

ROYAL COLLEGE OF VETERINARY SURGEONS

STATUTORY EXAMINATION FOR MEMBERSHIP

The horse

PAPER 1

3 hours

Wednesday 3 May 2006

This examination question paper is in two sections – Section A and Section B. Each section carries 50% of the total marks available for this examination paper and candidates are advised to allocate their time accordingly.

Within questions percentages in brackets are used to indicate what proportion of the marks for that question has been allocated to a particular part or sub-section of the question.

*Candidates should answer **THREE** questions from Section A and should attempt **ALL** questions in Section B.*

Candidates should start each answer on a new answer sheet and write the question number in the margin of each sheet used.

SECTION A (answer **either** (a) **or** (b) from each of the 3 pairs of questions)

- 1a. List the clinical signs which would lead you to suspect a problem affecting the cheek teeth of a horse (50%). What investigations would you carry out to confirm your suspicions (15%)? What options are there for removal of a cheek tooth (20%)? Briefly give the advantages and disadvantages of each method (15%).

OR

- 1b. You are called to see a horse that has become tangled in wire fencing and has sustained a heel bulb laceration. Discuss the consequences of this type of injury (50%) and describe how you would evaluate and treat the case (50%).

- 2a. Prepare a one page “handout” for distribution to lay horse owners who keep their horses at a mixed livery stable in the UK, showing the most important aspects of anthelmintic therapy in horses. The handout should show clear information expressed in “intelligent layman’s terms” and should avoid scientific or obscure expressions.

OR

- 2b. Nodular skin disease in the horse covers a spectrum of well recognised conditions. List 5 (five) possible causes of cutaneous nodules in horses and for 2 (two) of these causes describe the aetiopathogenesis, epidemiology, main clinical features and

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treatment options.

- 3a. When carrying out a pre-purchase examination, veterinary surgeons need to be mindful of the fact that an increasing number of horses undergo surgical procedures during their lifetime. List 3 (three) surgical procedures that you might check for during the course of such an examination. For each, discuss the evidence you would look for, and the advice (with reasons) that you would give to the prospective purchaser in the event of positive findings.

OR

- 3b. You are presented with a horse with an acutely painful eye. The owner reports that the horse was normal when she last saw it the previous evening in the field with 3 (three) other horses. When she went to feed it in the morning its eye was closed and there were large amounts of tears streaming down the side of its face. The eye is held tightly closed and the horse actively resents any attempt to examine it.

How would you manage this case (50%)? What techniques would you employ to establish a diagnosis?

Briefly outline how you might treat the most likely conditions affecting a horse with this history (50%).

SECTION B (*answer **all** questions*)

1. What clinical signs would make you suspect that a horse had gastric rupture? (50%) How would you confirm your diagnosis? (50%)
2. Illustrate the anatomical structures which enable the horse to lock its stifle in extension. (50%) What clinical signs would you associate with upward fixation of the patella? (50%)
3. Briefly describe how you would perform abdominocentesis in a horse. (30%). How would you evaluate a peritoneal fluid sample taken from a horse with colic? (30%) and what conclusions might you draw? (40%)
4. What diagnostic procedures would you carry out prior to endoscopy in a horse suspected of having left recumbent laryngeal neuropathy? (100%)
5. Describe how you would perform posterior (caudal) epidural anaesthesia in a thoroughbred mare prior to repairing a third degree perineal laceration (100%).

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6. Briefly outline your chosen method for the management of dermatophytosis in an individual horse stabled in a large livery yard. (100%)
7. Outline how you would perform an “overnight low dose dexamethasone suppression test” to confirm a diagnosis of “Equine Cushing’s Disease” in a 24 year old pony, noting the changes that would indicate a positive result and comment on any possible complications that could arise. (100%)
8. Briefly describe how you would perform a Zinc Sulphate Turbidity Test to establish the IgG status of a 24 hour-old Thoroughbred foal. What other test would you use to confirm the result? (100%)
9. You need to administer the following drugs at the doses stated to a 400 kg Welsh Pony Mare. From the information provided calculate the volume of the drug you would administer.
[Show how you have calculated the volume in your answer]
 - Procaine penicillin (200,000 iu/ml) at a dose of 20,000 iu / kg bodyweight (30%)
 - Gentamicin sulphate (50 mg/ml) at 6.6 mg/kg bodyweight (40%)
 - Flunixin meglumine (50 mg/ml) at a dose rate of 1 mg/kg (30%)
10. Outline the interval requirements for primary vaccination against:
 - TETANUS (20%)
 - EQUINE INFLUENZA (20%)
 - HERPES VIRUS (20%)
 - STRANGLES (20%)
 - EQUINE VIRAL ARTERITIS (20%)

Small Companion Animals

PAPER 2

3 hours

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SECTION A (answer **either** (a) **or** (b) from each of the 3 pairs of questions)

- 1a. You are presented with an 11 year old female German Shepherd dog with a history of breathlessness and reluctance to exercise. Her mucous membranes are pale and you discover that she has a PCV of 0.15 l/l.
- Outline and classify the causes that you would consider for this presentation, (25%)
 - Describe your initial clinicopathological approach to this case, indicating how you would interpret the tests that you use to classify the problem further. (75%)

OR

- 1b. You are presented with an 8 year old entire male Flat Coated Retriever which has been pyrexia for 2 weeks despite antibacterial therapy. **List** the differential diagnoses that you would consider for this presentation, and outline your diagnostic approach to this case.

- 2a. You are presented with a 5-year-old miniature Dachshund with a history of acute-onset paraplegia of 12 hours duration. List the differential diagnoses for this condition (20%). Describe in detail your neurological examination of this animal (30%), how this would help localise a lesion (10%), and indicate the significance of your potential findings (10%). What management options are there for this dog (30%)?

OR

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- 2b. A 4-year-old Labrador presents with lameness of the right hindlimb of 4 weeks duration. The right stifle (genual) joint is swollen. List the differential diagnosis for a swollen stifle joint in this patient (30%). What further clinical and diagnostic tests would you perform (20%)? For one of your differential diagnoses, outline how you would manage the condition (50%).
- 3a. Discuss the aetiopathogenesis (50%) and management (50%) of osteoarthritis of the canine hip joint.
- OR**
- 3b. You are presented with a thin 13 year old domestic shorthaired cat which has been polyuric and polydipsic for 1 month but has been depressed for the last 2 days. On examination the kidneys feel small and irregular and the cat is dehydrated. You identify that the cat has moderate azotaemia, mild anaemia and her urine specific gravity is low (1.015) with mild proteinuria. She is also moderately hyperphosphataemic. The owner does not want any more investigations. Describe your short and long term therapeutic options.

SECTION B (answer *all* questions)

1. List the signs of canine hepatic encephalopathy.
2. Write short notes on the mechanisms of action of the following drugs in small animal cardiology:

• frusemide (furosemide)	30%
• pimobendan	30%
• enalapril	40%
3. How would you diagnose feline asthma?
4. Outline the aetiopathogenesis of canine hyperadrenocorticism.
5. You are presented with a cat that is refusing to eat. List 8 (eight) methods that you could employ to ensure that the cat receives adequate nutrition whilst the cause of its anorexia is being investigated.
6. A 3-year-old Lhaso Apso presents with acute-onset unilateral blepharospasm, conjunctivitis and excessive lacrimation of 6 hours duration. Outline your ophthalmic examination of this eye.

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7. A 13 year-old neutered male cat is presented to you to be anaesthetised for a 'dental'. On clinical examination all parameters are normal and there is no history of polydipsia/ polyuria.
- Describe two ways that you could protect the cat's airway during the procedure. (20%)
 - Briefly list advantages and disadvantages of each. (40%)
 - Dental procedures often involve a lot of water being sprayed around; apart from the risk of aspiration, what other problem may the water cause the cat? (10%)
 - How would you guard against this happening? (20%)
 - If you have a pulse oximeter, where could you put the probe if you are unable to use the cat's tongue? (10%)
8. Briefly describe the technique for the placement and management of a thoracostomy tube (chest drain) in a 25kg dog.
9. In practical terms, how would you sample and preserve synovial fluid from the canine stifle joint (50%)? What test would you perform or request on the fluid to provide clinically-useful information (50%)?
10. Briefly discuss the epidemiology (30%), diagnosis (30 %) and management (40%) of cheyletiella dermatitis in dogs, cats and rabbits.

STATUTORY EXAMINATION FOR MEMBERSHIP

Production Animals

PAPER 3

3 hours

Thursday 4 May 2006

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SECTION A (answer **either** (a) **or** (b) from each of the 3 pairs of questions)

- 1a. A calf is presented to you with a “swelling” in the umbilical region. Describe how you would investigate this further (40%) and outline your treatment of 3 (three) possible differential diagnoses (20% for each).

OR

- 1b. Describe the aetiology (20%) and clinical signs of traumatic reticulitis in the cow (20%). How can it be diagnosed (20%), and treated (20%)? What complications may develop despite treatment (20%)?

- 2a. Write notes on both of the following parts:

- The desirable characteristics of a modern UK beef suckler cow. Illustrate your points by reference to specific breeds and breed crosses (50%).
- The feed requirements and management of a winter-housed Hereford x Friesian suckler cow calving in the spring (50%).

OR

- 2b. Describe the clinical signs (40%), pathological findings (20%) and current methods of control (40%) of Bovine Spongiform Encephalopathy (BSE) in the UK..

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- 3a. Compare and contrast the clinical manifestation, diagnosis and control of abortion caused by *Toxoplasma gondii* and *Chlamydophila abortus* in sheep.

OR

- 3b. List the methods of pregnancy diagnosis that may be used in cattle (20%). For manual rectal palpation, indicate the definitive signs of pregnancy that you would feel for and outline the expected findings at different stages of pregnancy (80%).

SECTION B (answer *all* questions)

1. Describe how you would induce parturition in a sow (80%), indicating any precautions you would advise to the client (20%).
2. List the clostridial toxoids to which sheep can be routinely vaccinated in the U.K.
3. Outline how you would treat a case of per-acute mastitis in a dairy cow caused by *Escherichia coli*.
4. A farmer is worried that his home-bred heifer replacement calves are succumbing to infection in their first month of life. What advice would you give him regarding maternally derived immunity (70%) and how could you check if it was successful (30%)?
5. What are the advantages and disadvantages of vaccinating poultry against Avian Influenza in England under present circumstances?
6. Write short notes on the monitoring and recording of herd fertility in the dairy herd.
7. Considering the nutrition of a 600kg liveweight Holstein-Friesian dairy cow, lactating 30 litres of milk per day, 60 days post-partum.
 - What are her energy demands for lactation and maintenance in MJ ME/day? (40%)
 - What is her approximate expected dry matter intake in kg/day? (40%)If she is to maintain a constant body weight
 - What should the energy density of her diet be in MJ ME/kg DM? (20%)
8. List the Notifiable Diseases of sheep (40%), pigs (40%) and poultry (20%) in the UK.

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9. Write short notes on amputation of the bovine digit.
10. List the clinical signs one would expect to see when *Porcine Reproductive and Respiratory Syndrome* (PRRS) first enters a non-immune breeding pig herd. Divide your answer into the following classes of pig: sows and boars (40%), piglets (30%) and weaners and growers (30%).

Veterinary Public Health

PAPER 4

3 hours

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SECTION A (answer **either** (a) **or** (b) from each of the 3 pairs of questions)

- 1a. A horse owner wishes to erect a stable block for two 'hunters' and one child's pony. Describe the requirements for the welfare and future health of the horses that must be considered in the design of the stable block (60%). In your answer discuss the significance of any points you make (40%).

OR

- 1b. For a controlled environment Animal House, identify the factors that impact on the husbandry of the animals in such a building (50%). Describe the importance of maintaining various environmental conditions within acceptable limits (50%).

- 2a. An established farm animal client seeks your advice regarding veterinary issues surrounding a proposed new 'Open Farm' venture where the public will be permitted contact with cattle and sheep. Outline your response in terms of risk assessment for the important zoonoses (60%) and risk management advice aimed at avoiding infection of visitors (40%).

OR

- 2b. Discuss the causes, epidemiology, and control of Salmonellosis in cattle in the UK (excluding individual case management) (60%). Discuss the potential routes for zoonotic infection on-farm and during meat processing, with brief mention of their control methods (40%).

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- 3a. A sheep farm in mid-Wales had very high lamb mortality in the last lambing season, when the lambing was indoors in a comparatively crowded environment. Lambs before dying exhibited “drooling of saliva”, a typical symptom of “Watery Mouth” disease and most of them died within 12-72h after birth. Moreover, deaths were more common among twins and triplets. The farmer was advised by the local veterinary practice to adopt measures to prevent the disease in the future, rather than treatment of the affected cases. How would you investigate the cause(s) of watery mouth on the farm (40%), and what husbandry measures will you adopt to stop it happening again (60%)?

OR

- 3b. 100 pigs were delivered to a slaughterhouse, and on arrival the Official Veterinarian at the plant noticed that around 15% were severely tail bitten. In addition, some were lame. What further actions are necessary at the slaughterhouse (80%); what advice might you offer to the producer if you were his private veterinarian (20%)?

SECTION B (answer *all* questions)

1. What is meant by “Carcase Quality” (50%) and how is this determined for sheep (50%)?
2. Why is ‘bedding’ used in housing horses (20%)? List four materials commonly used in Britain and indicate the merits and disadvantages of each chosen material (80%).
3. Describe the importance of using appropriate feeding during each life stage of a dog.
4. A farmer notices that his sows are very fat (Average condition score 4) at farrowing. However, by the time the litters of these sows are weaned, their average condition score is below 2. The weaning to service interval is over three weeks.

Outline the likely causes of this situation (30%), what other performance parameters of the sow plus litter is likely to be affected (30%) and the measures would you take to correct the situation (40%)?
5. Briefly explain how milk yield and milk composition can be varied by adjusting various ingredients in the cow diet. In explaining how this can take place, illustrate your answer with reference to the use of common dietary ingredients.

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6. What factors determine the likelihood and level of shedding of zoonotic pathogens by dogs (50%)? What risk factors determine the likelihood of transmission of these infections to the owner or handler (50%)?
7. Outline the public health concerns associated with scrapie in sheep (33%). What are the differential diagnoses for this disease (33%)? What steps are in place in the UK to reduce the possibility of human consumption of scrapie-infected material (33%)?
8. List three (3) zoonotic *Leptospira* serovars that are present in the UK (30%). For one of these briefly outline the clinical presentation in the reservoir species (60%), and its mode of transmission to humans (10%).
9. Outline the appropriate actions on (a) suspicion (25%) and (b) confirmation (75%) of anthrax in a 6 month old bullock found dead.
10. A 20 month old bullock is submitted to the abattoir as a positive reactor in the herd intradermal tuberculin test. As Official Veterinarian inspecting the carcass, list the gross pathological lesions you will be seeking and their likely location(s) (50%); what judgement options and actions are available for the carcass and offal and what additional actions might you require (50%).
