



The Hong Kong College of Anaesthesiologists
Intermediate Fellowship Examination
Written Paper in Pharmacology
5 February 2018 (Monday)
14:00 - 16:00 hours

Instructions:

- a. There are three pre-labelled answer books. Please make sure you answer the questions in the respective answer book.
- b. Write your candidate number on the cover of each answer book.
- c. Use ink or ball-point pen.
- d. 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.

1. **Outline the factors that affect the rate of inhalational induction of anaesthesia.**
2. **In clinical trials, what is (are) the purpose(s) of randomization? (50%) Describe two types of randomization techniques that are commonly used. (50%)**
3. **Compare and contrast the effects of diclofenac and celecoxib on EACH of the followings organ systems:**
 - A) **gastrointestinal tract; (33%)**
 - B) **platelets, and (33%)**
 - C) **renal system. (33%)**
4. **What is stereoisomerism? (50%) Describe the effect of stereoisomerism and cardiotoxicity of bupivacaine and levobupivacaine. (50%)**
5. **Compare and contrast oxycodone and morphine in terms of:**
 - i **Pharmacokinetic properties (50%)**
 - ii **Potency (25%)**
 - iii **Side effects (25%)**
6. **Outline the pharmacological actions of etomidate.**
7. **List, with examples and underlying mechanisms, three pharmacological and three pathophysiological factors that affect the potency of muscle relaxants.**
8. **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%)**
9. **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%)**
10. **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.

- END -