



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

Friday, 10 February 2012, 14:00 - 16:00

The questions carry equal marks. Answer **ALL** questions.

1. Outline the principles of management of ventricular fibrillation when caused by bupivacaine systemic toxicity. Briefly explain the mechanisms of actions of the treatment modalities.
2. Compare and contrast the potential cardiovascular effects of nitrous oxide and desflurane
3. Outline pharmacokinetic factors that may delay recovery from neuromuscular blocking agents with examples
4. An opioid is administered intravenously to a pregnant woman in early labour. Outline the factors that will affect the peak plasma concentration in the foetus
5. A 70 y.o patient is chronically treated with carvedilol, a glyceryl trinitrate (GTN) patch and enalapril. The patient becomes hypotensive after propofol, remifentanyl and sevoflurane are administered. Outline the potential pharmacological mechanism/s of hypotension in this patient.
6. Explain the term, context-sensitive half time. Discuss its limitations in clinical practice.
7. Outline the pharmacological effects of Magnesium in the obstetric patients, and explain the mechanism/s of action. Outline the other pharmacological effects of magnesium and explain the mechanism/s of action.
8. Describe, with example(s), the potential adverse effects of anti-cancer chemotherapeutic agents. Outline the implications of these adverse effects in a patient presenting for anaesthesia and surgery.
9. List and classify (with examples) drugs that may act via serotonin (5 HT) receptors. What are the potential problems if a patient who is taking SSRI (Selective Serotonin Reuptake Inhibitors) presents for general anaesthesia?
10. Outline the pharmacology of human albumin.
11. What mechanisms may be responsible for Inter-individual Variability of Drug Response? Outline, with example(s), the factors that may cause this variability in an elderly patient.
12. Write short notes on Pearson chi-square test.

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