



Australian and New Zealand College of Veterinary Scientists

Fellowship Examination

November 2020

Avian Medicine and Surgery **Paper 1**

Perusal time: **Twenty (20)** minutes

Time allowed: **Three (3)** hours after perusal

Answer **ALL SIX (6)** questions

All six (6) questions are of equal value.

Answer **SIX (6)** questions, each worth 30 markstotal 180 marks

Paper 1: Avian Medicine and Surgery

Answer all six (6) questions

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

- a) Explain the key anatomical and physiological differences between birds and mammals that must be considered when performing an ophthalmological examination in birds. *(20 marks)*
- b) Describe the embryological development of the avian eye. *(10 marks)*

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

- a) Compare and contrast the anatomical and physiological adaptations of the avian gastrointestinal tract to a nectivorous and faunivorous diet using a lorikeet and a falcon as exemplars. *(15 marks)*
- b) Discuss the clinical signs **and** diagnosis of hepatic disease in psittacine birds. *(15 marks)*

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

- a) With respect to aspergillosis and avian chlamydiosis compare and contrast:
 - i. the differing immunological responses that can occur with infection and disease *(10 marks)*; and
 - ii. the predisposing factors for infection and disease *(10 marks)*.
- b) Describe the usefulness and limitations of serological testing as a diagnostic tool. *(10 marks)*

Continued over page

4. Answer **all** parts of this question regarding the artificial incubation of avian eggs:
- a) Describe the different kinds of malposition, and the consequence of each. *(5 marks)*
 - b) List the most common differential diagnoses for embryonic losses in each trimester of incubation. *(7 marks)*
 - c) Discuss how you would set up and monitor the artificial incubation process for a commercial aviculture venture. Include in your answer egg collection, incubator management and hygiene and details of the monitoring process. *(18 marks)*
5. Answer **both** parts of this question:
- a) List the predisposing factors, pathogenesis, clinical signs and grading system used for atherosclerosis in avian patients. *(20 marks)*
 - b) Discuss the diagnosis and medical management of atherosclerosis in birds. *(10 marks)*
6. Sixteen-week-old pullets were added to an existing flock of backyard chickens (*Gallus gallus*). The new birds have developed nasal discharge, sneezing and malaise. List **five (5)** likely differential diagnoses for this flock of birds *(5 marks)* and, for each differential diagnosis, describe the clinical signs, diagnosis, treatment and prevention *(25 marks)*.

End of paper



Australian and New Zealand College of Veterinary Scientists

Fellowship Examination

November 2020

Avian Medicine and Surgery

Paper 2

Perusal time: **Twenty (20)** minutes

Time allowed: **Three (3)** hours after perusal

Answer **ALL SIX (6)** questions

All six (6) questions are of equal value.

Answer **SIX (6)** questions, each worth 30 markstotal 180 marks

Paper 2: Avian Medicine and Surgery

Answer all six (6) questions

1. A two-year-old, female Eclectus parrot (*Eclectus roratus macgillivrayi*) is presented for an acute onset of vomiting and lethargy.

Answer **both** parts of this question:

- a) Describe the current best practice in initial supportive care and diagnostic evaluation of this patient. (15 marks)
- b) List **five (5)** of the most likely differential diagnoses and discuss specific considerations and treatment options for each. (15 marks)

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

- a) Compare and contrast the steps required to confirm a diagnosis for the following neoplastic diseases:
 - i. Squamous cell carcinoma of the uropygial gland in a cockatoo (*Cacatua galerita galerita*). (6 marks)
 - ii. Lymphosarcoma of the wattle in a chicken (*Gallus gallus*). (6 marks)
 - iii. Fibrosarcoma in the beak of a Blue and Gold Macaw (*Ara ararauna*). (6 marks)
- b) Outline the client, animal and disease factors which would influence your treatment plan for these three types of neoplasm. (12 marks)

Continued over page

3. Discuss the incursion into Australia, transmission, clinical signs, treatment and prevention of pigeon paramyxovirus (PPMV-1). (30 marks)
4. A 10-year-old female cockatiel (*Nymphicus hollandicus*) is presented with suspected oviduct impaction.

Answer **all** parts of this question:

- a) Briefly describe the assessment (3 marks), diagnostic testing (4 marks), and treatment plan (3 marks) for this case.
- b) Assuming that surgery is ultimately required, please outline a plan for surgical resolution, including:
 - i. Justification for the preferred surgical approach. (2 marks)
 - ii. Details of the planned anaesthetic method, including and justifying such details as: (14 marks)
 - choice of premedication
 - mode of induction
 - maintenance of anaesthesia, including gas flow rates and choice of anaesthetic circuit
 - anaesthetic monitoring.
 - iii. Post-operative analgesic regime. (4 marks)

Continued over page

5. Describe, in detail, the approach to managing the pre-operative, intra-operative and post-operative cardiovascular status of a three-year-old, female Southern Brown Kiwi (*Apteryx australis*) undergoing a surgical repair of a fractured femur. Include in your answer the assessment, planned responses to changes in cardiovascular status, and potential sequelae to mismanagement. (30 marks)
6. A 20-year-old, female galah (*Eolophus roseicapilla*) is presented with a medium-term history (4–6 weeks) of feather damaging behaviour over the sternal margin and ventral coelomic area.

Answer **all** parts of this question:

- a) Describe the physical assessment and recommended diagnostic work up of this case. (10 marks)
- b) Describe the behavioural assessment and work up of this case. (10 marks)
- c) Assuming that no medical reasons for the feather damaging behaviour were found, describe a potential treatment plan for this animal, including environmental, behavioural and medical interventions. (10 marks)

End of paper