



The Hong Kong College of Anaesthesiologists

Intermediate Fellowship Examination

Written Paper in Pharmacology

5 February 2018 (Monday)

14:00 - 16:00 hours

Instructions:

- There are three pre-labelled answer books. Please make sure you answer the questions in the respective answer book.
- Write your candidate number on the cover of each answer book.
- Use ink or ball-point pen.
- Answer ALL questions. They are worth equal marks and you should spend approximately **ten minutes** for each question. For questions with multiple parts, allocation of marks is indicated in the brackets.

- Outline the factors that affect the rate of inhalational induction of anaesthesia.**
- In clinical trials, what is (are) the purpose(s) of randomization? (50%) Describe two types of randomization techniques that are commonly used. (50%)**
- Compare and contrast the effects of diclofenac and celecoxib on EACH of the followings organ systems:**
 - gastrointestinal tract; (33%)**
 - platelets, and (33%)**
 - renal system. (33%)**
- What is stereoisomerism? (50%) Describe the effect of stereoisomerism and cardiotoxicity of bupivacaine and levobupivacaine. (50%)**
- Compare and contrast oxycodone and morphine in terms of:**
 - Pharmacokinetic properties (50%)**
 - Potency (25%)**
 - Side effects (25%)**
- Outline the pharmacological actions of etomidate.**
- List, with examples and underlying mechanisms, three pharmacological and three pathophysiological factors that affect the potency of muscle relaxants.**
- What are the properties of an ideal intravenous fluid to be used in the management of dehydration? (50%) Explain if normal saline could be an example of ideal intravenous fluid in this circumstance. (50%)**
- Discuss the mechanism of action and clinical use of hypotensive drugs that act on the renin-angiotensin system. (75%) What are the anaesthetic implications for patients who are taking these medications? (25%)**
- Compare and contrast dabigatran with warfarin in terms of their**

- A) mechanisms of the action; (33%)
- B) requirement for monitoring of effect, and (33%)
- C) pharmacokinetic properties. (33%)

11. Discuss the pharmacological agents, with examples, used to suppress premature labour.

12. Draw and explain the characteristics of a dose-response curve for rocuronium. List three factors, encountered in clinical practice, that may shift of this curve to the right.

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