



# Australian and New Zealand College of Veterinary Scientists

## **Fellowship Examination**

June 2016

## **Small Animal Medicine**

## **Paper 1**

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

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

Answer **ALL FIVE (5)** questions

All five questions are of equal value.

Answer **FIVE** questions each worth 48 marks .....total 240 marks

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# Paper 1: Small Animal Medicine

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Answer all five (5) questions

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

a) Discuss the pathophysiological relationship between cardiovascular and renal disorders. *(42 marks)*

b) Briefly describe the effect of frusemide therapy on these relationships. *(6 marks)*

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

a) With respect to coagulation, discuss the regulation and action(s) of the following:

i. tissue factor *(10 marks)*

ii. protein C *(6 marks)*

iii. plasmin. *(10 marks)*

b) Explain how the following drugs interfere with haemostasis:

i. aspirin *(8 marks)*

ii. clopidogrel *(6 marks)*

iii. heparin. *(8 marks)*

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3. Answer **both** parts of this question:
- a) Discuss the normal physiology of cerebrospinal fluid (CSF) production, circulation and drainage. *(18 marks)*
  - b) Discuss the classification, causes and pathophysiological consequences of hydrocephalus. *(30 marks)*
4. Describe the pathophysiology of hepatic encephalopathy in dogs. *(48 marks)*
5. Discuss the pathogenesis of vaccine-induced adverse effects in dogs **and** cats. *(48 marks)*

**End of paper**



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## **Paper 2**

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Answer **ALL FIVE (5)** questions

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Answer **FIVE** questions each worth 48 marks .....total 240 marks

# Paper 2: Small Animal Medicine

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## Answer all five (5) questions

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

- a) Describe the pathogenesis of *Toxoplasma gondii* infection in cats. (16 marks)
- b) Discuss available methods of diagnosing toxoplasmosis in cats. (14 marks)
- c) With reference to the parasitic life-cycle, discuss the risk that a cat infected with *Toxoplasma gondii* poses to a pregnant woman. Include in your answer steps that can be undertaken to minimise the zoonotic risk **and** the role of serological testing of the cat in identifying risk. (12 marks)
- d) Discuss the role of serological testing for *Toxoplasma gondii* antibodies in a cat prior to cyclosporin therapy **and** outline treatment recommendations for both seronegative and seropositive scenarios. (6 marks)

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

- a) Discuss the management of feline idiopathic hypercalcemia. Include in your answer the proposed mechanisms of action of the treatments described. (24 marks)
- b) With reference to the literature, discuss the role of thyroid stimulating hormone (TSH) measurement in the diagnosis and therapeutic monitoring of cats with hyperthyroidism. (18 marks)
- c) Discuss the evidence for the treatment of iatrogenic hypothyroidism in cats previously treated for hyperthyroidism. (6 marks)

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3. Answer **both** parts of this question:
- a) Using an evidence-based approach, discuss dietary management of lymphocytic-plasmacytic enteritis in the dog. *(24 marks)*
  - b) Using an evidence-based approach, discuss non-dietary management of lymphocytic-plasmacytic enteritis in the dog. *(24 marks)*
4. Answer **all** parts of this question:
- a) Describe the physical examination findings and electrocardiogram (ECG) features associated with both primary ('lone') and secondary atrial fibrillation in dogs. *(9 marks)*
  - b) Discuss the causes of atrial fibrillation in dogs and cats. *(10 marks)*
  - c) Briefly describe the haemodynamic consequences of atrial fibrillation with a ventricular rate of 240 beats per minute. *(9 marks)*
  - d) Compare and contrast the different methods of managing primary **and** secondary atrial fibrillation. Include in your answer a description of the anticipated outcomes and potential complications of therapy. *(20 marks)*
5. Discuss the advantages and disadvantages of the various methods of estimating or quantifying glomerular filtration rate (GFR). *(48 marks)*

**End of paper**