



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2012

Small Animal Surgery

Paper 1

Perusal time: **Fifteen (15)** minutes

Time allowed: **Two (2)** hours after perusal

Answer **ALL FOUR (4)** questions

All questions are of equal value

Answer **FOUR** questions each worth 25 markstotal 100 marks

Paper 1: Small Animal Surgery

Answer ALL four (4) questions

1. Answer **all** subparts of this question:

- a) Name the end products of primary and secondary haemostasis and briefly describe how they are formed. *(8 marks)*
- b) Describe the clinical signs expected in animals with significant defects in primary and secondary haemostasis. *(8 marks)*
- c) State the beneficial properties of transfusions of fresh frozen plasma, fresh whole blood and packed red blood cells and give an example of a surgical clinical situation in which each of these products could be used. *(9 marks)*

2. Answer **all** subparts of this question:

- a) Using a diagram, illustrate the tissue layers of the small intestine. *(4 marks)*
Indicate the layer which must be incorporated when suturing a full thickness intestinal incision. *(2 marks)*
- b) Describe, at a cellular level, the stages of wound healing in a small intestinal anastomosis from scalpel incision to wound maturity. *(9 marks)*
Mention the approximate time period for each stage. *(3 marks)*
- c) Describe how the integrity and strength of the sutured anastomosis changes over the timeline from incision to wound maturity. *(7 marks)*

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3. Answer **all** subparts of this question:
- a) Describe the processes of direct and indirect bone healing of fractures. Include in your answer reference to inter-fragmentary strain theory. *(20 marks)*
 - b) With respect to direct and indirect bone healing explain your choice of repair method for a fracture of the lateral aspect of the humeral condyle in an adult dog. *(5 marks)*
4. Discuss the use of perioperative antibiotics in routine, elective orthopaedic surgery in dogs. Include in your answer a discussion of the relevant indications for use, the likely micro-organisms to be targeted, the level of contamination required for sepsis to occur and your choice, dose and scheduling of antibiotic agent. *(25 marks)*

End of paper



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Paper 2

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Answer **ALL FOUR (4)** questions

All questions are of equal value

Answer **FOUR** questions each worth 25 markstotal 100 marks

Paper 2: Small Animal Surgery

Answer ALL four (4) questions

1. A five-year-old male Dalmatian is presented to your clinic in a near comatose state. He has a very large bladder on palpation and you quickly discover this is due to a blockage in the urethra as you are unable to pass a catheter beyond the base of his penis due to the presence of a urethrolith.

Answer **all** subparts of this question:

- a) What is the most likely underlying primary composition of this urethrolith?
(1 mark)
- b) Provide a pathophysiological explanation for this dog's presentation. Include expected biochemical, electrolyte and ECG abnormalities. (6 marks)
- c) Discuss how you would go about emergency medical stabilisation of this patient given the derangements noted in part 1b) above, prior to attempting urethrolith removal. (6 marks)
- d) You are successful in your attempts at emergency medical stabilisation. Describe the technique to non-surgically relieve the urethrolith obstruction. (6 marks)
- e) If your method to relieve the obstruction non-surgically is unsuccessful, describe the technique for surgical removal of a urethrolith at the base of the os penis, including the relevant anatomical features. (6 marks)

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2. A six-year-old Labrador is presented to your clinic with progressive dyspnoea. On thoracic auscultation the heart and lung sounds are muffled. Thoracic radiography confirms a bilateral pleural effusion.

Answer **all** subparts of this question:

- a) List the different types of pleural effusions. (5 marks)
- b) Discuss the diagnostic tests you would perform to differentiate between each type of pleural effusion you have listed. Include in your answer the results you would expect for each effusion type. (10 marks)
- c) Your diagnostic tests confirm idiopathic chylothorax. Briefly discuss each of the treatment options you would give to the owner of this patient. (5 marks)
- d) As part of your treatment plan, a lateral intercostal thoracotomy is to be performed. Describe and justify your perioperative analgesia plan for a patient undergoing a lateral intercostal thoracotomy. (5 marks)

3. For idiopathic laryngeal paralysis in dogs, answer **all** subparts of this question:

- a) State the most common signalments. (2 marks)
- b) Describe the typical history and clinical signs. (5 marks)
- c) Briefly describe the work up a case of suspected idiopathic laryngeal paralysis and specify how you would confirm the diagnosis. (6 marks)
- d) Name the surgical treatment of choice, give a basic description of the surgery and outline postoperative care instructions. (8 marks)
- e) Discuss the potential postoperative complications. (4 marks)

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4. A four-year-old Cavalier King Charles spaniel has been presented to your clinic experiencing intermittent right hind leg skipping lameness. On physical examination you discover mild tibial rotation, a predominantly reduced patella which is easily luxated in a medial direction with flexion of the stifle joint and spontaneously reducing on stifle extension. You diagnose medial patella luxation.

Answer **all** subparts of this question:

- a) Describe a commonly used grading system for categorising medial patella luxation. (8 marks)
- b) What would you grade this dog using the system mentioned in part 4a) above? (2 marks)
- c) Briefly discuss **three (3)** commonly used soft tissue and **two (2)** commonly used bone reconstructive procedures that you could use to surgically help this animal. (10 marks)
- d) What potential complications could arise from your corrective surgery and what measures could you take to minimise these complications? (5 marks)

End of paper