



# Australian and New Zealand College of Veterinary Scientists

## Membership Examination

June 2019

## Veterinary Practice (Equine)

### Paper 1

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

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

Answer **ALL EIGHT (8)** questions

Answer **EIGHT** questions, each worth 15 marks ..... total 120 marks

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# Paper 1: Veterinary Practice (Equine)

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Answer all eight (8) questions

1. Choose **two (2)** significant zoonotic equine pathogens in Australia or New Zealand and briefly describe appropriate practice protocols to manage the risks of transmission in both humans and horses. The protocols should balance the need for examination and treatment with the protection of exposed personnel. *(15 marks)*
  
2. Answer **all** parts of this question:
  - a) Briefly describe how dynamic collapse of the upper airway occurs during exercise in racehorses with left recurrent laryngeal neuropathy (RLN) and explain how this condition causes poor performance. *(6 marks)*
  
  - b) List **three (3)** typical clinical signs commonly associated with RLN. *(3 marks)*
  
  - c) Briefly describe the diagnosis of dynamic airway collapse in horses with RLN. *(6 marks)*
  
3. Describe **six (6)** clinical, laboratory or imaging findings available in first-opinion practice that are useful in determining whether a horse with acute abdominal pain needs referral for potential surgery. *(15 marks)*
  
4. Answer **both** parts of this question:
  - a) Describe an appropriate examination and investigation approach to determine if a horse suspected of bleeding significantly two hours after standing castration needs further intervention. *(11 marks)*
  
  - b) Assuming you determine further intervention is required, list **four (4)** types of fluid therapy that may be appropriate in this scenario. *(4 marks)*

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5. Answer **both** parts of this question:

- a) List electrolyte and other biochemical abnormalities that would be expected in a blood sample taken from a three-day-old foal with a distended abdomen and a presumptive diagnosis of uroperitoneum. (6 marks)
- b) Describe an appropriate initial treatment plan for this foal prior to surgical intervention. (9 marks)

6. Answer **all** parts of this question:

- a) Describe how to perform and evaluate a palmar digital nerve block in a horse. Include in your answer an appropriate drug and dosage. (7 marks)
- b) Identify structures desensitised by a palmar digital nerve block. (4 marks)
- c) Identify additional structures likely to be desensitised by an abaxial sesamoid nerve block. (4 marks)

7. Answer **both** parts of this question:

- a) Identify and rank in order of significance **four (4)** internal parasites of foals up to six months of age of potential consequence on large stud farms in Australia and New Zealand with heavy stocking densities. (4 marks)
- b) Describe an appropriate management plan to control these parasites on a large stud farm in Australia or New Zealand. (11 marks)

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8. Briefly describe and justify the best-practice use of antimicrobials in the following scenarios. If antimicrobials are indicated, briefly describe a suitable antimicrobial protocol, including drug type, method, frequency of administration and dose, as relevant:
- a) Surgical removal of the distal portion of a splint bone in a well-managed surgical facility. There are no skin lesions in the region. *(7.5 marks)*
  
  - b) A superficial corneal injury that was sustained during a race one hour previously. *(7.5 marks)*

**End of paper**



# Australian and New Zealand College of Veterinary Scientists

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June 2019

## Veterinary Practice (Equine)

## Paper 2

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

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

Answer **ALL FOUR (4)** questions

Answer **FOUR** questions, each worth 30 marks ..... total 120 marks

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## Paper 2: Veterinary Practice (Equine)

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Answer all four (4) questions

1. A 15-year-old Quarter horse gelding is presented for dropping food when eating, head shaking when ridden, and halitosis.

Answer **all** parts of this question:

- a) Briefly describe an optimal approach to oral examination of this horse. *(5 marks)*
  
- b) The oral examination reveals a slab fracture of the 209 cheek tooth. Briefly describe how to acquire radiographs of this tooth, including projections and restraint techniques. You can use an appropriately labelled diagram to demonstrate your answer, if required. *(7 marks)*
  
- c) Assuming there are no financial constraints, identify an additional imaging modality that would be appropriate in this case and briefly explain why this modality is likely to be superior to radiography. *(4 marks)*
  
- d) During your examination, you note some purulent discharge coming from the ipsilateral nostril. Explain how this discharge may be related to the identified dental problem. *(3 marks)*
  
- e) In addition to radiography and the answer provided in part 1a), briefly explain how sinus involvement can be confirmed. *(3 marks)*
  
- f) Extraction of the diseased tooth is considered to be the best option in this case. List techniques available for extraction of this tooth. *(4 marks)*
  
- g) List the complications that commonly occur with extraction of this tooth in horses. *(4 marks)*

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2. A five-year-old Quarter horse stallion has been bred to 20 Quarter horse mares during the current breeding season. All mares have been hand served and bred on at least three oestrus cycles. Five out of 20 mares covered have been confirmed pregnant at about 14 days post-ovulation.

Answer **all** parts of this question:

- a) Outline an appropriate investigation of subfertility in this group of mares. (10 marks)
- b) Outline an appropriate examination, including methods of semen collection and aspects of semen evaluation, to assess fertility in this stallion. (10 marks)
- c) The investigation reveals that the stallion is failing to ejaculate when hand served. Outline how this stallion's breeding could be managed to increase pregnancy rates. In your answer, assume assisted reproduction methods are possible. (10 marks)

3. A one-day-old Clydesdale colt foal with swelling in the scrotal region was slow to start effective nursing, but is now nursing well and has passed some meconium.

Answer **all** parts of this question:

- a) Describe an appropriate examination and assessment of this foal, including any laboratory tests and imaging that might be indicated. (8 marks)
- b) An inguinal hernia is diagnosed. Identify the management options available at this time and discuss factors that should be considered in order to determine the most appropriate management strategy for this foal. (8 marks)

Three weeks later, the foal develops dyspnoea and a cough.

- c) Outline an appropriate investigation that would maximise your chances of a diagnosis of the cause of these signs. (8 marks)
- d) *Rhodococcus equi* infection is diagnosed. Briefly describe an appropriate treatment plan for this foal. (6 marks)

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4. You are presented with a 10-year-old Warmblood mare that has been losing weight for six months.

Answer **all** parts of this question:

- a) Describe an appropriate investigation of this case. (20 marks)
- b) During the investigation of the case, a rectal examination is performed. Identify the most important adverse event associated with this procedure and recommend steps that can be taken to minimise the risk of this occurring. (5 marks)
- c) The horse is from a farm that had an outbreak of *Streptococcus equi* subspecies *equi* six months previously. Explain how this organism can be responsible for a six-month period of weight loss and explain how to confirm that this is the case. (5 marks)

**End of paper**