



Australian and New Zealand College of
Veterinary Scientists

**Veterinary Anaesthesia and Analgesia
Fellowship**

Sample Multiple Choice Questions

Paper 1

Answer all nine (9) multiple choice questions in this section

This section is worth 9 marks. Each question is worth one (1) mark. There is no negative marking.

1. Which of the following describes the correct foetal circulatory anatomy?
 - a. Blood from the superior vena cava flows into the left atrium via the foramen ovale
 - b. The uterine artery supplies deoxygenated blood to the foetus
 - c. Blood from the inferior vena cava flows to the head vessels via the ductus arteriosus
 - d. The ductus venosus drains directly into the inferior vena cava

2. Which of the following has the greatest impact on cerebral blood flow?
 - a. $p\text{CO}_2$
 - b. $p\text{O}_2$
 - c. pH
 - d. Base excess

3. Which of the following devices is most commonly used in breath-to-breath analysis of oxygen in anaesthetic breathing circuits?
 - a. Paramagnetic oxygen analyser
 - b. Clarke electrode
 - c. Fuel cell
 - d. Gas chromatography

4. Which of the following species have a tracheal bronchus?
- a. Pigs and cattle
 - b. Dogs and pigs
 - c. Dogs and horses
 - d. Cats and horses
5. Under which of the following conditions is compound A least likely to be produced during sevoflurane anaesthesia?
- a. Use of a closed anaesthetic circuit
 - b. Use of baralyme for CO₂ absorption
 - c. High humidity in the soda lime
 - d. Use of mechanical ventilation
6. What is the approximate osmolality of a 7.5% saline solution?
- a. 1400 mOsm kg⁻¹
 - b. 2000 Osm kg⁻¹
 - c. 2400 Osm kg⁻¹
 - d. 2000 mOsm kg⁻¹
7. Which statement BEST describes the compensatory mechanisms for acute normovolaemic anaemia?
- a. Increased blood viscosity, hyperventilation and an increased cardiac output
 - b. Increased cardiac output, increased 2,3 DPG and an increased blood viscosity
 - c. Hyperventilation, decreased blood viscosity, decreased 2,3 DPG and systemic vascular resistance
 - d. Decreased blood viscosity, increased cardiac output followed by an increased 2,3 DPG

8. Which of the following statements best describes the mechanism of action of tranexamic acid?
- a.** Inhibits the inactivation of plasminogen
 - b.** Accelerates fibrinolysis by stimulating plasmin
 - c.** Minimises fibrinolysis by binding to plasminogen
 - d.** Binds to lysine on fibrin to delay fibrinolysis
9. Sugammadex can be used to reverse which of the following neuromuscular blocking drugs?
- e.** Rocuronium and pancuronium
 - f.** Vecuronium and atracurium
 - g.** Rocuronium and vecuronium
 - h.** Altracurium and pancuronium

Paper 2

Answer all five (5) multiple choice questions in this section

This section is worth 5 marks. Each question is worth one (1) mark. There is no negative marking.

1. Which of the following combination of describes the characteristics of brachycephalic obstructive airway syndrome?
 - a. Narrow nostrils, elongated soft palate, enlarged tongue, narrow trachea
 - b. Large laryngeal diverticula, stunted soft palate, enlarged tongue, narrow trachea
 - c. Small laryngeal diverticula, elongated soft palate, short tongue, wide trachea
 - d. Narrow nostrils. Rigid soft palate, short tongue, wide trachea

2. Which one of these anaesthetic drugs is most likely to cause vasodilation?
 - a. Acepromazine
 - b. Ketamine
 - c. Methadone
 - d. Medetomidine

3. Which of the following is the best method of confirming correct placement of an endotracheal tube?
 - a. Movement of the rebreathing bag during spontaneous ventilation
 - b. Palpation of the neck
 - c. Capnography
 - d. Movement of the thorax during manual intermittent positive pressure ventilation

4. Which of the following drugs interfere with the results of intradermal skin testing for allergies?
- e. Medetomidine
 - f. Acepromazine
 - g. Propofol
 - h. Alfaxalone
5. A horse is anaesthetized with isoflurane in oxygen in dorsal recumbence and is breathing spontaneously. The depth of anaesthesia is appropriate. An arterial blood gas reveals the following:
- pH – 7.3 (7.35-7.45 is normal)
 - PaO₂ – 350 mmHg (>100 is normal)
 - PaCO₂ – 60 mmHg (35-45 is normal)
 - Bicarb – 22 mEq/L (18-25 is normal)

Which of the following treatments is most likely to correct the abnormality noted in the blood gas above?

- a. Decrease the isoflurane setting
- b. Turn up the oxygen flow meter
- c. Institute mechanical ventilation
- d. Administer sodium bicarbonate