



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2014

Medicine of Australasian Wildlife Species 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

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Paper 1: Medicine of Australasian Wildlife Species

Answer all four (4) questions

1. Compare and contrast the anatomy and physiology of the respiratory systems of amphibians, birds and reptiles, noting the clinical relevance of differences. (30 marks)

2. For **four (4)** of the following, discuss:
 - a) aetiology and diagnosis of avian mycobacteriosis in captivity (7.5 marks)

 - b) the pathology and management of coccidiosis in kiwi (*Apteryx* spp.) (7.5 marks)

 - c) the provision of analgesia in reptiles (7.5 marks)

 - d) the clinical signs, diagnosis and treatment of exudative cloacitis in kakapo (*Strigops habroptilus*) (7.5 marks)

 - e) the clinical signs, pathogenesis and treatment of lead toxicity in waterfowl (7.5 marks)

 - f) the management of an eastern long-necked turtle (*Chelodina longicollis*) that has swallowed a fish hook. (7.5 marks)

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3. A cornerstone of zoological medicine is being able to restrain a broad range of species for veterinary procedures. Discuss the advantages, disadvantages **and** indications for the range of techniques (behavioural, physical and chemical) available to enable interventions for veterinary procedures to be performed in captive animals from the following taxonomic groups:
- a) Macropodidae (10 marks)
 - b) Chiroptera (10 marks)
 - c) Pinnipedia (10 marks)
4. For **four (4)** of the following, discuss:
- a) the aetiology and epidemiology of chorioretinitis in kangaroos (7.5 marks)
 - b) the diagnosis and treatment of chlamydiosis in koalas (*Phascolarctos cinereus*) (7.5 marks)
 - c) the epidemiology and pathology of *Klebsiella* spp. in New Zealand sea lions (*Phocarctos hookeri*) (7.5 marks)
 - d) the epidemiology, clinical signs and pathology of mucormycosis in platypuses (*Ornithorhynchus anatinus*) (7.5 marks)
 - e) the epidemiology and pathology of tuberculosis in brushtail possums (*Trichosurus vulpecula*) in New Zealand (7.5 marks)
 - f) the epidemiology, diagnosis and treatment of cryptococcosis in captive marsupials. (7.5 marks)

End of paper



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Paper 2

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Paper 2: Medicine of Australasian Wildlife Species

Answer all four (4) questions

1. Feather abnormalities have been noted in captive orange bellied parrots (*Neophema chrysogaster*) in a breed for release program. There is concern these clinical signs may be associated with psittacine beak and feather disease.

Answer **all** parts of this question:

- a) Discuss the options available to establish a definitive diagnosis, and to assess the prevalence in the population. (10 marks)
- b) Describe the means by which psittacine beak and feather disease could have entered this population. (10 marks)
- c) Discuss your recommendations to minimise transmission within the captive population, and between the captive and wild populations. (10 marks)

2. You have been assigned to coordinate the wildlife rescue response following a large coastal oil spill affecting large numbers of seabirds and pinnipeds.

Describe the logistical requirements of such a response, and discuss the approach to the triage, treatment, rehabilitation and release of affected animals. (30 marks)

3. Disease is a potential threatening process which can influence the success or failure of wildlife translocations for conservation management purposes.

Describe baseline health and disease evaluation for the translocation of **one (1)** species of native wild animal of your choice. Your answer should give consideration to the process of disease risk analysis and ongoing surveillance for the translocation. (30 marks)

4. Rehabilitation of sick, injured and orphaned native wildlife is a common practice. Discuss the potential welfare, biosecurity and conservation implications of wildlife rehabilitation, illustrating your answer with species-specific examples. (30 marks)

End of paper