



Australian and New Zealand College of Veterinary Scientists

Fellowship Examination

June 2012

Equine Surgery

Paper 1

Perusal time: **Twenty (20)** minutes

Time allowed: **Three (3)** hours after perusal

Answer your choice of any **SIX (6)** questions from the seven questions **ONLY**

All questions are of equal value

Answer **SIX** questions each worth 30 markstotal 180 marks

Paper 1: Equine Surgery

Answer six (6) questions from seven only

1. Answer **both** subparts of this question.
 - a) Discuss the use of lasers in equine surgery with reference to the basic physics of laser energy, the effects of laser on tissue, the different types of laser and the advantages and disadvantage of each type of laser. *(20 marks)*
 - b) Describe specific procedures where laser surgery is indicated citing recent literature where appropriate. *(10 marks)*

2. Discuss the mode of action, efficacy, routes of administration, indications and contra-indications and clinical applications for **each** of the following drugs used for horses with joint disease: *(7.5 marks each)*
 - a) interleukin-1 receptor antagonist protein (IRAP)
 - b) tiludronic acid
 - c) hyaluronic acid
 - d) triamcinolone acetate.

3. Answer **both** subparts of this question.
 - a) Discuss the interpretation of perineural and intrasynovial/intrathecal nerve blocks in the distal extremity of the horse (i.e. distal to the metacarpus but not including the fetlock joint). *(15 marks)*
 - b) Describe the different arthroscopic approaches that can be used to explore the distal interphalangeal joint and discuss the anatomic structures of the joint that can be visualised with each approach. *(15 marks)*

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4. Define the physical characteristics, the method and rate of absorption (for absorbable sutures), the advantages and disadvantages and a potential use for **each** of the following suture materials: *(6 marks each)*
- a) polybutester
 - b) glycomer 651
 - c) polyglecaproic acid
 - d) polypropylene
 - e) polyglactin 910.
5. Answer **both** subparts of this question.
- a) With regard to skin grafting techniques, discuss the use of island grafts, including in your answer reference to the common donor sites and indications and contraindications for the use of island grafts. *(15 marks)*
 - b) Describe how you would perform an island skin graft including in your answer reference to care of both the recipient and donor sites, factors involved in graft failure and how to maximise the chances of graft survival. *(15 marks)*
6. List the dose rate, mode of action, metabolism, contra-indications, complications associated with their use and method of excretion for **each** of the following antibiotics used in the horse. *(7.5 marks each)*
- a) oxytetracycline
 - b) enrofloxacin
 - c) erythromycin
 - d) ceftiofur.

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7. Answer **both** subparts of this question.
- a) List **three (3)** drugs or drug combinations commonly used for epidural anaesthesia in the horse and discuss their onset and duration of action. Justify your choice of epidural analgesia for a 500kg horse following the repair of a medial condylar fracture of the third metatarsus. In addition, describe the anatomical landmarks for epidural injection in the horse and list possible complications associated with the technique. *(20 marks)*
- b) Briefly describe an approach to providing analgesia for a 450kg adult horse with a severe, unilateral hind limb lameness due to septic navicular bursitis that sustained a penetrating injury seven days prior to presentation. *(10 marks)*

End of paper



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Paper 2

Perusal time: **Twenty (20)** minutes

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Answer your choice of any **SIX (6)** questions from the seven questions **ONLY**

All questions are of equal value

Answer **SIX** questions each worth 30 markstotal 180 marks

Paper 2: Equine Surgery

Answer six (6) questions from seven only

1. Describe in detail your surgical treatment for **each** of the following conditions and justify your choice: *(7½ marks each)*
 - a) progressive ethmoid haematoma in the caudal maxillary sinus
 - b) a small, apparently chronic ileocaecal intussusception
 - c) intramural haematoma in the distal small colon
 - d) subepiglottic cyst.

2. Answer **both** subparts of this question.

You are presented with an eight-year-old warm-blood gelding used for show-jumping that has a chronic history of a grade 2/5 right forelimb lameness. There is moderate effusion in the digital flexor tendon sheath but no other significant findings on physical examination.

- a) Describe how you would localise this forelimb lameness to the digital flexor tendon sheath, with specific reference to diagnostic analgesia and diagnostic imaging. *(20 marks)*
- b) Presuming that your diagnostic imaging as outlined above does not provide a specific diagnosis discuss your surgical management of this case. *(10 marks)*

3. Answer **all** subparts of this question.

- a) Discuss in detail how you would approach the diagnosis of cervical stenotic myelopathy in a two-year-old thoroughbred colt presenting with ataxia. *(15 marks)*
- b) Assuming the diagnosis of cervical stenotic myelopathy is confirmed and the assessment of the level of hind limb ataxia is grade II out of IV, discuss the treatment options that could be presented to the owner. *(10 marks)*
- c) Outline and justify your recommended treatment for this case. *(5 marks)*

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4. You are presented with a four-year-old thoroughbred mare with a history of ocular trauma to the left eye of 30 hours duration. Examination of the eye reveals the presence of a desmetocoele.
- Outline the surgical treatment options for this case and discuss the advantages and disadvantages of each option. *(20 marks)*
 - Describe your post-operative management of this case following successful surgical treatment. *(10 marks)*
5. Answer **both** subparts of this question.
- Briefly describe your diagnostic approach for a three-year-old thoroughbred racehorse presenting with respiratory noise during galloping. List **three (3)** conditions that cause respiratory stridor during inspiration and describe in detail your surgical treatment(s) of choice for one of the conditions that you have listed. *(25 marks)*
 - In addition, provide a prognosis for this horse to return successfully to racing following your chosen treatment in 5a) above, and list **two (2)** complications of this surgical technique. *(5 marks)*
6. A 450kg quarter horse gelding is referred to you for management of urolithiasis to remove a 12cm diameter urinary calculus.
- Briefly describe the types of cystic calculi that occur in horses. *(10 marks)*
 - List **three (3)** different surgical approaches to the bladder and describe one of these approaches in detail with reference to suture materials and patterns used in surgical closure of the bladder. *(20 marks)*

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7. A veterinarian has called you regarding a four-year-old standard-bred racehorse that has just sustained a closed, displaced lateral condylar fracture of the left hind third metatarsus this morning during fast work.
- a) Briefly discuss your recommendation for stabilising the limb with regard to transportation of the horse to your practice. *(5 marks)*
 - b) Describe in detail your surgical management of this case, with particular reference to your preferred method of internal fixation, and any external coaptation for recovery from anaesthesia. *(25 marks)*

End of paper