

Australian College of Veterinary Scientists

## Membership Examination

June 2011

### Small Animal Surgery

### 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 six main questions are of equal value

Answer **FOUR** questions each worth 25 marks .....total 100 marks

# Paper 1: Small Animal Surgery

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

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

- a) Discuss the role of steam sterilisation, ethylene oxide and hydrogen peroxide gas plasma in the sterilisation of surgical equipment. Include the conditions required for sterilisation and possible limitations of **each** of these methods. *(17 marks)*
- b) Discuss the use of indicators for determining the effectiveness of sterilisation. *(8 marks)*

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

- a) Discuss the major factors that contribute to fracture non-union. *(10 marks)*
- b) List and describe the types of viable fracture non-unions based on radiographs. *(6 marks)*
- c) List and describe the properties of cancellous bone grafts that are beneficial in the treatment of fracture non-unions. *(6 marks)*
- d) Give **three (3)** examples of anatomical sites from which autogenous cancellous bone grafts are commonly harvested. *(3 marks)*

3. Answer **all** subparts of this question:

- a) Name and describe the **four (4)** stages of acceptance of full-thickness free-skin grafts. *(12 marks)*
- b) Describe the factors that influence successful take of a full-thickness free-skin graft during wound bed preparation, the grafting procedure and the post-operative period. *(13 marks)*

**Examination continued on next page**

4. Answer **all** subparts of this question:

- a) Describe the gross anatomy of the salivary glands and ducts in **both** the dog and cat. (7 marks)
- b) List the reasons for the high incidence of dehiscence in oesophageal wounds. (6 marks)
- c) Briefly describe the different types of hiatal hernia. (6 marks)
- d) Briefly explain the current theories regarding the pathogenesis of perianal fistulas. (6 marks)

5. Answer **all** subparts of this question:

- a) Illustrate the anatomy of the major veins of the gastrointestinal tract, liver and spleen. You may use a diagram if you wish. (12 marks)
- b) List **four (4)** commonly reported types of congenital extrahepatic portosystemic vascular anomalies. (8 marks)
- c) Briefly describe the proposed aetiopathogenesis of multiple acquired portosystemic shunts. (5 marks)

6.

a) Answer **all** subparts of this question:

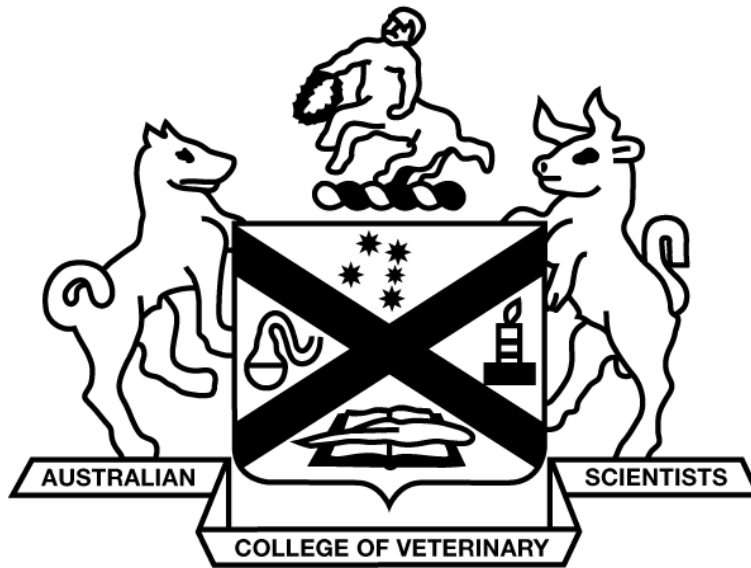
A 16-week-old kitten sustains a fracture of the distal femoral metaphysis after minor trauma. History taking reveals the kitten is fed only minced beef.

- i. Explain the likely aetiopathogenesis of the fracture in this patient. (8 marks)
- ii. Other than pathologic fractures, list **three (3)** radiographic changes that may be seen in the skeleton of this patient. (4½ marks)

b) Answer **all** subparts of this question:

- i. Describe the aetiopathogenesis of bone disease that may occur in a 13-year-old Australian terrier with chronic renal failure. (8 marks)
- ii. Name the most common location and radiographic features of bone disease in such a patient. (4½ marks)

**End of paper**



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### Small Animal Surgery

### Paper 2

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

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

All six main questions are of equal value

Answer **FOUR** questions each worth 25 marks ..... total 100 marks

# Paper 2: Small Animal Surgery

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

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

Considering a non-ambulatory, five-year-old Dachshund with a Hansen type 1 disc extrusion at T<sub>13</sub>-L<sub>1</sub>:

- a) Describe the expected findings of patellar reflex testing. *(2 marks)*
- b) Describe **one (1)** possible grading system of severity of neurologic dysfunction. *(4 marks)*
- c) List the benefits and disadvantages of the different imaging modalities in this case; including plain radiographs, myelography, computed tomography and magnetic resonance imaging. *(12 marks)*
- d) List the indications for surgery. *(4 marks)*
- e) Identify the main clinical determinant of prognosis and explain how you would assess this. *(3 marks)*

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

Two distinct age populations of dog are affected by hip dysplasia (immature and adult animals).

- a) Compare and contrast the clinical and diagnostic features of each group. *(12½ marks)*
- b) Discuss the various surgical treatment options for each group. Indicate at what age these treatments are applicable. *(12½ marks)*

**Examination continued over page**

3. Answer **all** subparts of this question:

A six-year-old, female-neutered Australian cattle dog presents with a 1cm diameter, poorly circumscribed, rapidly growing mass on the buccal gingiva of the mandible adjacent to the second molar on the left side. You are suspicious of a malignant neoplasm.

- a) List your differential diagnoses for a malignant neoplasm in this location. *(5 marks)*
- b) Describe how you would go about achieving a diagnosis and staging this tumour. *(5 marks)*
- c) You decide to attempt curative surgery. Outline the surgical technique you would perform. *(5 marks)*
- d) For **each** of the possible diagnoses you listed in question 3a) above, outline any adjunctive therapy you might consider. *(5 marks)*
- e) Explain how the prognosis for a tumour of the mandible differs from that of the maxilla. Provide a possible reason for this. *(5 marks)*

4. Answer **all** subparts of this question:

A 12-year-old, male-neutered German shepherd is presented after a protracted history of right-sided otitis externa that has been refractory to appropriate medical management.

- a) List the surgical procedures that may be used to treat refractory otitis externa. *(4 marks)*
- b) Outline the clinical examination findings and diagnostic test results that would lead you to select each of the procedures you listed. *(9 marks)*
- c) List the possible complications of each procedure and briefly state how each complication can be avoided. *(12 marks)*

**Examination continued over page**

5. Answer **all** subparts of this question:

An eight-year-old, female chihuahua presents to you for respiratory stridor, non-productive coughing and syncope. You are suspicious of tracheal collapse.

- a) Describe your diagnostic evaluation of this case. *(8 marks)*
- b) Outline the grading system commonly used for tracheal collapse. *(4 marks)*
- c) Outline your treatment options for a case of tracheal collapse. *(8 marks)*
- d) List the possible complications of surgery for tracheal collapse. *(5 marks)*

6. Answer **all** subparts of this question:

A seven-month-old female-neutered labrador retriever presents to you for urinary incontinence. The owners describe constant urine dripping as the dog walks around although it will void small amounts of urine. You are suspicious of an ectopic ureter.

- a) List **three (3)** other differential diagnoses for this case. *(3 marks)*
- b) Outline the options for diagnostic evaluation of this case. Indicate which test is considered the most reliable for diagnosing ectopic ureters in female dogs. *(10 marks)*
- c) Testing demonstrates an intramural ectopic ureter on the left side. Describe the surgery you would perform in this case. *(8 marks)*
- d) Indicate the published success rate for surgery alone in resolving the incontinence in ectopic ureters. *(2 marks)*
- e) Name a minimally invasive option that has been described for treating intramural ectopic ureters. *(2 marks)*

**End of paper**