



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2018

Medicine of Zoo Animals

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

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Paper 1: Medicine of Zoo Animals

Answer all four (4) questions

1. Answer **both** parts of this question:
 - a) Discuss the use of neuroleptic agents in zoo animals. Include the pharmacology of commonly used drugs, routes and methods of administration **and** potential adverse effects. (15 marks)
 - b) Discuss cardiovascular disease in great apes, including the epidemiology, pathophysiology, diagnosis **and** treatment. (15 marks)

2. Select **two (2)** mammalian herpesviruses that differ from each other with respect to the mammalian order that they primarily affect. Compare and contrast the clinical signs, diagnosis, treatment **and** prevention of infection of your **two (2)** selected viruses. (30 marks)

3. Answer **all** parts of this question:
 - a) Name the aetiological agent responsible for cryptosporidiosis in snakes **and** describe the clinical signs **and** diagnosis of this disease. (7.5 marks)
 - b) Describe the aetiology and clinical signs of Newcastle disease in columbiform birds. (7.5 marks)
 - c) Name the aetiological agent, **and** discuss the epidemiology, clinical signs **and** pathology of proventricular dilatation disease in psittacine birds. (7.5 marks)
 - d) Describe and compare the options for the chemical restraint of a perentie (*Varanus giganteus*). (7.5 marks)

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

- a) Provide a detailed description of the pathogenesis of capture/exertional myopathy in a zoo setting. *(10 marks)*

- b) Outline options for treatment **and** prevention of capture/exertional myopathy, including examples of zoo species with a known predisposition to this condition. *(20 marks)*

End of paper



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Paper 2: Medicine of Zoo Animals

Answer all four (4) questions

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

- a) Compare and contrast the approach to the diagnostic investigation of a multifocal cutaneous lesion in an axolotl (*Ambystoma mexicanum*) **and** a collared peccary (*Pecari tajacu*). (20 marks)
- b) Discuss how the administration of therapeutic agents may differ between these two species. (10 marks)

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

- a) List possible causes of infertility, low hatching rates **and** high levels of neonatal mortality in a zoo-based native passerine conservation breeding programme. (15 marks)
- b) Describe an investigation plan for such a scenario. (15 marks)

3. A dedicated facility for clinical evaluation, hospitalisation and quarantine of crocodylians and aquatic chelonians is being designed.

Answer **all** parts of this question:

- a) Describe the key features of and required equipment for such a facility that account for optimal husbandry, disease investigation **and** biosecurity. (10 marks)
- b) Discuss the health and safety risks for personnel working in such a facility **and** provide recommendations for minimising these risks. (10 marks)
- c) Design a quarantine protocol for newly-arrived animals at this facility. (10 marks)

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

a) Discuss the range of foot disorders seen in artiodactylids, perissodactylids **and** elephants in a zoo setting. *(15 marks)*

b) Outline the diagnosis, treatment and prevention of disorders identified in part 4 a), including a discussion of the practical **and** logistical challenges.

(15 marks)

End of paper