



Australian and New Zealand College of
Veterinary Scientists

Membership Examination

June 2022

Small Animal Dentistry and Oral Surgery

Paper 1

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

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

Answer **ALL FOUR (4)** questions

Answer **FOUR (4)** questions, each worth 30 marks total 120 marks

Paper 1: Small Animal Dentistry and Oral Surgery

Answer all four (4 questions)

1. Discuss oral fracture repair in the dog. As part of your discussion include:

- A brief outline of the various repair techniques (*18 marks*)
- The indications of each technique (*4 marks*)
- The advantages of each technique (*4 marks*)
- possible complications of inappropriate technique (*4 marks*)

Exclude external fixators and plating from your answer.

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

- a) Describe the location, structure and function of each of the tissues that make up the periodontium. *(15 marks)*
- b) Discuss how the structure and function of these tissues changes with the onset and progression of periodontal disease. *(15 marks)*

3. Answer **all** parts of this question

Local anaesthetics form a vital component of many analgesic plans formulated for patients undergoing dental procedures.

a) Describe the mode of action of local anaesthetic agents when used in nerve blocks. *(6 marks)*

b) What are the times to onset and duration of action of both lignocaine and bupivacaine? *(2 marks)*

c) What are the advantages of local anaesthesia over other forms of analgesia in oral surgery? Include in your answer pre, peri and post op analgesia.

(12 marks)

d) Compare and contrast how you would place a caudal maxillary nerve block versus an infra-orbital nerve block in a dog. Include in your answer:

- Anatomical considerations
- The technique utilised
- Structures anaesthetised

(10 marks)

4. Answer **all** parts of this question.
- a) Please answer all parts of this sub-question (*3 marks*)
- Name the cranial nerve that innervates the anterior two-thirds of tongue mucosa. (*1 mark*)
 - Name the cranial nerve that innervates the posterior third of tongue mucosa. (*1 mark*)
 - Name the cranial nerve that innervates the muscles of the tongue. (*1 mark*)
- b) Describe the **three (3)** individual stages of the tooth embryologic development. (*10 marks*)
- c) Outline the composition of the dentin and name the cell that forms dentin. (*1 mark*)
- d) Outline the composition of the enamel and name the cell that forms enamel. (*1 mark*)
- e) Outline the **three (3)** main functional phases/stages of amelogenesis and the role of ameloblasts during each stage. (*6 marks*)
- f) Describe the process that is involved in the root formation for a single-rooted tooth and the relation of epithelial rests of malassez. (*9 marks*)

END OF EXAMINATION



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Paper 2

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

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

Answer **ALL FOUR (4)** questions

Answer **FOUR (4)** questions, each worth 30 marks total 120 marks

Paper 2: Small Animal Dentistry and Oral Surgery

Answer all four (4) questions

1. A five-year-old male, neutered Boxer dog presents with halitosis and has not been chewing his food appropriately. On oral examination you note that the gingiva is enlarged and has almost engulfed some of the crown. The problem appears to involve all **four (4)** quadrants and has a reasonably symmetrical distribution

Answer **all** parts of this question.

- a) Outline the differential diagnoses and indicate the most likely differential diagnosis in this condition. *(5 marks)*
- b) Describe the consequences of generalized gingival enlargement if it is left untreated. *(10 marks)*
- c) Discuss your short- and long-term management of this case. Include details of any procedures performed. *(15 marks)*

2. You are performing a dental procedure on a twelve-year-old female, spayed cat. You have taken full mouth dental radiographs of this patient and determined that there is tooth resorption affecting the maxillary right canine tooth (104) and the mandibular left third premolar tooth (307).

Answer **all** parts of this question.

- a) Describe the radiographic techniques you would have used to obtain the images of these two teeth. (6 marks)
- b) Your radiographs reveal that tooth 104 is undergoing type 1 tooth resorption. Describe the typical radiographic appearance of a tooth with type 1 tooth resorption. (3 marks) Give a detailed description of your treatment plan for this tooth. (10 marks)
- c) Your radiographs reveal that tooth 307 is undergoing type 2 tooth resorption. Describe the typical radiographic appearance of a tooth with type 2 tooth resorption. (3 marks) Give a detailed description of your treatment plan for this tooth. (8 marks)

3. Compare and contrast the performance of extractions of the incisors in dogs and cats compared to the same procedure in rabbits

Include in your answer:

- Anatomy review (*8 marks*)
- Instrumentation and equipment required (*5 marks*)
- Indications for extraction (*5 marks*)
- Surgical techniques (8 marks)
- Possible complications (*4 marks*)

4. Answer **both** parts of this question:
- a) Describe **six (6)** different treatment options for bilateral linguoversion of the mandibular canine teeth (malocclusion class 1) that are causing contact trauma to the palate (*20 marks*)
 - b) Compare and contrast of the advantages and disadvantages of each of these techniques (*10 marks*)

END OF EXAMINATION