

1. Describe the vascular anatomy of the antecubital fossa (arterial and venous).
2. Describe the washout of desflurane from a patient following six hours of general anaesthesia. You may wish to use a graph to illustrate the description.
3. Briefly outline the acute management of malignant hyperthermia (during a relaxant general anaesthetic). Describe the important aspects of dantrolene pharmacology relevant to treating malignant hyperthermia.
4. Describe an active anaesthetic gas scavenging system.
5. Describe the physiology of the pain pathways and how drugs may modulate the perception of pain.
6. 20mls of 0.5% bupivacaine is inadvertently administered intravenously over 15 seconds to a 60 year old, 60kg woman. Describe the potential complications and mechanisms of these.
7. A new test called the "intubation score" has a reported 90% sensitivity and 70% specificity when used to predict difficult intubation. Describe how this information and other statistics related to this test can be used in predicting difficult intubation. How will the incidence of difficult intubation affect the performance of this test?

8. Outline the important pharmacological considerations when stopping warfarin and commencing prophylactic (low dose) low molecular weight heparin (LMWH) in the peri-operative period.
9. What lower limit of SpO₂ would you accept in an ASA1 young male under general anaesthesia? Explain your reasons for choosing this value.
10. How is renal blood flow regulated? What are the physiological effects of angiotensin II?
11. Describe the cardiovascular changes that occur with morbid obesity.
12. Explain the Bohr and Haldane effects in trans-placental gas exchange.
13. Briefly explain the changes that occur in stored whole blood.
14. Outline the effects of intravenously administering 500 ml of 20% mannitol. Outline the potential problems associated with its use.
15. Write brief notes on the physiological changes associated with sleep.