



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2013

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 markstotal 120 marks

Paper 1: Veterinary Behaviour

Answer all four (4) questions

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

- a) List and briefly describe the areas of the brain involved in the serotonergic diffuse modulatory system. *(10 marks)*
- b) At the cellular level; describe the production, release, action and deactivation of serotonin. *(10 marks)*
- c) Discuss the influence of serotonin on behaviour. *(10 marks)*

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

- a) List and briefly describe the variety of vocal communications used by cats. *(10 marks)*
- b) Describe sexual behaviour in alpacas and briefly discuss how this knowledge can be used in a breeding program. *(10 marks)*
- c) Describe behaviour of the mare and foal in the first 24 hours postpartum. *(10 marks)*

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

- a) Answer **all** of the following:
 - i. Define altruism. Give **two (2)** brief examples of altruistic behaviour in non-human species. *(5 marks)*
 - ii. From an evolutionary perspective, discuss why altruism might occur. *(10 marks)*
- b) Describe predator avoidance behaviours in rabbits. *(15 marks)*

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

- a) Define classical conditioning and operant conditioning. Describe how they differ, using **two (2)** examples of each. *(20 marks)*

- b) For heifers, entering a dairy shed and being milked for the first time can be a frightening experience. Describe how both classical conditioning and operant conditioning are involved in turning a nervous heifer into a cow that confidently enters the milking shed and 'lets down' her milk. *(10 marks)*

End of paper



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Paper 2

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Answer **ALL FOUR (4)** questions

Answer **FOUR** questions each worth 30 markstotal 120 marks

Paper 2: Veterinary Behaviour

Answer all four (4) questions

1. A four-year-old entire male border collie is brought into your clinic on a stormy afternoon after having been found roaming. You are able to contact the owner using microchip details. When the owner arrives to pick up the dog she mentions that it is the fourth time in a month that her dog has escaped from her backyard and she has paid a small fortune in pound release fees. She seeks your advice in solving the escaping problem.

Answer **all** parts of this question:

- a) List your differential diagnoses for the escaping behaviour. (3 marks)
- b) List questions you would ask the owner that would assist you in making a diagnosis. (9 marks)
- c) After discussing the situation with the owner you diagnose that the dog suffers from a noise phobia. List the medications that you would consider prescribing for this dog and briefly describe why you have chosen them. (9 marks)
- d) List environmental management and behaviour modification options that you would recommend for this dog. (9 marks)

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

- a) You are called to investigate an otter showing a stereotypic locomotor swimming behaviour in an oceanarium.
 - i. Briefly describe additional information you would seek to investigate the problem. (7 marks)
 - ii. Describe the treatment options you would recommend for this patient. (8 marks)
- b) A client has called you to treat her two-year-old female galah for a feather picking problem. The galah has been seen by a registered specialist in avian medicine and a comprehensive investigation has identified no medical or dermatological causes for the feather picking. Describe your treatment recommendations for this patient. (15 marks)

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

- a) A large Australian poultry producer contracts you to design protocols for harvesting and transport of their broiler chickens prior to slaughter. The chickens have to travel for two hours to get from the farm to the abattoir. Describe and discuss the features of the system you would implement with the goal of creating a high standard of welfare, safety and productivity. (20 marks)

- b) A hobby farmer needs to transport a ram to a friend's property 10 kilometres away. They have a trailer with an enclosed wire top and a loading ramp. The ram is shared between the two properties and will need to travel back and forth regularly. They cannot get the ram to load into the trailer. Describe the advice you would give to enable safe loading and humane travel of the ram. (10 marks)

4. Stray and feral cats are a major problem in Australasia.

Answer **all** parts of this question:

- a) You are asked to design a stray and feral cat management program in **two (2)** different geographical locations. For **each** region, describe the management strategies you would recommend.
 - i. Region 1: A heavily populated municipality of Auckland. (10 marks)

 - ii. Region 2: A remote area of north-western Western Australia. The region includes a small reserve known to contain an endangered species of small marsupial. (10 marks)

- b) Discuss the reasons why your recommendations for the **two** regions described in Question 4 a) differ. (10 marks)

End of paper