Australian and New Zealand College of Veterinary Scientists

Membership Examination

June 2017

Medicine of Dairy Cattle

Paper 1

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

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

Answer **ALL <u>FOUR (4)</u>** questions

Answer **<u>FOUR</u>** questions each worth 30 marks .....total 120 marks

Paper 1: Medicine of Dairy Cattle

Answer all four (4) questions

1. Discuss the aetiology, pathogenesis and clinical diagnosis of **each** of the following:

   a) infectious pustular vulvovaginitis *(10 marks)*

   b) infectious bovine keratoconjunctivitis *(10 marks)*

   c) foot and mouth disease. *(10 marks)*

2. Discuss the risk factors, diagnosis **and** management of hypophosphataemic post-parturient haemoglobinuria. *(30 marks)*

3. Discuss the aetiology, clinical presentation and treatment options for **each** of the following diseases:

   a) dermatophytosis *(10 marks)*

   b) digital dermatitis *(10 marks)*

   c) listeriosis. *(10 marks)*

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

   a) Describe the pathophysiology of *Escherichia coli* diarrhoea in neonatal calves. *(15 marks)*

   b) Discuss the treatment(s) you would use to successfully correct dehydration in recumbent neonatal calves affected by neonatal diarrhoea. *(15 marks)*

End of paper

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Paper 2

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Answer **ALL <u>FOUR (4)</u>** questions

Answer **<u>FOUR (4)</u>** questions each worth 30 marks.....total 120 marks

Paper 2: Medicine of Dairy Cattle

Answer all four (4) questions

1. A client has requested your assistance with a mid-season mastitis problem in a large dairy herd. The herd is milked twice daily through a 70-bail rotary shed with automatic cluster removers and automatic post-milking teat disinfection.

   The herd currently has an average bulk milk somatic cell count of 250,000 cells per ml which fluctuates between 200,000 and 300,000 cells per ml. The current monthly clinical mastitis case rate is 7%.

   At your initial milking time visit, you discover that at least 20% of the cows have either rough or very rough teat-end hyperkeratosis, and 40% of the cows have at least 100 ml of milk in one or more quarters after being milked.

   Answer **both** parts of this question:

   a) Account for milking machine factors that might contribute to your findings **and** discuss the advice you would give to reduce the incidence and prevalence of mastitis in this herd in the short **and** long term. *(20 marks)*

   b) Outline the final action plan that you develop to resolve this problem. *(10 marks)*

2. You suspect ketosis in a high producing dairy herd.

   Answer **both** parts of this question:

   a) Discuss your approach to confirming the diagnosis of ketosis. *(10 marks)*

   b) Your individual cow tests reveal serum beta-hydroxybutyrate levels of >1400 umol/L. Provide a prevention and control plan for this farm that will reduce the incidence and prevalence of ketosis in this herd now and in future. *(20 marks)*

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3. You have been asked by a veterinary colleague to assist with a herd that has had at least 30% of cows in anovulatory anoestrus prior to the mating start date each year for the past three seasons.

   Provide a detailed account of the advice you would give to your colleague to identify and treat the anovulatory anoestrus cows **and** to reduce the future prevalence of anovulatory anoestrus in this herd. *(30 marks)*

4. A veterinary colleague requests your assistance to help manage the use of antibiotics on one of their clients' dairy farms. The vet and the farmer are both concerned about the increased use of several different types of antibiotics being used in treating interdigital necrobacillosis (foot rot).

   Discuss the advice you would give to your colleague that will successfully control the incidence of this disease **and** rationalise the use of antibiotics. *(30 marks)*

End of paper