

Australian College of Veterinary Scientists

Fellowship Examination

June 2011

Feline Medicine

Paper 1

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

Time allowed: **Four (4)** hours after perusal

In **Section A**: Answer your choice of any **THREE (3)** questions from the four questions **ONLY**
All four main questions in **Section A** are of equal value

In **Section B**: Answer **ALL FOUR (4)** questions

Section A: THREE questions each worth 25 marks 75 marks

Section B: FOUR questions each worth 5 to 8 marks 25 marks

total 100 marks

Paper 1: Feline Medicine

Section A

Answer your choice of any **THREE** (3) questions from the four questions in Section A **ONLY**.

1. List the available laboratory tests and discuss their interpretation to allow an ante-mortem diagnosis to be made for **each** of the following infectious conditions:
 - a) pulmonary *Toxoplasma gondii* infection (6¼ marks)
 - b) wet form of feline infectious peritonitis (6¼ marks)
 - c) feline Herpesvirus 1 conjunctivitis (6¼ marks)
 - d) CNS cryptococcosis. (6¼ marks)

2. Answer **all** subparts of this question:
 - a) Outline the normal mechanisms for calcium homeostasis. (10 marks)
 - b) List the major causes of hypercalcaemia in the cat, and for **each** cause briefly outline our current understanding of the pathophysiology of the condition. (15 marks)

3. Discuss the different classifications of diabetes mellitus in cats, as they relate to the pathophysiology of the disease. Be sure to include underlying causes and mechanisms in your answer. (25 marks)

4. Outline the pathophysiology of **each** of the following abnormalities in cats with chronic renal disease; include in your answer how each complication contributes to further renal deterioration:
 - a) systolic hypertension (8½ marks)
 - b) hyperphosphataemia (8½ marks)
 - c) proteinuria. (8½ marks)

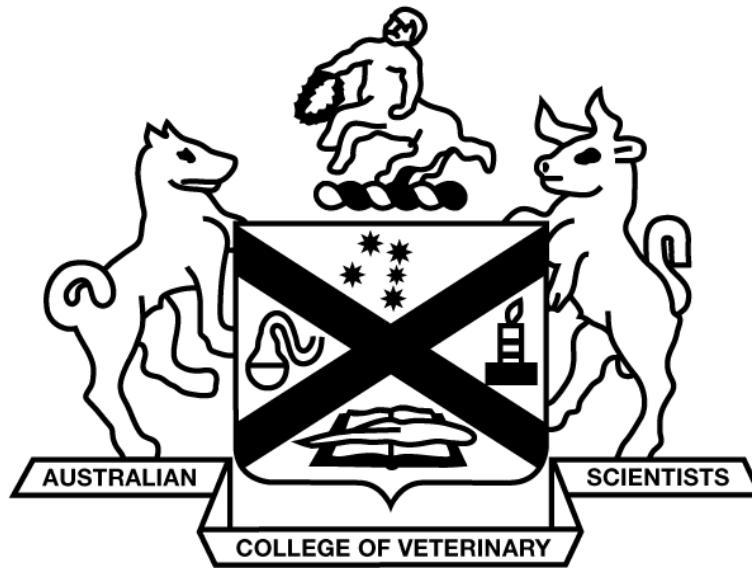
Section B on next page

Section B

Answer ALL FOUR (4) questions in Section B.

- 5 Answer **all** subparts of this question:
- Define the following terms, when applied to validation of diagnostic tests:
 - sensitivity (1 mark)
 - specificity (1 mark)
 - positive predictive value (1 mark)
 - negative predictive value. (1 mark)
 - Indicate how the latter **two** would be affected by a lower prevalence of disease in the test population. (1 mark)
6. Answer **all** subparts of this question:
- List the radiographic changes that are consistent with feline heartworm disease. (2 marks)
 - List the tests that can confirm the diagnosis. (1 mark)
 - Discuss the interpretation of these tests. (3 marks)
7. Describe the mechanism of action **and** indications for **all** of the following drugs in feline patients:
- pimobendan (2 marks)
 - clopidogrel (2 marks)
 - amphotericin B (2 marks)
 - posaconazole. (2 marks)
8. Describe the pathophysiology of feline aortic thromboembolism. (6 marks)

End of Paper



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Paper 2

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

Time allowed: **Four (4)** hours after perusal

In **Section A**: Answer your choice of any **THREE (3)** questions from the four questions **ONLY**
All four main questions in **Section A** are of equal value

In **Section B**: Answer **ALL THREE (3)** questions

Section A: THREE questions each worth 25 marks 75 marks

Section B: THREE questions each worth 8 to 9 marks..... 25 marks

total 100 marks

Paper 2: Feline Medicine

Section A

Answer your choice of any **THREE** (3) questions from the four questions in Section A **ONLY**.

1. Answer **all** subparts of this question:
 - a) Discuss the differences in survival and remission rates that could be expected with available chemotherapy and/or radiation therapy protocols for nasal lymphoma in a three-year-old Siamese cat. (15 marks)
 - b) List the side effects or complications that can occur with these treatment options. (5 marks)
 - c) If the cat had been treated with prednisolone prior to starting chemotherapy, explain how this might affect the prognosis, and what evidence there is to support your answer. (5 marks)

2. Describe your treatment of hepatic lipidosis secondary to acute suppurative cholangiohepatitis in a 4 kg, seven-year-old domestic short-haired cat. Bile culture results are pending; liver aspirate cytology showed lipid accumulation and inflammatory changes. Include in your answer the treatment plan and rationale for each treatment. (25 marks)

3. A ten-year-old, neutered-female cat presents with a three month history of recurrent lower urinary signs. Answer **all** subparts of this question:
 - a) List the major differential diagnoses. (3 marks)
 - b) Describe and justify your investigation of this case. (10 marks)
 - c) Discuss the options for treatment and management of idiopathic non-obstructed FLUTD, citing evidence to support these treatment options. (12 marks)

4. Describe your approach to the investigation and management of *Tritrichomonas foetus* in a pedigree breeding household. (25 marks)

Section B over page

Section B

Answer **ALL** THREE (3) questions in Section B.

5. An eight-year-old, neutered-female, domestic short-haired cat presents with a two-week history of gradually progressive gait abnormality.

General physical examination is unremarkable other than the presence of an overfilled painful bladder which cannot be easily expressed.

The findings on neurological examination are as follows:

Assessment of gait, posture and attitude:

Alert and responsive, normal mentation. Normal fore-limb gait, bilateral hindlimb weakness and ataxia.

Assessment of cranial nerves:

Normal.

Assessment of spinal reflexes:

REFLEX	Left	Right
Thoracic limb withdrawal	Normal	Normal
Pelvic limb withdrawal	Normal	Normal
Patellar (L4-L5)	Marked	Marked
Gastrocnemius	Present	Present
Cranial tibial	Not Done	Not Done
Cutaneous trunci/panniculus	Absent	
Anal reflex (S1-S3)	Normal	

Assessment of postural reactions:

ASSESSMENT		Left	Right
Knuckling (Foot Position)	Fore-limbs	Normal	Normal
	Hind-limbs	Knuckles	Slow to correct
Hopping	Fore-limbs	Normal	Normal
	Hind-limbs	Slow	Slow
Wheelbarrow	Fore-limbs	Normal	Normal
	Hind-limbs	Poor	Poor
Extensor Postural Thrust		Weak	Weak
Placing Reactions	Fore-limbs	Normal	Normal
	Hind-limbs	Absent	Absent

Question continued on next page

Assessment of pain sensation:

Deep pain present in all four feet? Yes
 Evidence of spinal pain? No

- a) State the neurological localisation. (2 marks)
 b) List your major differential diagnoses for this cat. (4 marks)
 c) **Briefly** describe the afferent and efferent arms of the panniculus reflex. Provide explanations for its absence in a cat. (3 marks)

6. A one-year-old, neutered-male, domestic short-haired cat presents with a 24 hour history of acute-onset confusion, loss of litter training and what the owner describes as 'aimless wandering around'. On presentation the cat is ambulant but reluctant to move. When encouraged to walk he has a low crouching gait and tends to circle widely to the right.

The findings on neurological examination are shown below: Physical examination of other body systems is unremarkable.

Assessment of cranial nerves:

Assessment				
Eyes	Pupil size		L	Normal
			R	Normal
	Pupillary light reflexes	Direct	L	Normal
			R	Normal
		Consensual	L	Normal
			R	Normal
	Nystagmus		Static	Absent
			Positional	Normal
	Menace response		L	Absent
			R	Absent
Blink reflex		L	Normal	
		R	Normal	
Visual placing responses			Absent	
Facial symmetry			Normal	
Facial sensation			Normal	
Gag response			Normal	
Tongue tone/symmetry/movement			Normal	
Swallowing			Normal	
Response to noise			Normal	
Head tilt			Absent	

Question continued on next page

Assessment of spinal reflexes:

REFLEX	Left	Right
Thoracic limb withdrawal	Normal	Normal
Pelvic limb withdrawal	Normal	Normal
Patellar (L4-L5)	Normal	Normal
Gastrocnemius	Not done	Not done
Cranial tibial	Not done	Not done
Cutaneous trunci/panniculus:	Normal	
Anal reflex (S1-S3)	Normal	

Assessment of postural reactions:

ASSESSMENT		Left	Right
Knuckling (foot position)	Fore-limbs	Slow to correct	Normal
	Hind-limbs	Slow to correct	Normal
Hopping	Fore-limbs	Poor	Normal
	Hind-limbs	Slow	Normal
Wheelbarrow	Fore-limbs	Weak	Normal
	Hind-limbs	Weak	Poor
Extensor postural thrust		Weak	Normal
Placing reactions	Fore-limbs	Slow	Normal
	Hind-limbs	Slow	Normal

Assessment of pain sensation

Deep pain present in all four feet? Yes

Evidence of spinal pain? No

- a) State the neurological localisation. (2 marks)
- b) List your major differential diagnoses for this cat. (3 marks)
- c) **Briefly** describe the afferent and efferent arms of the menace reflex. Provide possible explanations for the absence of menace response in this cat. (3 marks)

7. Briefly describe the treatment options for **each** of the following toxic agents:

- a) permethrin (4 marks)
- b) acetaminophen (paracetamol) (4 marks)

End of paper