



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2015

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 markstotal 120 marks

© 2015 Australian and New Zealand College of Veterinary Scientists ABN 00 50 000894 208

This publication is copyright. Other than for the purposes of and subject to the conditions prescribed under the Copyright Act, no part of it may in any form or by any means (electronic, mechanical, microcopying, photocopying, recording or otherwise) be reproduced, stored in a retrieval system or transmitted without prior written permission. Enquiries should be addressed to the Australian and New Zealand College of Veterinary Scientists

Paper 1: Medicine of Horses

Answer all four (4) questions

1. For **each** of the conditions listed below, outline the following:
 - i. predisposing factor(s)
 - ii. the typical clinical presentation(s)
 - iii. recommended treatment(s).
 - a) Atrial fibrillation. *(15 marks)*
 - b) Metabolic alkalosis in a horse following a 160 km endurance ride. *(15 marks)*
2. Discuss why the **four (4)** medications listed below are commonly used in equine practice. Include in your answer; indications for use, mode of action, examples of similarly acting drugs **and** contra-indications for use.

Answer **all** parts of this question:

- a) procaine penicillin *(7.5 marks)*
- b) phenylbutazone *(7.5 marks)*
- c) xylazine hydrochloride *(7.5 marks)*
- d) butorphanol tartrate. *(7.5 marks)*

Continued over page

3. The owner of a stud farm reports that higher than normal levels of osteochondrosis have been found in weanlings radiographed prior to sales. They are concerned that this is only occurring since the retirement of a previous manager two years ago and subsequent management changes.

Answer **both** parts of this question:

- a) Discuss the finding in light of suggested aetiology(ies) and clinical presentation. *(20 marks)*
- b) What advice would you give the client regarding management of likely risk factors for this disease? *(10 marks)*

4. Name **three (3)** diseases of horses against which vaccination is available.

For **each** of these **three (3)** diseases describe:

- a) type of vaccine *(4.5 total / 1.5 marks per disease)*
- b) route and frequency of vaccination *(7.5 total / 2.5 marks per disease)*
- c) known complications *(7.5 total / 2.5 marks per disease)*
- d) how effective the vaccine is in preventing disease in individuals **and** in groups of animals. *(10.5 total / 3.5 marks per disease)*

End of paper



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2015

Medicine of Horses

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 markstotal 120 marks

© 2015 Australian and New Zealand College of Veterinary Scientists ABN 00 50 000894 208

This publication is copyright. Other than for the purposes of and subject to the conditions prescribed under the Copyright Act, no part of it may in any form or by any means (electronic, mechanical, microcopying, photocopying, recording or otherwise) be reproduced, stored in a retrieval system or transmitted without prior written permission. Enquiries should be addressed to the Australian and New Zealand College of Veterinary Scientists

Paper 2: Medicine of Horses

Answer all four (4) questions

1. The owner of a small property with eight Thoroughbreds of mixed sex and ages, calls you regarding one of her four pregnant mares. She reports that the 16-year-old multiparous mare has aborted a nine month gestational age foetus, despite appearing clinically normal. Upon your arrival at the property, the owner rushes to inform you that one of the other pregnant mares is now uncomfortable and straining.

Having confirmed the initial abortion discuss:

- a) Your recommendations to the owner for immediate management of his mares. *(10 marks)*
 - b) The likely differential diagnoses. *(10 marks)*
 - c) The diagnostic samples you would collect (if necessary) for further testing and why? *(5 marks)*
 - d) The measures you would recommend to minimise risks of future abortions. *(5 marks)*
2. A three-year-old Standardbred filly in the Adelaide hills of South Australia is noted to be laying down more than usual and uncharacteristically not interested in her morning feed. You are called to examine the filly and note that she has a heart rate of 42 beats per minute, respiratory rate of 18 breaths per minute and rectal temperature of 38.6°C. Her gut sounds seem reduced and you note that her faecal balls are dry with some mucous obvious. There are no other obvious clinical abnormalities and the owner has not reported anything abnormal in the horse's recent history nor that of the other four horses in the paddock.

Answer **all** parts of this question:

- a) Suggest likely differential diagnoses for this presentation **and** your reasons. *(10 marks)*
- b) On the basis of your suspicions, what further procedures or tests would you perform **and** why? *(10 marks)*
- c) Outline **and** justify your treatment plan for the disease process that you consider to be likely. *(10 marks)*

Continued over page

3. A ten-year-old Warmblood gelding used for high level eventing is presented with a chronic cough of four weeks duration. He does not have a nasal discharge and appears well otherwise.

Answer **all** parts of this question:

- a) List **four (4)** differential diagnoses from most to least likely. (4 marks)
- b) Outline your approach to further investigation of this case. Discuss how the findings from these investigations might influence your diagnosis. (16 marks)
- c) For the **two (2)** most likely diagnoses outline your approach to management of this case. Give dose rates for any medications you would use. (10 marks)

4. An eight-year-old Warmblood mare is presented to you after the owner noticed that she was spending less time grazing pasture and was (uncharacteristically) not finishing her daily chaff and ration mix. The mare had been moved to a different paddock eight weeks previously. She is bright, alert and responsive. Her temperature, gastrointestinal sounds, heart and respiratory rates are within normal ranges. Mucous membranes are pink with a normal capillary refill time.

Her haematology and biochemistry results are presented on the **following page**.

After analysing the haematology and biochemistry results - answer **all** parts of this question:

- a) List the haematological and biochemical abnormalities present and give your explanation for these abnormalities. (10 marks)
- b) List possible differential diagnoses from most to least likely. (5 marks)
- c) Describe any further tests you would perform and how this could assist you in making a final diagnosis. Assume you have all possible diagnostic capabilities at hand. (10 marks)
- d) For your most likely diagnosis, outline a treatment and management schedule for the mare. (5 marks)

Question 4 haematology and biochemistry results over page

Parameter	Value	Normal range	Unit
Red cell count	7.08	7.44–12.12	10 ¹² /L
Haemoglobin	119	127–190	G/L
Haematocrit	0.34	0.35–0.53	L/L
MCV	48	39–51	fL
MCH	17	14–18	pg
MCHC	349	330–378	g/L
White cell count	11.0	5.0–10.8	10 ⁹ /L
Neutrophils (%)	81	47–79	%
Band forms (%)	0	<1	%
Lymphocytes (%)	14	19–47	%
Monocytes (%)	4	1–6	%
Eosinophils (%)	1	0–4	%
Basophils (%)	0	0–2	%
Fibrinogen	5.4	1.2–2.4	g/L
Sodium	136	134–144	mmol/L
Potassium	4.1	2.7–5.1	mmol/L
Chloride	99	95–105	mmol/L
Phosphate	0.9	0.7–1.8	mmol/L
Total bilirubin	29	<74	µmol/L
AST	472	150–400	U/L
CK	135	50–400	U/L
ALP	1390	91–250	U/L
Total protein	94	53–72	g/L
Albumin	35	33–42	g/L
Globulins	59	18–35	g/L
GGT	444	6–45	U/L
GLDH	20	0.1–21	U/L
Bicarb	27	26–34	mmol/L
Urea	3.3	2.5–7.4	mmol/L
Creatinine	90	89–166	Umol/L
Calcium	2.9	2.7–3.3	mmol/L
Magnesium	0.8	0.7–1.0	mmol/L
Serum Amyloid A	938	<7	mg/L

End of paper