

Australian College of Veterinary Scientists
Membership Examination

June 2010

Medicine of Australasian Wildlife Species

Paper 1

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

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

Answer **four (4)** from the six questions **only**.

All questions are of equal value.

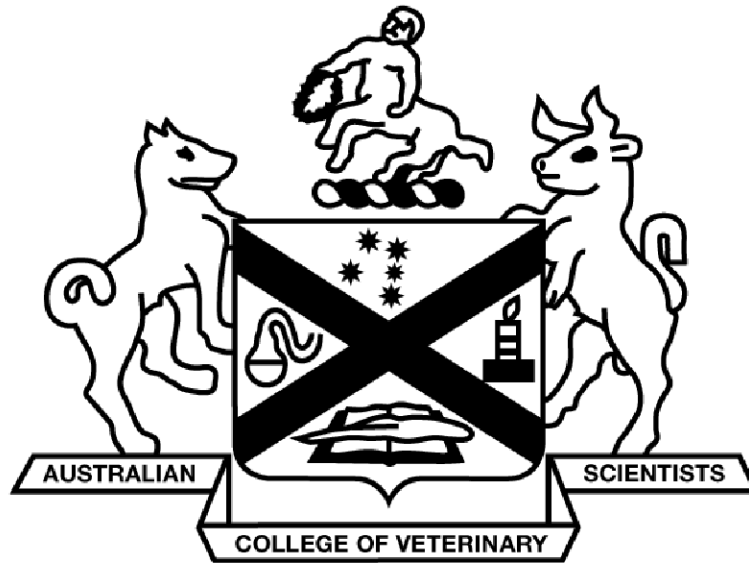
Subsections of questions are of equal value unless stated otherwise.

Paper 1: Medicine of Australasian Wildlife Species

Answer four (4) from the six questions only.

1. Compare and contrast the major anatomical and physiological differences between the renal systems of mammals, birds, reptiles and amphibians.
2. Discuss the role of the wildlife veterinarian in monitoring emerging infectious diseases in wildlife populations. Include in your answer **three (3)** examples of current emerging diseases and a discussion of the advantages and disadvantages of active surveillance versus passive surveillance.
3. Discuss the veterinarian's role in the captive breeding of endangered wildlife for release using **three (3)** of the species below as examples. Your answer should include information on preventative medicine, potential diseases of concern and disease surveillance.
 - a) orange bellied parrot
 - b) Tasmanian devil
 - c) green and gold bell frog
 - d) brush tailed rock wallaby
 - e) western swamp tortoise.
4. Population management is an important part of the veterinarian's role. Discuss techniques available to reduce overabundant populations. Include in your answer pharmacological, surgical and physical means for achieving this and discuss the relative merits of each.
5. Discuss the roles that veterinarians may play in wildlife emergency situations. In your answer, discuss at least **three (3)** specific examples of wildlife emergencies requiring veterinary involvement.
6. Sedation and anaesthesia are frequently required to perform even minor procedures in free ranging and captive wild animals. Discuss the advantages, disadvantages, basic pharmacology and the indications and contraindications when working with wildlife of **three (3)** of the following anaesthetic/sedative drugs:
 - a) diazepam
 - b) tiletamine hydrochloride/zolazepam hydrochloride
 - c) alfaxalone
 - d) propofol
 - e) medetomidine hydrochloride.

End of paper



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Paper 2

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Answer **four (4)** from the six questions **only**.

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Paper 2: Medicine of Australasian Wildlife Species

Answer four (4) from the six questions only.

1. Write notes on **four (4)** of the following:
 - a) transmission, clinical signs, pathology, diagnosis, prevention and significance of West Nile virus in birds
 - b) transmission, clinical signs, pathology, diagnosis, prevention and significance of highly pathogenic avian influenza (H5N1)
 - c) diagnosis, treatment and prevention of botulism in wild ducks
 - d) management of a cormorant that has swallowed a fish hook
 - e) compare and contrast clinical signs and diagnosis of psittacine circovirus infection and psittacine polyomavirus infection
 - f) diagnosis and management of herpesvirus infections in raptors.

2. Write notes on **four (4)** of the following:
 - a) anaesthesia of pinnipeds
 - b) transmission, clinical signs, pathology, diagnosis, prevention and epidemiology of *Mucor amphibiorum* in platypus
 - c) pathogenesis of devil facial tumour disease
 - d) diagnosis and treatment of chlamydophilosis in koalas
 - e) transmission, clinical signs, pathology, diagnosis and prevention of macropod herpesvirus infection
 - f) pathogenesis, clinical signs, pathology, treatment and prevention of exudative dermatitis in possums.

3. Write notes on **four (4)** of the following:
 - a) clinical signs, pathology, diagnosis, prevention and significance of fibropapillomatosis in sea turtles
 - b) anaesthesia of frogs
 - c) clinical signs, pathology and diagnosis of ophidian paramyxovirus infection
 - d) diagnosis and management of cryptosporidiosis in a colony of snakes
 - e) pathogenesis, clinical signs, treatment and prevention of dental disease in captive agamids
 - f) clinical signs, pathology and treatment of chytridiomycosis.

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4. Toxins, either naturally occurring or introduced, may be the cause of significant disease in both captive and free-ranging native animals. Discuss the aetiology, pathogenesis, diagnosis and treatment of **three (3)** diseases in native animals caused by exposure to toxins.

5. Discuss the management of health problems during hand rearing and rehabilitation of orphaned marsupials and monotremes. Include information on nutrition, husbandry and relevant preventative medicine practices. Include **three (3)** species-specific examples in your discussion.

6. Describe your approach to the assessment, medical and surgical management and care during rehabilitation of an adult female osprey with a closed mid-shaft fracture of the left humerus. Your answer should include information on available fracture repair techniques, appropriate analgesia and diseases likely to be encountered during the post operative/rehabilitation period.

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