



# Australian and New Zealand College of Veterinary Scientists

## Membership Examination

June 2017

## Veterinary Behaviour Paper 1

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

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

Answer **ALL FOUR (4)** questions

Answer **FOUR** questions each worth 30 marks .....total 120 marks

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# Paper 1: Veterinary Behaviour

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## Answer all four (4) questions

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

- a) Define what is meant by diffuse modulatory systems in the brain. *(4 marks)*
- b) Explain the role of diffuse modulatory systems in the brain. *(3 marks)*
- c) List **four (4)** neuromodulatory systems **and** their associated neurotransmitters. *(4 marks)*
- d) Describe the anatomy of the raphe nuclei. *(4 marks)*
- e) What is the role of the raphe nuclei? *(2 marks)*
- f) Compare and contrast the use of tricyclic antidepressants and selective serotonin re-uptake inhibitors in the treatment of phobic disorders. *(9 marks)*
- g) Explain the neuropharmacology of acepromazine. *(4 marks)*

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

- a) Compare and contrast maternal behaviour in free range sows versus sows housed in farrowing crates. *(12 marks)*
- b) Describe adult aggressive and defensive behaviour in the ferret. *(4 marks)*
- c) Explain how to promote food intake in a cat utilising the natural ingestive behaviour of cats. *(6 marks)*
- d) Briefly discuss how calves play. *(2 marks)*
- e) Discuss why calves play. *(6 marks)*

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

- a) Define sleep. (5 marks)
- b) Describe the function of sleep. (5 marks)
- c) Discuss typical signals of communication used by horses within a social group **and** give examples. (4 marks)
- d) Discuss the advantages **and** disadvantages of living in a social group. (10 marks)
- e) List **and** briefly describe **six (6)** ways animals may navigate. (6 marks)

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

- a) Define learning, **and** list the primary neurological structures involved in learning in your answer. (4 marks)
- b) Define reinforcement **and** explain the use of different reinforcement schedules. (6 marks)
- c) Define extinction and desensitisation with an example of **each**, and briefly discuss the similarities **and** differences between them. (12 marks)
- d) Explain the term 'socialisation period', why it is important, and the consequences of social isolation during this period. In your answer, list the socialisation period in horses **and** cats. (8 marks)

**End of paper**



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## Paper 2

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Answer **ALL FOUR (4)** questions

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# Paper 2: Veterinary Behaviour

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Answer all four (4) questions

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

- a) An eight-month-old desexed Siamese cat is presented for wool sucking. The physical examination, haematology, biochemistry, thyroid panel urinalysis and faecal assessment were within normal limits. Viral profiles for feline leukemia virus and feline immunodeficiency virus were also negative.

Answer **all** parts of this sub-question:

- i. List questions you should ask during your history taking. (6 marks)
- ii. You diagnose the cat with compulsive disorder. Describe **three (3)** medications, **each** from a different class you might consider using in this case **and** justify your choice. (6 marks)
- iii. Justify your environmental or behavioural recommendations for this cat. (6 marks)

b) Answer **both** parts of this sub-question:

- i. Explain how the social structure of free-ranging goats facilitates the use of a 'Judas goat' in feral goat management. (5 marks)
- ii. Explain to a client who is trying to teach her dog to walk without pulling why you would not recommend using a choker/check chain. (7 marks)

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

- a) A client has presented a three-year-old cockatiel for chronic egg laying. The hen has been laying an uninterrupted series of eggs this spring. There is no male bird present, and no nesting box. An avian specialist has evaluated the bird and no medical problem was identified.

Answer **both** parts of this sub-question:

- i. Describe the behavioural causes for chronic egg laying and their aetiology. *(7 marks)*
- ii. Justify your environmental, management and behavioural recommendations for this bird. *(8 marks)*

b) Answer **both** parts of this sub-question:

- i. Discuss recommendations for the introduction of two new rabbits to minimise fighting. Include in your answer how you would recognise if the rabbits have bonded. *(10 marks)*
- ii. Describe the normal maternal behaviour of the female rabbit. *(5 marks)*

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

- a) A farmer contracts you to design a protocol for the yarding and transport of their deer to a slaughter facility. Describe and discuss the features that will maximise productivity, and create a high standard of welfare **and** safety. *(20 marks)*
- b) Describe and justify how you would train a young horse to load and float easily, **and** list the behaviour modification techniques being used. *(10 marks)*

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

- a) Six months ago, animal liberationists released a small population of rabbits from a laboratory which borders a previously 'rabbit free' national park. You are asked to design a pest management program to limit the impact of the population on the local area. Describe the management strategies you would recommend. *(15 marks)*
  
- b) Design an environmental enrichment program for a marine mammal of your choice **and** explain the benefits of implementing a successful enrichment program. *(15 marks)*

**End of paper**