



# The Hong Kong College of Anaesthesiologists

## Intermediate Fellowship Examination

### Written Paper in Pharmacology

Friday, 23 February 2007, 14:00 - 16:00 h

Answer ALL questions

1. Describe a dosing regime that will maintain a constant plasma concentration of propofol. In your answer, include a brief explanation of the relevant pharmacokinetic concepts.
2. Describe the biochemical changes that occur in a patient as a result of ten hours administration of 70% nitrous oxide. What are the potential clinical effects of these changes? How could these changes be modified?
3. What is protamine and what is it used for? Describe the cardiovascular effects of protamine.
4. Discuss the advantages and disadvantages of dexmedetomidine for sedation.
5. Outline the factors that might shorten the duration of action for non-depolarising neuromuscular blocking agents.
6. Explain how epinephrine (adrenaline) acts as an inotropic agent and contrast this with milrinone. Discuss the advantages and disadvantages of using these two drugs as inotropes.
7. How do the different antiplatelet drugs exert their effect? Include in your answer the duration of the antiplatelet effect.
8. List four drugs that can be added to local anaesthetic agents in order to prolong the duration of regional block. Explain how these drugs prolong the block?
9. Compare and contrast the haematological and cardiovascular effects of diclofenac and celecoxib.
10. Define variance, covariance and correlation coefficient. What are the relationships between these three terms? Why is correlation coefficient a better measure of association between variables than covariance?
11. Describe the pharmacology of syntocinon. What are the main differences between syntocinon and carbetocin.
12. Outline the factors that determine the offset of analgesia after an intravenous infusion of opioid. How do morphine and remifentanyl differ in this regard?

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