



## The Hong Kong College of Anaesthesiologists

### Intermediate Fellowship Examination

#### Written Paper in Pharmacology

16 July 2021 (Friday)

14:00 - 16:30 hours

1. Briefly describe the Pharmacological events after intravenous administration of Suxamethonium (From the site of administration to neuromuscular junction) (50%). Outline the factors affecting the rate of recovery from Suxamethonium (50%).
2. What is sample size in a clinical trial (5%)? Outline the factors affecting sample size (75%). Explain the importance of correct sample size calculation (20%).
3. Outline the factors Determining the Duration of Action of local anaesthetic agents.
4. What are the Benefits of using propofol-based total intravenous anaesthesia compared to a volatile-based anaesthesia?
5. Outline the pharmacology of Norepinephrine (*Noradrenaline*) (70%). Discuss the pros and cons of using Norepinephrine (*Noradrenaline*) in treatment of maternal hypotension after spinal anaesthesia for Caesarean Section (30%).
6. Outline the pharmacology of tranexamic acid (60%). Briefly discuss the clinical uses in surgical patients (Including Cardiac, Orthopaedic, Obstetric and Trauma cases) (40%).
7. To what extent does Desflurane satisfy the criteria to be an "Ideal" volatile Anaesthetic agent.
8. List the classes of diuretics and give one example to each. Outline their mechanism of action.
9. Outline the pharmacology of midazolam (75%). Discuss the Risks and Benefits if co-administered with Fentanyl for sedation (25%)?
10. Describe and explain the major differences in pharmacokinetic properties of paracetamol given via Intravenous and Rectal routes. (Including duration of action, maximum plasma concentration and time to reach maximum plasma concentration).
11. Describe the mechanism of action of phenytoin as an anti-epileptic agent (25%). States the dose related side-effects (25%). Explain the reasons for the need of plasma phenytoin level monitoring (50%).
12. Describe the pharmacology of methadone (67%). Outline the concerns in its use as an analgesic (33%).

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