may be used to prevent this complication.
10. In a set of parametric data, describe three measures to express variability. In your answer, briefly discuss the advantages and disadvantages of each measure.
11. Describe the mechanism of action, pharmacokinetics and major side effects of intravenous administration of adenosine for cardiac arrhythmia.
12. Briefly describe the pharmacology of agents that may be used to reverse non depolarizing neuromuscular blockade.

\*\*\*\*\* END OF PAPER \*\*\*\*\*