



**AUSTRALIAN AND NEW ZEALAND
COLLEGE OF VETERINARY SCIENTISTS**

Sample Exam Questions

Veterinary Practice (Small Animal)

Written Examination (*Component 1*)

Written Paper 1 (two hours): Principles of Veterinary Practice
EIGHT (8) questions of 15 marks each with mark allocation for any sub-questions indicated.

Written Paper 2 (two hours): Applied Veterinary Practice
FOUR (4) questions of 30 marks each with mark allocation for any sub-questions indicated.



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2018

Veterinary Practice (Small Animal) Paper 1

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

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

Answer **ALL EIGHT (8)** questions

Answer **EIGHT** questions each worth 15 markstotal 120 marks

Paper 1: Veterinary Practice (Small Animal)

Answer all eight (8) questions

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

- a) List **four (4)** differential diagnosis for pleural effusion. *(4 marks)*
- b) Briefly describe **five (5)** typical radiographic changes of pleural effusions. *(5 marks)*
- c) Briefly describe how radiography may be used to confirm suspicion of a cranial mediastinal mass in a cat with pleural effusion. *(3 marks)*
- d) List **three (3)** typical radiographic signs of a cranial mediastinal mass. *(3 marks)*

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

- a) Outline the steps indicated for pre-operative assessment of a dog prior to removal of a rapidly growing 1.5 cm diameter mast cell tumour from the lateral thorax of a dog. *(5 marks)*
- b) Name the **two (2)** common grading systems used for canine mast cell tumours. *(2 marks)*
- c) Define the recommended surgical margins for mast cell tumours. *(4 marks)*
- d) Outline the correct advice to give to the owner of a dog following surgical removal of a low grade mast cell tumour with clear surgical margins. *(4 marks)*

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3. Answer **both** parts of this question:
- Explain the causes and factors which contribute to recurring bacterial otitis externa in dogs. (7 marks)
 - Outline the principles to be considered in the treatment of chronic *Pseudomonas aeruginosa* otitis in dogs, including: (8 marks)
 - antimicrobial considerations
 - addressing predisposing and perpetuating factors
 - prognosis for resolution of signs.
4. Answer **all** parts of this question:
- Outline the pathogenesis of paracetamol toxicity in cats. (3 marks)
 - List **four (4)** clinical signs of paracetamol toxicity in the cat. (4 marks)
 - List **five (5)** signs of pseudopregnancy in the bitch. (2.5 marks)
 - Outline the mechanism of action, criteria for use and potential adverse effects of **one (1)** drug used to treat pseudopregnancy in bitches. (5.5 marks)
5. Answer **all** parts of this question:
- Explain the meaning of 'core vaccine' with reference to the currently recommended core vaccination protocols for dogs and cats in Australia and New Zealand. (5 marks)
 - Explain why feline herpesvirus and feline calicivirus vaccines may not provide similarly robust protection compared with other core vaccines. (5 marks)
 - Explain the current recommendation that the final core vaccine of the puppy series be given at no earlier than 16 weeks of age. (5 marks)

Continued over page

6. Answer **all** parts of this question:
- a) List **five (5)** written instructions to be provided to the client, which are legally required when dispensing veterinary prescription medicines in Australia and New Zealand. *(5 marks)*
 - b) List **five (5)** legal requirements to be met before dispensing, to a dog owner, a drug not registered for use in dogs in Australia and New Zealand. *(5 marks)*
 - c) Briefly outline the registered and off-label uses of afloxolaner in the dog. *(5 marks)*
7. With regard to monitoring a dog under general anaesthesia.
List **five (5)** observations that can be made, **without the aid of electronic equipment**, and describe the information **each** provides about the dog's anaesthetic depth and physiological status. *(15 marks)*
8. Brachycephalic dog breeds are affected by significant phenotypic, genetic and hereditary anatomical anomalies. A client is considering the purchase of a brachycephalic puppy. Considering the welfare of the animals, discuss in detail the appropriate advice to give to these clients. *(15 marks)*

End of paper



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Membership Examination

June 2018

Veterinary Practice (Small Animal)

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

Paper 2: Veterinary Practice (Small Animal)

Answer all four (4) questions

1. A seven-year-old, obese English bulldog requires dental surgery for removal of a fractured carnassial (upper fourth premolar) tooth.

Answer **all** parts of this question:

- a) Discuss the anaesthetic considerations for this case. In your answer, include predictable anaesthetic complications. *(10 marks)*
- b) Describe the surgical approach to removing the upper fourth premolar in a dog. In this case, the tooth was healthy and viable until fractured seven days ago. *(10 marks)*
- c) This dog is diagnosed as having significant brachycephalic upper airway syndrome / brachycephalic obstructive airway syndrome. List the common surgical procedures used to treat brachycephalic breeds and the potential complications for these procedures. *(10 marks)*

2. An elderly cat presents with polyuria and polydipsia of several months duration.

Answer **all** parts of this question:

- a) List the differential diagnoses for polyuria and polydipsia in cats. *(5 marks)*
- b) Outline what information can be obtained from the history and physical examination to help you rule in or rule out causes of polyuria and polydipsia in the cat. *(5 marks)*

As part of the investigation a complete blood count (CBC), serum biochemistry profile and urinalysis is performed (results are on the following page).

- c) Interpret the laboratory results with reference to the likely diagnosis and explanation of the polyuria and polydipsia. *(15 marks)*

Question 2 continued over page

Parameter	Result	Reference interval
Glucose	9.0	3.2–7.5 mmol/L
BUN	26.5	5.0–15.0 mmol/L
Creatinine	248	80–200 µmol/L
Total protein	83	60–84 g/L
Albumin	37	25–38 g/L
Globulin	46	31–52 g/L
Bilirubin, total	2	<8 µmol/L
ALT	80	19–100 IU/L
ALP	41	5–50 IU/L
GGT	1	0–5 IU/L
Cholesterol	3.5	2.2–5.5 mmol/L
Calcium	2.4	2.1–2.8 mmol/L
Phosphate	3.1	1.0–2.3 mmol/L
Sodium	146	144–148 mmol/L
Potassium	3.4	3.7–5.4 mmol/L
Chloride	110	106–123 mmol/L
SDMA	30	0–14
Total T4	50	10–60

Parameter	Result	Reference interval
RBC	3.8	4.9–10.0 x10 ¹² /L
Haemoglobin	65	77–156 g/L
Haematocrit	0.17	0.25–0.48
WCC	14.3	5.5–19.0 x10 ⁹ /L
Neutrophils (seg)	13.2	2.0–13.0 x10 ⁹ /L
Lymphocytes	0.5	0.9–7.0 x10 ⁹ /L
Monocytes	0.4	<0.6 x10 ⁹ /L
Eosinophils	0.2	<1.0 x10 ⁹ /L
Platelets	250	200–500 x10 ⁹ /L

SMEAR:

RBC and WBC morphology normal - platelets clumped and adequate

Urinalysis

Appearance	clear, pale yellow
Specific gravity	1.010
pH	6
Protein	Trace
Glucose	Negative
Ketones	Negative
Bilirubin	Negative
Hb	Negative

SEDIMENT: no significant findings

- d) Describe a rational management plan for this cat, including dietary considerations. Justify these recommendations. (5 marks)

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3. A 45 kilogram, six-year-old Bull mastiff presents with sudden onset of left hindlimb lameness and pain localised to the left stifle.

Answer **all** parts of this question:

- a) Describe the assessment of the stifle joint. Include the clinical examination and any further diagnostic tests recommended. *(10 marks)*
- b) A cranial cruciate ligament rupture is identified. List the intra-articular structures in the canine stifle joint and **one (1)** main function for **each** structure listed. *(5 marks)*
- c) Identify **three (3)** treatment options for cranial cruciate ligament disease. Explain which of these treatment options would give the best outcome for this case. *(5 marks)*
- d) Discuss an optimal analgesic plan for this dog, from the time of diagnosis until two weeks post-operatively, including the peri-operative period. *(10 marks)*

4. A six-year-old, 20 kilogram crossbred male dog is presented straining to urinate over the previous 24 hours. He can only pass a few drops of urine at a time. Abdominal palpation reveals an enlarged, tense bladder and no other obvious abnormalities.

Answer **all** parts of this question:

- a) Outline the diagnostic investigation indicated to determine the cause of the dysuria. *(5 marks)*
- a) Diagnostic investigation concludes that uroliths are present in the urethra and the bladder. Outline the pre-anaesthetic stabilisation indicated for this dog. *(10 marks)*
- b) Discuss in detail the surgical procedures indicated to remove all the uroliths within the urinary bladder and urethra. *(10 marks)*
- c) Urolith analysis confirms the uroliths are 100% struvite. Outline the correct advice to best prevent recurrence. *(5 marks)*

End of paper