



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

© 2017 Australian and New Zealand College of Veterinary Scientists ABN 00 50 000894 208
This publication is copyright. Other than for the purposes of and subject to the conditions prescribed under the Copyright Act, no part of it may in any form or by any means (electronic, mechanical, microcopying, photocopying, recording or otherwise) be reproduced, stored in a retrieval system or transmitted without prior written permission. Enquiries should be addressed to the Australian and New Zealand College of Veterinary Scientists

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)

Continued over page

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)

Continued over page

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



Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2017

Medicine of Goats

Paper 2

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

© 2017 Australian and New Zealand College of Veterinary Scientists ABN 00 50 000894 208
This publication is copyright. Other than for the purposes of and subject to the conditions prescribed under the Copyright Act, no part of it may in any form or by any means (electronic, mechanical, microcopying, photocopying, recording or otherwise) be reproduced, stored in a retrieval system or transmitted without prior written permission. Enquiries should be addressed to the Australian and New Zealand College of Veterinary Scientists

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)

Continued over page

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)*

Continued over page

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)*

End of paper