



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2012

Medicine of Cats

Paper 1

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

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

Answer your choice of any **FOUR (4)** questions from the six questions **ONLY**

All questions are of equal value

Answer **FOUR** questions each worth 30 markstotal 120 marks

Paper 1: Medicine of Cats

Answer four (4) from the following six questions only

1. Answer **both** parts of this question.
 - a) Explain the species-specific metabolic and behavioural aspects of the cat that contribute to its susceptibility to poisonings. *(7.5 marks)*
 - b) Outline the pathophysiology, clinical signs and laboratory findings associated with **each** of the following toxicities: *(7.5 marks each)*
 - i. permethrin
 - ii. lilies
 - iii. paracetamol (acetaminophen).
2. Explain the aetiology, pathophysiology and clinical presentation associated with **each** of the following conditions: *(10 marks each)*
 - a) nutritional secondary hyperparathyroidism
 - b) thiamine deficiency
 - c) hypervitaminosis A.
3. Discuss the indications, clinical interpretation and limitations of **each of** the following laboratory tests: *(10 marks each)*
 - a) tritrichomonas polymerase chain reaction (PCR)
 - b) feline leukaemia virus antigen testing
 - c) feline calicivirus polymerase chain reaction (PCR).

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4. Describe the mechanism of action, clinical indications and potential side effects of **four (4)** of the following drugs: *(7.5 marks each)*

a) darbepoetin/erythropoetin

b) doxycycline

c) spironolactone

d) doxorubicin

e) ranitidine.

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

a) Discuss the aetiopathogenesis of myocardial hypertrophy due to both primary cardiac disease and secondary to other disorders (secondary ventricular hypertrophy). *(20 marks)*

b) Describe **two (2)** clinical presentations for cats with idiopathic hypertrophic cardiomyopathy. *(10 marks)*

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

a) Describe the pathophysiology of a type 1 IgE mediated hypersensitivity reaction. *(10 marks)*

b) Discuss the inheritance of the feline AB blood type and the significance of this with regards to neonatal isoerythrolysis. *(20 marks)*

End of paper



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Paper 2

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

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

Answer your choice of any **FOUR (4)** questions from the six questions **ONLY**
At least **ONE (1)** question must from be from **Section B**

All questions are of equal value

Answer **FOUR** questions each worth 30 markstotal 120 marks

Paper 2: Medicine of Cats

Answer **FOUR (4)** from the following six questions only. At least one (1) question must be from Section B.

Section A

1. Degenerative joint disease is a common, but under-recognised condition of geriatric cats. Recent studies have highlighted the importance of using a 'triad' approach to diagnose the condition.

Answer **all** of the following:

- a) List the historical, physical examination and radiographic findings that you would expect in a cat with degenerative joint disease, and indicate how this might differ from the dog. *(12 marks)*
- b) Discuss the management options for degenerative joint disease. *(12 marks)*
- c) Discuss any important considerations prior to commencing medical management in a geriatric cat, especially with regard to the use of non-steroidal anti-inflammatory drugs. *(6 marks)*

2. Feline interstitial cystitis (FIC) is a common clinical problem.

Answer **all** of the following:

- a) Describe the typical risk factors and clinical features (including findings on urinalysis) seen with this disorder. *(6 marks)*
- b) Discuss your ideal diagnostic approach for a cat that has not previously shown lower urinary tract signs, and the expected results of each diagnostic test/procedure used. *(12 marks)*
- c) Discuss your comprehensive management plan for a cat presented with acute but recurrent lower urinary tract signs, without bacterial urinary tract infection or evidence of urinary calculi or urethral plugs. *(12 marks)*

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3. List the likely differential diagnoses and discuss a logical diagnostic approach for **two (2)** of the following conditions: *(15 marks each)*
- a) peritoneal effusion in an eight-year-old domestic shorthair cat
 - b) uveitis in a six-month-old British shorthair cat
 - c) constipation in a 14-year-old Burmese cat.
4. Answer **both** parts of this question: *(15 marks each)*
- a) Describe the expected clinical features associated with acromegaly and how you would confirm this diagnosis.
 - b) Evaluate the management options for feline hyperthyroidism in its various presentations, including the adverse effects of each proposed therapy.

End of Section A

Section B

Answer at least one (1) question from this section.

5. A 12-year-old, male neutered domestic shorthair cat presents with a history of chronic vomiting and weight loss despite a good appetite. Physical examination reveals a bodyweight of 3.9 kg and a body condition score of 4/9. The remainder of the physical examination is unremarkable.

Haematology and serum biochemistry and urinalysis results are listed below.

Haematology:

Parameter	Value	Reference range
PCV	0.24	0.25–0.48 L/L
MCV	44	43–55 fL
MCH	13	13–17 pg
MCHC	330	282–333 g/dL
Platelets	312	300–800 x 10 ⁹ /L
Reticulocyte %	0.1	<0.5%
Reticulocyte count	4	<61 x 10 ⁹ /L
WBC	15.5	5.5–19.0 x 10 ⁹ /L
Neutrophils	12.6	2.0–13.0 x 10 ⁹ /L
Lymphocytes	0.7	0.9–7.0 x 10⁹/L
Monocytes	0.6	<0.7 x 10 ⁹ /L
Eosinophils	0.9	<1.1 x 10 ⁹ /L

Blood smear: platelets clumped and adequate

Question 5 continued over page

Serum Biochemistry:

Parameter	Value	Reference range
Sodium	152	144–158 mmol/L
Potassium	4.6	3.7–5.4 mmol/L
Chloride	119	106–123 mmol/L
Urea	18.2	5.0–15.0 mmol/L
Creatinine	0.12	0.08–0.20 mmol/L
Glucose	7.4	3.2–7.5 mmol/L
Bilirubin	4	<10 µmol/L
AST	30	2–62 U/L
ALT	46	19–100 U/L
ALP	48	5–50 U/L
Total protein	58	60–84 g/L
Albumin	24	25–38 g/L
Globulin	34	31–52 g/L
Total calcium	2.4	2.1–2.8 mmol/L
Phosphate	0.9	1.0–2.3 mmol/L
Cholesterol	3.5	2.2–5.5 mmol/L

Urinalysis:

Parameter	Value
Specific gravity	1.044
Protein	1+
Glucose	negative
Ketones	negative
Bilirubin	negative
Blood	negative
pH	6.5

Answer **all** of the following:

- Give your assessment of the clinical and clinicopathological findings. *(12 marks)*
- Discuss your diagnostic approach to this case. *(12 marks)*
- If the diagnosis was low-grade alimentary lymphoma, outline your advice to the owner regarding treatment options and prognosis. *(6 marks)*

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6. You are called to assess an establishment where purebred Burmese kittens are bred. A single room measuring 3m x 5m is annexed from the owner's house for this purpose and houses eight breeding queens and kittens. Queens are taken to other locations where there are stud cats for mating. The owner reports that chronic sneezing and mucopurulent ocular and nasal discharge have been long-term (>2 years duration) problems for cats and kittens in this establishment, despite full compliance with a vaccination protocol using inactivated feline herpesvirus/feline calicivirus vaccines as per manufacturer's instructions.
- a) Discuss your ideal diagnostic plan to investigate the upper respiratory tract disease in this cattery. *(9 marks)*
 - b) Outline your recommendations for optimal housing and husbandry in this cattery, including cleaning and vaccination protocols. *(12 marks)*
 - c) Explain the treatment options you would recommend for any cats with acute signs of upper respiratory tract disease, before the results of diagnostic tests were available. *(9 marks)*

End of paper