

This page shows the details and instructions to candidates that are given at the beginning of examination question papers. In the examination, the question paper will give details only of the subject being examined (not all 4 subjects as in this example)



<b>Examination</b>	<b>STATUTORY EXAMINATION FOR MEMBERSHIP</b>
<b>Examination Subject</b>	<b>THE HORSE</b> SMALL COMPANION ANIMALS PRODUCTION ANIMALS VETERINARY PUBLIC HEALTH
<b>Paper</b>	<b>ONE</b> TWO THREE FOUR
<b>Length of Examination</b>	<b>3 HOURS</b>
<b>Date</b>	<b>Thursday 3 May 2007</b> ( <i>Papers One and Two</i> ) <b>Friday 4 May 2007</b> ( <i>Papers Three and Four</i> )
<b>Time</b>	<b>9.15am to 12.15pm</b> ( <i>Papers One and Three</i> ) <b>2.00pm to 5.00pm</b> ( <i>Papers Two and Four</i> )
<p><i>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.</i></p> <p><i>Candidates should answer <b>THREE</b> questions from Section A and should attempt <b>ALL</b> questions in Section B.</i></p> <p><i>Candidates should read each question carefully and answer the question that has been asked. Examiners cannot award marks for information that the question does not ask for. Section A tests understanding and problem-solving skills. Section B tests factual knowledge.</i></p> <p><i>Bracketed percentages within questions show the maximum proportion of marks that can be awarded for the candidate's answer to that part or sub-section of the question.</i></p> <p><i>Start each answer on a new answer sheet and write the question number in the margin of each sheet used.</i></p>	

## SECTION A

Answer either (a) or (b) from each of the 3 pairs of questions

- 1a. Iatrogenic rectal tears are a common reason for horse owners to seek litigation. Describe what steps you take when carrying out rectal examination in horses to minimise the risk of trauma (50%). What would lead you to suspect damage to the rectum (20%) and describe how you would respond to such evidence (30%).

**OR**

- 1b. A client calls on your mobile phone to say that a horse you castrated 4 hours earlier has something protruding for 30 cm from the scrotum. You are 45 minutes drive from the premises.

What information would you attempt to obtain over the phone (30%), and what advice would you give the owner regarding management of the horse until you arrive on the premises (30%)? Outline how you would proceed based on the results of your clinical examination (40%).

- 2a. An imported stallion has arrived from Eastern Europe into a stud for which you are responsible. Some 2 months after arrival and starting stud duties, it becomes clear that mares served by the stallion are becoming mildly ill with fever and dullness. Discuss the possible causes of this situation (50%) and the course of action you would take to establish the nature of the problem (50%).

**OR**

- 2b. A stud owner notices that his late born foals are failing to thrive. Several are sluggish and remain inactive when turned out with the others. A few have chronic diarrhoea. Investigations reveal that the stud has several foals affected with *Rhodococcus equi*. Discuss the *difficulties* of the diagnosis (30%) and the advice you would give regarding both the treatment (30%) of the affected foals, the control of the outbreak (20%) and the prophylactic measures (20%) you would advise for future stud seasons.

- 3a. A 7 year old Thoroughbred steeplechaser is struck into from behind during a race. A cursory examination reveals that it has a penetrating wound on the plantar aspect of the midcannon region of its right hind leg.

Describe how you would examine and assess this case (50%), and indicate particular points you would discuss with the owners with regard to treatment of the wound and the horse's future as a racehorse (50%).

**OR**

- 3b. Neurological dysfunction is a common clinical problem in equine practice. Using examples of the various types and the locations of pathology within the nervous system, discuss the difficulties that are inherent in the neurological examination of horses and how these can be overcome in the practice situation.

(50% of the marks will be allocated to the use of case material in the

examples.)

## SECTION B

Answer all 10 questions

1. Define "SIMPLE OBSTRUCTION" of the intestine (30%). Give an example of a complete simple obstruction of the equine small intestine (20%) and describe the pathophysiological sequelae of such an obstruction (50%).
2. An 8 year old cob mare is presented with a history of an unilateral purulent nasal discharge of several weeks duration. List the possible causes of such a discharge (50%). List the diagnostic modalities (equipment) which could be used to investigate the problem, briefly indicating the particular value of each (50%).
3. A 12 year old Thoroughbred gelding is presented with a history of frequent passage of small amounts of urine (pollakiuria) which is sometimes discoloured. List the possible causes (30%) and describe how you would proceed in order to arrive at a diagnosis (70%).
4. You suspect that a horse which has been chronically lame behind (hind limb lameness) for several months has bone spavin (osteoarthritis of the distal tarsal joints).  
  
What radiographic views of the hock would you take (30%), and what radiographic changes would confirm your diagnosis (30%)? List the options, non-surgical and surgical, for managing this case (40%).
5. On the basis of which subjective criteria would you decide NOT to resect a length of strangulated small intestine you have freed from the epiploic foramen at laparotomy (50%)? List additional methods of evaluating intestinal viability which can be used during the operation (50%).
6. An owner presents a 13 year old grey horse with a visible and palpable mass in the margin of the upper eyelid. The mass is reported to have grown slowly over the previous 2 years. List 4 conditions that you would consider in the differential diagnosis (10% each). Select one of your listed conditions and describe how the diagnosis could be confirmed (60%).
7. Uveitis is a common problem in horses. List 4 possible causes (10% each). Describe briefly how you would manage one of these (60%).
8. You are presented with a 500 kg Thoroughbred cross horse which is lame. You decide to administer an analgesic dose of phenylbutazone at a dose rate of 4.4 mg / kg. The label on the bottle shows that the solution contains 1 gram / 5 millilitres (200 mg / ml) of the drug. Calculate the precise dose of this formulation that you will use. (Show your calculations.)

9. With the aid of a diagram describe how you would perform a regional nerve block to confirm that a lameness in a front foot was due to palmar foot (heel) pain.
10. With the aid of a labelled diagram, describe the major anatomic features that would be visible endoscopically with an endoscope located in the right internal nares region / dorsal nasopharynx.

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<b>Examination Subject</b>	<b>SMALL COMPANION ANIMALS</b>
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### SECTION A

Answer either (a) or (b) from each of the 3 pairs of questions

- 1a. An adult cat of indeterminate age has been with the current owners for 5 years. Recently the owners have noticed weight loss and increasing thirst. Describe how you would ascertain the most likely cause of this animal's condition from history, clinical examination and laboratory tests (60%). Briefly describe the treatment of three of the most common causes of polydipsia and weight loss in the cat (40%).

**OR**

- 1b. A fourteen year old male neutered cat presents to you with weight loss, polyphagia, vomiting and polydipsia. Clinical signs include tachycardia and a palpable goitre. What is the most likely diagnosis (10%)? How would you confirm it (10%)? Describe the advantages and disadvantages of the three different types of treatment usually considered for this disease in the UK (80%).
- 2a. A 10 month old male Labrador has been presented for lameness in his forelimbs. The lameness has been present for approximately 3 months and is variable and intermittent in nature. The owner believes that the lameness is not related to any particular event. Observation reveals a 4/10th left forelimb lameness when walked or trotted.

On palpation and manipulation the dog appears to have pain on flexion and extension of both elbows. There is pain on the medial aspect of the elbow joints. Provide a list of differential diagnoses for lameness located in the elbow joint of this case. (20%)

What are your next steps in the diagnostic work-up of this case and briefly elaborate on how the results of these tests would help you to arrive at a definitive diagnosis? (30%)

You diagnose elbow dysplasia involving fragmentation of the medial coronoid process. Describe the treatment options for this case. (50%)

**OR**

2b. A 12 month old entire female Golden Retriever presents with a one-month history of urinary incontinence.

- What pertinent questions would you ask the owner of this dog? (25%)
- What is your differential list? (25%)
- How would you investigate this clinical problem giving details of any diagnostic procedures and what you might see with the differentials you have listed? (25%)

You diagnose urethral sphincter mechanism incompetence.

- What are the treatment options for this? (25%)

3a. A male, entire, German Shepherd dog aged seven years presents to you with sudden onset lethargy and a grade II/VI systolic heart murmur. Body temperature is 39°C, heart rate 132 beats per minute, respiration 24 breaths per minute. The dog is nervous and tends to pant. You are also concerned about possible mild abdominal swelling or tenderness but are uncertain.

- List some possible causes. (20%)
- Describe the way in which you would go about making a diagnosis in this case. (50%)
- Summarise treatment options and prognoses for three of the most common conditions. (30%)

**OR**

3b. A one-year-old crossbred male dog presents with a 3 day history of vomiting.

What pertinent questions would you ask the owner? (10%)

You examine the dog and you find:

- tacky (dry) mucous membranes
- Tachycardia
- Tense and painful abdomen on palpation

List your differential diagnosis. (20%)

The owners mention that the dog plays with lots of toys such as balls and they cannot account for all of them. What diagnostic tests would you elect to perform and why? (30%)

You identify a radiopaque foreign body in the jejunum. Describe your treatment of this case.

(40%)

## SECTION B

Answer all 10 questions

1. List common causes of otitis externa in dogs, with a brief explanation of each (70%). Why is this condition more common in certain breeds than others (30%)?
2. What is the normal heart rate and rhythm of the dog (25%)? What are the common causes and clinical signs of bradycardia (75%)?
3. What are the clinical signs associated with feline thrombo-embolism (60%)? What causes this disorder (40%)?
4. What are the possible causes of malocclusion of the incisor teeth in rodents and lagomorphs (50%)? Describe how you would treat and manage such a case (50%)?
5. A 10 year old Labrador retriever is presented to you with a history of sneezing and nasal discharge for three weeks. List the more common causes of this presentation (50%). What clinical signs would lead you to investigate the problem most urgently (50%).
6. List the clinical signs of Horner's syndrome in the dog (40%). Briefly describe how you would investigate a case showing these signs (60%).
7. A 12 month old Cavalier King Charles Spaniel presents with a 4-month history of intermittent left pelvic limb lameness which is of concern to the owner and appears to be worsening. Your examination discovers medial luxation of the left patella. List the anatomical abnormalities that predispose to medial luxating patella (50%). Briefly describe the treatment you would recommend (50%).
8. List the radiological features of:
  - Nasal aspergillosis in the dog (40%)
  - Osteoarthritis of the canine elbow joint (20%)
  - Aspiration pneumonia in a cat (40%)
9. In a table, list the advantages and disadvantages of the following anaesthetic agents for induction of canine anaesthesia:

- Thiopentone sodium (thiopental) (50%)
- Propofol (50%)

10. What methods should you employ to protect personnel from ionising radiation when performing radiography on a dog in the UK?

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<b>Examination Subject</b>	<b>PRODUCTION ANIMALS</b>
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### SECTION A

Answer either (a) or (b) from each of the 3 pairs of questions

1a. Prepare a one page "client newsletter" for distribution to farm animal clients on the topic of calf pneumonia outlining the common pathogens, what the client can expect in terms of investigation and treatment and prevention advice from a good veterinary practice. Use language appropriate to communicate with educated farmers.

**OR**

1b. List the possible causes of an extended calving interval in a herd of dairy cattle (40%), and indicate how you would determine which ones were significant problems on a farm (60%).

2a. You visit a dairy farm that has a 45% prevalence of lameness in the milking herd.

- List four possible conditions that could explain the high prevalence of lameness in this herd. (20%)
- For each of the conditions listed above, describe the aetiology and a prophylactic/therapeutic approach. (80%)

**OR**

2b. You are presented with a valuable 6 year old, Holstein bull with sudden onset of anorexia, and acute abdominal pain. Looking from behind, the abdominal outline has a marked right sided distension. Physical exam reveals moderate to severe dehydration, and no rumen motility. Auscultation/percussion reveals a loud, resonant high pitched sound (gas ping) over the 8th to 12th right intercostals space and succussion reveals a gas-fluid interface ventral to this area in the right lower abdomen.

- Using the clinical signs as a problem list, briefly describe your interpretation of each sign. (25%)
- Describe five additional diagnostic tests that would be useful in making a specific diagnosis in this case, and what these tests might indicate. (25%)
- From the information given in the case description, select a single and plausible diagnosis and describe your short and long-term

therapeutic approach to the case. (50%)

- 3a. A shepherd on a hill farm with 500 Welsh mountain cross ewes calls you to examine five collapsed ewes, which have recently been housed for lambing in April. The sheep have a condition score of 1 out of 5. There is no evidence of lameness or wool loss.

Describe how you might investigate this problem (50%), including a differential diagnosis list (50%).

**OR**

- 3b. You are called to visit a small back-garden farm. The family have purchased each of their three children a piglet to raise and fatten for competition at a County Show. On arrival you find that two of the 4 month old piglets have rectal prolapses. You evaluate one of the prolapses as grade 1 (involving mucosa and submucosa only) and the other as grade II (involving full wall thickness of the rectum).

- Describe your corrective approach for each of these piglets. (80%)
- How would you prevent recurrence of this condition in this group of animals? (20%)

## **SECTION B**

Answer all 10 questions

1. A local farmer arrives at your clinic with a recumbent 4 day old Holstein heifer calf in the back of his pick-up truck. Clinical examination reveals a rectal temperature of 37°C, heart rate of 40, cool extremities, 10% dehydration, and a profuse, watery diarrhoea.

- Outline your diagnostic approach. (50%)
- Describe your therapeutic management of this case. (50%)

2. Outline the process by which Bovine Viral Diarrhoea Virus (BVDV) infection leads to a persistent infection state in cattle. (40%)

Discuss what impact such an animal has in the following farming types:

- Closed dairy unit, (20%)
- Beef fattening unit, (20%)
- Veal calf unit. (20%)

3. Describe the different approaches to treating dehydration in livestock species. Highlight the advantages and disadvantages of treating individual animals versus mass medication of the management group.



4. Briefly describe how you can assess milking hygiene on a dairy farm.
5. Outline the importance of cross-breeding in the British beef industry. In your answer, provide examples of beef management systems that incorporate cross-breeding, mentioning the breeds that would most suit these systems.
6. What are the aetiologies of the two most common eye lesions in cattle in the UK, (30% each) and how can the conditions be differentiated during a clinical examination (40%)?
7. Write brief notes on why colostrum is important to young farm animals including specific conditions that you may expect to see in animals when colostrum intake is inadequate.
8. Write short notes on tail docking in pigs.
9. Describe tests available to diagnose Traumatic Reticulitis in cattle commenting on the advantages and disadvantages of each.
10. Write short notes on the methods available for control of blowflies in sheep in the UK.

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<b>Examination Subject</b>	<b>VETERINARY PUBLIC HEALTH</b>
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### SECTION A

Answer either (a) or (b) from each of the 3 pairs of questions

- 1a. The use of the “farm to fork approach” is increasingly being used in the production of safe food of animal origin. List points in the chain where control measures can be applied (40%) and indicate how successful each of the controls might be in terms of food safety (60%).

**OR**

- 1b. Briefly describe the steps in a cleaning and disinfection protocol for a large red meat slaughterhouse (70%).

Discuss the methods available to a plant operator to check the efficiency of cleaning and disinfection (30%).

- 2a. A client, whose 8 year old child is due to undergo liver transplantation, calls you for advice about the safety of continuing to keep the family's 2 year old Labrador as a family pet. Outline your risk analysis.

**OR**

- 2b. Identify the 2 *Brucella* species most likely to be associated with human

disease diagnosed in the United Kingdom (10%). For a *Brucella* species which is indigenous to the UK describe the most likely route of human exposure and the methods for surveillance and control in animals (90%).

- 3a. The use of the Hazard Critical Control Programme (HACCP) has been used in the food industry since 1985 and the Principles of HACCP and Good Hygiene Practice (GHP) are now being applied on the farm itself.

Consider the possible hazards in food of animal origin on a dairy farm and identify, using a diagram, where control points exist (50%) and comment on the level of control that may be achieved (50%).

**OR**

- 3b. The results of monitoring under the ZAP (Zoonosis Action Plan) Salmonella Scheme indicate that one of your pig clients' herds has a high prevalence of Salmonella. What are the legal implications (30%)? Describe the measures you would recommend to reduce prevalence of infection on the farm (70%).

## **SECTION B**

Answer all 10 questions

1. How can effectiveness of stunning be assessed in
  - red meat animals and
  - poultry?
2. Outline the requirements for handling materials in a full-throughput beef abattoir not intended to go for human consumption – i.e. by-products and wastes, (but excluding "Specified Risk Material").
3. Describe your judgement and action on finding pericarditis at Post Mortem Inspection.
4. Describe why ante-mortem inspection (AMI) of livestock presented for slaughter is necessary.
5. Discuss briefly how spoilage of meat can be controlled.
6. Briefly summarise the key control mechanisms for a major notifiable epizootic incursion, such as Foot and Mouth Disease, in the UK.
7. How does *Erysipelothrix rhusiopathiae* infection present in humans (20%)? Identify potential non-human reservoir species in the UK and describe the typical presentation of infection in each of these species (30%). How might transmission to humans be prevented (50%)?
8. Identify the typical reservoir and intermediate species infected by *Toxoplasma gondii* (20%). By what means is transmission to humans likely

to occur (20%)? Outline the key points in prevention of human infection (60%).

9. Why must veterinarians use antimicrobials prudently (with careful judgement) (20%)? List four considerations relating to prudent selection (40%), and four considerations relating to prudent implementation (40%), of antimicrobial treatments.
10. List 3 zoonotic infections of aviary birds and / or back-yard fowl in the UK (30%). For one of these, outline the clinical presentation (20%), the diagnostic approach (20%) and your response on confirming the presence of infection (30%).

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