



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2017

Medicine of Goats

Paper 1

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

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

Answer **ALL SIX (6)** questions

Answer **SIX** questions each worth 20 markstotal 120 marks

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Paper 1: Medicine of Goats

Answer all six (6) questions

1. Describe the important predisposing factors and clinical signs of **each** of the following:
 - a) pregnancy toxaemia (5 marks)
 - b) urinary calculi (5 marks)
 - c) polioencephalomalacia (cerebrocortical necrosis) (5 marks)
 - d) lactic (rumen) acidosis. (5 marks)

2. Describe the clinical signs **and** explain the pathophysiology in goats for **each** of the following:
 - a) foot and mouth disease (5 marks)
 - b) Johne's disease (paratuberculosis) (5 marks)
 - c) caseous lymphadenitis (5 marks)
 - d) hypocalcemia. (5 marks)

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3. Answer briefly **each** of the following questions:

- a) If eaten, which garden plants can result in vomiting in goats? (2 marks)
- b) For how many months does the enterotoxaemia vaccine provide protective antibody levels in goats? (2 marks)
- c) Describe the anatomical location(s) used for administration of local anaesthetic to achieve desensitisation of the nerves supplying the horn of the goat. (2 marks)
- d) How long does an injection of meloxicam (either subcutaneous or intravenous) provide pain relief in goats? (2 marks)
- e) What age does puberty occur in male goats? (2 marks)
- f) What is the cut off point for somatic cell counts that indicates sub-clinical mastitis in goat's milk? (2 marks)
- g) Which undesirable gene is linked to the poll gene in goats? (2 marks)
- h) At what age should a veterinarian surgically castrate male kids that are going to be kept as pet wethers? (2 marks)
- i) At what dose rate should a white drench that is only registered for sheep e.g. Rycoben broad spectrum sheep and lamb drench (albendazole), be prescribed for goats? (2 marks)
- j) Which joint should be used for an epidural to block the flank, inguinal and perineal areas? (2 marks)

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4. For **each** of the following, describe the likely presenting history, and discuss the advantages **and** limitations of tests and procedures for confirmation of diagnosis:
- a) enterotoxaemia (5 marks)
 - b) iodine deficiency in kids (5 marks)
 - c) coccidiosis in kids (5 marks)
 - d) footrot. (5 marks)
5. Identify **ten (10)** differential diagnoses for swellings on the head and neck of a goat, including the clinical signs and **most** likely cause of **each** differential e.g. organism name, genetic, and so on. (20 marks)
6. Answer **both** parts of this question:
- a) Identify the main clinical signs for **each** of these exotic diseases of goats:
 - i. peste des petits ruminants (PPR or goat rinderpest) (5 marks)
 - ii. scrapie (5 marks)
 - iii. *Brucella melitensis* (4 marks)
 - iv. clinical bluetongue. (4 marks)
 - b) Describe the process for reporting exotic diseases in Australia or New Zealand. (2 marks)

End of paper



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Answer **ALL SIX (6)** questions

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Paper 2: Medicine of Goats

Answer all six (6) questions

1. A large scale fibre goat producer contacts you as they suspect drench resistant worms on the property.

Answer **both** parts of this question:

- a) Describe how drench resistance could be confirmed. (10 marks)
- b) If anthelmintic resistance is confirmed in only *Haemonchus contortus*, what worm control protocols should be suggested to the owner? (10 marks)

2. Gastro-intestinal nematodes are a major problem for goats.

Answer **both** parts of this question:

- a) Relying on drenches should not be the sole method of worm control. Describe the other methods for worm control that should also be used for goats. (10 marks)
- b) Explain the term 'refugia' and why it is important in preventing drench resistance developing. (10 marks)

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3. A client with a commercial dairy goat enterprise is concerned about poor growth rates of artificially reared kids in the first four weeks of life. The kids are being raised on a commercial powdered milk replacer.

Answer **all** parts of this question:

- a) How would you investigate the owner's concern of poor growth rates in the kids? *(10 marks)*
- b) What advice could be given to the owner about disease risks of feeding bulk raw goats' milk to kids? *(8 marks)*
- c) Should lambs be fed with bulk raw goats' milk? Explain briefly your reason(s). *(2 marks)*

4. A colleague contacts you for advice about how to investigate an abortion storm on a goat farm.

Answer **all** parts of this question:

- a) Discuss briefly the **five (5) most** likely causes of the abortion storm. *(5 marks)*
- b) Describe the gross pathological changes you would expect to find with **each**. *(10 marks)*
- c) Describe briefly the specimens that would be useful to confirm a diagnosis. *(5 marks)*

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5. Trace element deficiencies are suspected by the owners to be causing weaner ill-thrift on a goat property.

Answer **all** parts of this question:

- a) Describe the **four (4) most** important trace mineral deficiencies which interfere with the growth rates of weaner goats in Australia or New Zealand (choose the region with which you are most familiar). *(5 marks)*
 - b) What are the **three (3) most** likely differential diagnoses to trace mineral deficiency for weaner goat ill-thrift? *(5 marks)*
 - c) Explain how you would investigate this problem. *(10 marks)*
6. Your largest commercial goat client asks you to develop a biosecurity plan for this property and their goats.
- Briefly state the type of property and goat operation and answer **both** parts of this question:
- a) Explain which diseases should be considered. *(8 marks)*
 - b) Describe **and** justify the methods that will best protect this client's herd from these diseases. *(12 marks)*

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