



# Australian and New Zealand College of Veterinary Scientists

## Membership Examination

June 2017

## Medicine of Horses

### Paper 1

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 1: Medicine of Horses

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Answer all four (4) questions

1. Compare and contrast the following drugs in reference to indications/contraindications, mechanism of action **and** potential side effects:
  - a) Flunixin meglumine and meloxicam. *(15 marks)*
  - b) Xylazine and acepromazine. *(15 marks)*
  
2. Answer **both** parts of this question:
  - a) Discuss the pathophysiology of equine gastric ulceration syndrome (EGUS).  
*(10 marks)*
  - b) Relate the pathophysiology of this condition to the management strategies and pharmacological interventions that may influence the severity of the disease.  
*(20 marks)*
  
3. You are working in a specialised equine practice that has excellent facilities for intensive care and surgery. Your colleagues have asked you to review current use of antimicrobials in the practice.

Answer **both** parts of this question:

  - a) Outline (using bullet points if you wish) the general principles that guide prudent and rational antimicrobial use. Include examples of such use in your answer.  
*(15 marks)*
  - b) Describe rational antimicrobial use policies in the following situations:
    - i. a 12-hour premature foal that is unable to stand *(7.5 marks)*
    - ii. an adult horse with acute enterocolitis. *(7.5 marks)*

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

- a) Describe the pathophysiology of pituitary pars intermedia dysfunction (PPID) in horses. Include illustrations if required. *(10 marks)*
- b) List the common clinical signs of PPID in horses. *(4 marks)*
- c) Discuss the advantages **and** disadvantages of the following diagnostic tests to investigate PPID in horses: *(total 16 marks)*
  - i. serum cortisol
  - ii. endogenous ACTH
  - iii. low dose dexamethasone test.

**End of paper**



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## Paper 2

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Answer **ALL FOUR (4)** questions

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# Paper 2: Medicine of Horses

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## Answer all four (4) questions

1. A 10-year-old Welsh mountain pony mare used for showing and carriage driving is presented to you with recurrent laminitis. The last two episodes were four months apart.

Answer **all** parts of this question:

- a) Discuss factors which may be important in contributing to laminitis in this pony. *(10 marks)*
- b) Describe the most appropriate management strategy for this current acute episode of laminitis. *(10 marks)*
- c) Describe the general recommendations that should be made to the owner to prevent further episodes of laminitis. *(10 marks)*

2. You are requested to attend a stud farm in the Hawkesbury region, New South Wales. One mare has developed hindlimb ataxia and urinary incontinence. The stud manager also mentions another mare is walking strangely.

Answer **all** parts of this question:

- a) What additional information should be asked of the stud manager to further investigate this case? *(6 marks)*
- b) List the **four (4) most** likely differential diagnoses based on the history and clinical signs. *(4 marks)*
- c) What diagnostic tests should be performed to confirm a diagnosis? *(6 marks)*
- d) Describe the **most** appropriate treatment and management strategies that should be implemented while you are confirming the diagnosis. *(14 marks)*

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3. Identify and interpret the clinicopathological abnormalities for the following case scenarios. Describe appropriate fluid therapy plans for **each** case.

a) Acute colitis in an adult horse. (15 marks)

PCV	65%	32–52
TP	58 g/L	55–75
Lactate	8.3 mmol/L	<1.5
Na <sup>+</sup>	133 mmol/L	133–143
Cl <sup>-</sup>	100 mmol/L	96–104
K <sup>+</sup>	3.3 mmol/L	3.0–5.0
Ca <sup>++</sup>	1.21 mmol/L	1.3–1.72
HCO <sub>3</sub> <sup>-</sup>	27 mmol/L	23–32
Albumin	25 mmol/L	27–39
Urea	12.5 mmol/L	3.2–8.1
Creatinine	263 μmol/L	81–164

b) Pre-operative management of a two-day-old foal with a ruptured bladder. (15 marks)

PCV	32%	32–52
TP	56 g/L	55–75
Lactate	3.9 mmol/L	<1.5
Glucose	12 mmol/L	4–8
Na <sup>+</sup>	105 mmol/L	133–143
Cl <sup>-</sup>	71 mmol/L	96–104
K <sup>+</sup>	6.6 mmol/L	3.0–5.0
Ca <sup>++</sup>	1.56 mmol/L	1.3–1.72
HCO <sub>3</sub> <sup>-</sup>	31 mmol/L	23–32
Albumin	31 mmol/L	27–39
Urea	29.8 mmol/L	3.2–8.1
Creatinine	638 μmol/L	81–164

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4. A 10-year-old Thoroughbred gelding has experienced bouts of abdominal pain with increasing frequency and intensity over the last five days.

Answer **both** parts of this question:

- a) List the **most** likely causes of recurrent colic in this horse. (5 marks)
- b) Describe a rational diagnostic process, including justification **and** expected findings, to investigate the abdominal pain in this horse. (Assume you are at a well-equipped equine veterinary hospital). (25 marks)

**End of paper**