

Australian College of Veterinary Scientists
Membership Examination

June 2011

Medicine of Goats
Paper 1

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

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

Answer **ALL** **twenty (20)** questions

Answer **ALL** questions each worth 1 to 10 markstotal 100 marks

Paper 1: Medicine of Goats

Answer ALL twenty (20) questions

1. List **five (5)** common causes of lameness in housed dairy adult goats, which are not exotic to Australia and/or New Zealand. For each of the **five (5)** named causes list **two (2)** important preventative management practices that can be used to alleviate the condition. (7 marks)

2. Discuss the effects of the following conditions in goats. Include in your answer the economical impact on the herd:
 - a) copper deficiency in a fibre goat herd (3 marks)
 - b) selenium deficiency in a herd of Boer goats (3 marks)
 - c) iodine deficiency in a herd of milking goats. (3 marks)

3. A farm milking 500 British Alpines has a high milk iodine level (five times the desirable level) that is affecting the saleability of their milk to the processor. The farmer is not actively supplementing the diet with minerals containing iodine. The goats are fed only forages grown on farm and 500 grams/day of a purchased goat pellet in the dairy during milking. List other sources of iodine besides salt mineral blocks or loose minerals. Discuss the steps you would take to ensure saleable milk without compromising the health of the goat. (4 marks)

4. A client presents you with a three-year-old pet Australian Melaan doe that has been sporadically vomiting for the last 12 hours. Discuss the most likely cause(s) of the vomiting and how you would treat this case based on your differential diagnosis. (5 marks)

5. Discuss the most likely genetic cause of a recumbent newborn kid with a domed skull; exhibiting intention tremors, carpal contractures, and fetlock hyperextension. (2 marks)

6. Discuss the most likely cause of a recumbent doe three weeks from her expected kidding date carrying multiple fetuses. Explain how you would treat this case to obtain viable kids and prevent this condition from occurring in the future. (6 marks)

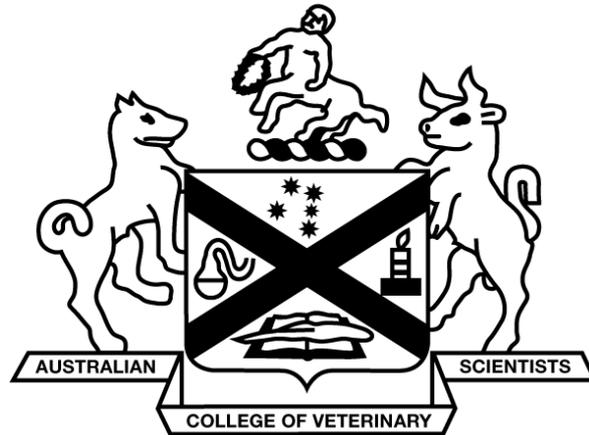
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7. List the **five (5)** main clinical syndromes in goats with caprine encephalitis. *(5 marks)*
8. Answer **all** subparts of this question:
- a) A North Island New Zealand farmer wants to provide milk year round to their processor. They milk 1000 Saanen does and want to kid 650 during July and 350 during the first three weeks of December. They will use natural pen mating for the does to kid in July and artificial insemination for the ones to kid in December. Discuss the natural triggers for the onset of the breeding season. *(1 mark)*
 - b) Describe **two (2)** methods used to breed goats out of season. *(2 marks)*
 - c) Discuss the optimal time to inseminate the goats to kid in December to maximize the number of kids born-per-doe over the three-week-period. *(3 marks)*
9. Discuss possible causes of a ten-day oestrus cycle in goats. *(3 marks)*
10. List **four (4)** causes of haemorrhagic diarrhoea in an 18-month-old milking doe. In your answer highlight any effects these causes may have on workers handling the doe. *(5 marks)*
11. Name an exogenous compound that can be used to delay the shedding of Cashmere goats to prevent post-shearing deaths under cold climatic conditions. *(3 marks)*
12. Discuss the most likely cause of an overall decreased milk production in a Toggenburg herd with a low milk fat to milk protein ratio and how you would treat/or prevent this condition. *(5 marks)*
13. Discuss the potential outcomes when breeding a polled Saanen doe to a polled Saanen buck. *(2 marks)*

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14. You are presented with an uncoordinated eight-day-old kid that has a decreased suckle reflex, muscle weakness and is not dehydrated and not scouring. You have ruled out white muscle disease. Discuss another possible differential for this case and how you would treat this condition. *(5 marks)*
15. A dairy herd (60% Saanen, 40% Toggenburg) has an average milk protein and milk fat percentage of 2.7% and 2.8% respectively. Discuss how the owners might significantly increase the herd's milk protein percentage. *(4 marks)*
16. An indoor dairy goat farm rears about 200 replacement kids indoors. They have a few seven-week-old buck kids with enlarged epiphyses and costochondral junctions, with bowing of the rear legs. Write short notes on the diagnosis, treatment, and prevention of this condition. *(5 marks)*
17. Describe how to diagnose **four (4)** different diseases in goats that are exotic to New Zealand and/or Australia (specify the country) and what you would do if you have identified an exotic disease on a farm with 600 meat goats and 800 sheep. *(10 marks)*
18. There has been an acute outbreak of polyarthritis and pneumonia on a calf rearing operation that has been feeding discarded unpasteurized milk from a dairy goat farm which has also been having problems with polyarthritis in their kids. Write short notes on the most likely diagnosis and the further management on their 350 head milking dairy goat farm. *(5 marks)*
19. A yearling Angora goat dies within 12 hours of showing clinical signs of depression, tachycardia and ataxia. On post mortem you find brown-coloured blood and mucous membranes. Another 20 goats in the herd of 400 are weak and/or recumbent. Discuss the likely cause of the death and how to treat and manage the remaining live animals. *(3 marks)*
20. Write short notes on any differences between the diagnosis and/or clinical signs of the following diseases in goats compared with cattle:
- a) footrot *(2 marks)*
 - b) Johne's disease *(2 marks)*
 - c) hypocalcaemia. *(2 marks)*

End of paper



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Paper 2

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

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

Answer **ALL four (4)** questions

All four questions are of equal value

Answer **FOUR** questions each worth 30 markstotal 120 marks

Paper 2: Medicine of Goats

Answer **ALL** four (4) questions

1. A commercial seasonal 680 head dairy goat farm is having a problem with a decreased kidding percentage. 33% of the total does mated fail to produce healthy live kids. The problems are multifactorial including an increase in stillbirths, weak kids, some vaginal prolapsing, less multiple births, abortions and empty does. The problems are not aged-related. Explain your approach to a reproductive program to increase kidding percentage and minimise kid losses on this farm. (30 marks)
2. Design an annual internal and external parasite prevention program for a 2000 head Angora goat farm. Provide in your proposed program, a discussion of the product(s) you would use, and their frequency and rotational schemes. Indicate if you would recommend using the same program in subsequent year(s) on this farm. (30 marks)
3. A 1000-head indoor goat dairy farm, with a 60-bale external rotary milking shed is having problems with poor milk quality. The owners have been grading because their Coliform and BactoScan/APC levels have been elevated for fourteen consecutive pick-ups and their bulk milk somatic cell counts (BMSCC) have fluctuated between 600,000 cells/ml and 2.8 million cells/ml during this period. The fluctuation of the BMSCC does not coincide with either the Coliform or BactoScan/APC levels. There have been only a few cases of clinical mastitis, and they continue to grade for elevated coliform and bactoscan/APC levels. Describe your systematic approach to this case to determine the possible source(s) of the problem. In your answer: list the questions you would ask; indicate the areas of management you will investigate, and the diagnostic technique(s) you will use; also explain the treatments for mastitis cases, and the prevention management techniques you will suggest. (30 marks)
4. The owner of an 800-head goat herd wants to eradicate CAE from their herd. 20% of the adult goats in the herd are exhibiting clinical signs of CAE. Discuss how you would determine the true prevalence of CAE in the herd. Explain the sensitivity and specificity of the test(s) you plan to use. You determine the prevalence of CAE in this herd is 48%. The owner can't afford to cull all positive animals and can only afford to rear 15% replacements a year. Design a program to eradicate CAE from this herd. Explain how long you expect it will take to get complete eradication from this herd. (30 marks)

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