The instructions which appear on the cover sheet of each subject question paper are set out below and the 2010 questions are on pages 2 to 14

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<td>Length of Examination</td>
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This examination question paper is divided into 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.

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

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.

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.

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. You are contacted by the owner of a stud farm. He has three offspring from the same mare that are showing typical signs of developmental orthopaedic disease. The 4-year-old has effusion of the stifle joints, the yearling has a club foot (type 11) and the foal has crooked carpus with the distal limb deviating 150 degrees outwards.

Briefly outline the aetiology and pathogenesis of this group of diseases (10%).
For each offspring briefly describe the clinical signs, radiographic findings and recommended treatment options for the developmental orthopaedic conditions they are showing. (30% for each offspring.)

OR

1b. Briefly indicate, with the aid of simple diagrams, the important anatomical features of the guttural pouches (30%). List the three most common pathological conditions affecting the guttural pouches in horses (10%). What role does the anatomy play in the aetiology, pathogenesis, diagnosis and treatment of these conditions (60%)?

2a. You have been asked to write an article for your practice’s newsletter on medical colic. Explain what is meant by ‘medical colic’ (10%), list the common types of medical colic that are recognised clinically (20%) and explain the common underlying causes and management factors that are thought to cause medical colics (20%). Explain how you would diagnose and treat one of the types of simple medical colic you have listed (40%) and explain what advice you would give to owners to prevent this type of colic occurring (10%).

OR

2b. You are presented with an aged pony that you think might have pituitary pars intermedia dysfunction (PPID) (equine Cushing’s disease).

- Give an account of the pathophysiology of this disease (30%)
- List the clinical signs associated with this disease (30%)
- Describe how you would confirm the diagnosis (20%)
- Describe how you would manage this disease (20%)

3a. A 9-month-old filly is presented with drainage of ingesta from a swollen
umbilicus. The filly was known to have had a small umbilical swelling from the first week of life. Three weeks previous to presentation she was noticed to be mildly uncomfortable and to be a little dull but had since improved.

- What is your diagnosis? (10%)
- Describe the sequence of pathological events which has led to the clinical signs at presentation. (50%)
- How would you manage this case? (40%)

OR

3b. What is equine grass sickness (20%)? List the clinical signs associated with this disease (40%). Describe how would confirm a diagnosis (20%). What advice would you give an owner on risk factors and prevention of this disease (20%)?

SECTION B
Answer all 10 questions

1. What are the indications for the use of surgical drains (20%)? Give examples of 2 passive and two active drains used in horses (20%). What are the potential complications associated with the use of drains (30%)? What steps can be taken to minimize these risks (30%)?

2. List the skin grafting techniques applicable to the horse (30%). What are the advantages of grafting a large granulating wound on the dorsal aspect of a hind cannon (30%)? Which technique would you employ? Give reasons for your choice (40%).

3. What are the indications for the use of epidural anaesthesia in horses (30%)? What potential problems are associated with its use (30%)? What advances have been made in recent years to minimize these risks (40%)?

4. List the causes of gastric dilatation in the horse (40%). Briefly describe how you would attempt to differentiate between them (60%).

5. List the radiation hazards associated with performing a radiographic examination of the equine limb (40%) and the steps you would take to minimize them (60%).

6. Give two equine skin diseases associated with Dermatophilus congoensis infection. (20%)
   List the clinical signs of one of these diseases. (20%)
   List the differential diagnosis. (20%)
   Describe how you would confirm the diagnosis of D. congoensis infection? (10%)
   How would you treat D. congoensis infection? (20%)
What advice would you give to the owner to reduce the risk of further occurrences? (10%)

7. What is the pathogenesis of neonatal isoerythrolysis (20%)? List the clinical signs of this disease (40%) and describe how would treat an affected foal (30%). What advice would you give to the mare owner about future pregnancies (10%)?

8. List two proposed aetiologies of atypical myoglobinuria (20%). List the clinical signs of this disease (40%) and its differential diagnosis (20%). Describe how you would manage affected horses (20%).

9. You are presented with a horse known to be affected by recurrent airway obstruction which now has acute and severe dyspnoea. What are the likely pathological changes affecting this horse (20%)? Describe the different pharmacological approaches that could be taken with this horse (60%). What advice would you give the owner about the horse’s future management (20%)?

10. Describe the pathogenesis of pericardial effusion in the horse (20%). What are the clinical signs of pericardial effusion (40%)? How would you confirm your diagnosis (20%) and how would you manage the case (20%)?

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<th>Examination Subject</th>
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<td>SMALL COMPANION ANIMALS – 3 hours</td>
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SECTION A

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

1a. A five year old German shepherd dog is presented to you with a history of collapsing episodes. The episodes have appeared in the previous 4 weeks and are becoming more frequent.

- What aspects of the clinical history will be particularly important in evaluating this case? (40%)
- Which body systems are commonly affected by diseases that result in collapsing episodes? (20%)

Considering the problem in this case (collapsing), outline what are the aspects of the physical examination that you would pay most attention to and briefly list the diagnostic tests you would be able to perform to evaluate this case working in a first opinion practice in the UK (40%).
OR

1b. Myasthenia Gravis is a neuromuscular disorder. What is the mechanism by which it results in clinical signs (10%)? What body systems can be affected by this disease and what would be the resultant clinical signs (50%)? How is Myasthenia Gravis diagnosed (20%) and what is the recommended method of treatment (20%)?

2a. A dog is presented for re-examination due to recurrent episodes of head shaking, and minor aural discharge. You have previously treated the patient with Surolan drops (miconazole nitrate 23 mg/ml, prednisolone acetate 5 mg/ml and polymyxin B sulphate 5500iu/ml) topically in the left ear twice a day for 14 days on three previous occasions. The owner reports that each of these courses of treatment has made a good improvement in the condition, but within 3 weeks of the end of the treatment the problem returns to its original level. The dog is easy to examine in general, but becomes aggressive when its left ear is gently palpated. The owner is keen to seek a more permanent solution to the dog’s problem.

- Outline and justify the diagnostic approach that will be most appropriate in assisting the decision making in the management of this dog’s ear disease? Specify how each diagnostic finding will influence your decisions and ability to inform the client (50%).

Among the results of your investigations you detect purulent discharge from the external ear, moderate erythema within the ear canal but you find no mass or foreign body. You decide that surgical treatment is the best option for this case.

- Outline the range of treatments for this dog (including any medical treatment alternatives). How will you explain the limitations or complications for each treatment option to the client (50%)?

OR

2b. A 3 year-old bulldog cross bitch is brought into the surgery as an emergency in the 69th day of pregnancy. The owner believes she has been in labour for 4 hours but has produced no puppies.

- How will you assess the bitch and decide if you need to assist parturition? (30%)

Your investigation leads you to believe that a caesarean section is required.

- How will you anaesthetise the bitch and what particular precautions will you take in this case? (40%)

- Describe how you will handle the uterus from the point at which you locate it through your laparotomy incision, to the point at which you surgically close the uterus. (30%)
3a. Mitral valve endocardiosis is the single most common acquired heart disease of the dog. Review in detail the natural history of this disease, how it presents, the consequences for cardiac function, how it is diagnosed, treated and managed, and indicate the prognosis for affected dogs (100%).

OR

3b. An adult male cat has been presented to a colleague at your surgery for loss of appetite, and generalised lethargy. You have been asked to make a radiographic survey of the cat’s abdomen.

- What are the features of the normal (no contrast or special views) abdominal radiographs of a cat, and how would these change in a disease where there is free peritoneal fluid accumulation such as the “wet type” of feline infectious peritonitis? (50%)

A nurse helps you to take the radiographs using the practice’s normal procedures. You notice that these radiographs have some movement blur, a problem you have seen in other radiographs in the practice.

- What steps could you take to reduce the problem with movement blur? (50%)

SECTION B
Answer all 10 questions

1. What is the urine to protein creatinine (UPC) ratio test used for in canine medicine and how is it interpreted (50%)? What other diagnostic tests would you usually run at the same time as the UPC test (50%)?

2. What are the common respiratory infectious agents in the cat, and how are these diseases controlled in the UK cat population (40%)? In a cattery outbreak of infectious respiratory disease, what management advice would you give to owner to control the outbreak and prevent further outbreaks (60%)?

3. Name two (2) diseases commonly vaccinated against in rabbits in the UK (50%). For both vaccines indicate any special considerations regarding administration timing and route of administration (50%).

4. Define haemolytic anaemia (40%). List the major causes of haemolytic anaemia in the dog and cat (60%).

5. What are the differences between regurgitation and true vomiting (50%). List five (5) common causes of vomiting in companion animals (50%).
6. You are treating a 7 year old Labrador dog which has been seen on a number of occasions in the last 3 months at the practice, and a detailed written history is available. The dog’s hips were radiographed five weeks ago, which showed a bilateral osteoarthritis. The dog’s only problem is intermittent left pelvic limb lameness, made worse by exercise, and reluctance to climb stairs or jump into the car.

- What should you do in the consulting room to check on the dog’s hip problem? (20%)
- What are the main points of the future medical/conservative strategy that you should explain to the owner? (80%)

7. Outline the main points of the correct approach to diagnosis and treatment of a subcutaneous mass approximately 2cm in diameter on the thorax of a five year-old female Staffordshire bull terrier. The mass is over the 10th rib, and the skin over it is raised and hairless. It is not painful to palpation, although the area becomes reddened after palpation. The owner reports the mass appeared suddenly but has noticed no other problems (100%).

8. An otherwise healthy adult male crossbred dog has been hospitalised in your practice for daily dressing changes of a full thickness skin wound, approximately 1cm by 2cm in size, on the dorsal surface of the metacarpals of the right forepaw. The wound has started to granulate, but the results from the swab you took 3 days ago indicate that the wound is contaminated with a methicillin resistant Staphylococcus aureus that is resistant to the antibiotics the patient is currently on. What are the correct procedures for dealing with this patient now? (100%).

9. A 4 year-old green iguana has been in your surgery for diagnostic evaluation. The animal has been losing weight, lethargic and having difficulty raising its abdomen from the ground when walking. You have radiographed the animal and noted that the femurs have extremely thin cortices and the transverse processes of the tail are radiolucent. How should you explain the common causes of this problem to the owner and what further treatment will you advise? (100%).

10. An eight year old crossbred dog is presented at your surgery. The owner is worried about the dog’s halitosis, a reddening of the gums, and the accumulation of some calculus on the teeth which you can see yourself on simple visual examination. You advise further diagnosis to discover the degree of the problem. List and briefly justify the steps you should undertake while the animal is under general anaesthesia, to discover the extent of its dental disease. (100%).

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2011 Stat Exam
SECTION A
Answer either (a) or (b) from each of the 3 pairs of questions

1a. A faecal egg count reduction test was performed during October using April-bom Suffolk-cross lambs on a lowground mixed sheep and beef farm. The test was instigated following the identification of nematode parasitism as the cause of ill thrift in the lambs. The post treatment efficacies for Teladorsagia spp. were as follows –

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<th>Treatment</th>
<th>Efficacy</th>
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<tr>
<td>Benzimidazole</td>
<td>17%</td>
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<tr>
<td>Imidazothiazole</td>
<td>73%</td>
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<tr>
<td>Avermectin</td>
<td>36%</td>
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<tr>
<td>Milbemycin</td>
<td>95%</td>
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- Comment on the implications of these results.  
  (30%)

- List the ways in which this problem might have arisen.  
  (30%)

- How can nematode parasites be economically sustainably managed on this farm in the future?  
  (40%)

OR

1b. A lowground sheep farmer with an April-lambing Mule ewe flock expresses concern about the level of discrepancy between his pregnancy scanning results (210 lambs per 100 ewes) and the number of live lambs turned out of his lambing shed with their dams (165 lambs per 100 ewes). The ewes are housed for lambing, with a high level of skilled supervision, and the farmer has observed that most of the lamb losses are occurring during the perinatal period.

- What would be a reasonable target for the perinatal lamb mortality rate in this flock?  
  (10%)

- List the common causes of high perinatal lamb mortality rates in lowground UK flocks.  
  (20%)

- Outline how you would investigate this problem.  
  (40%)


• Summarise the advice that you could give to address the common causes of high perinatal lamb mortality rates in lowground UK sheep flocks.

(30%)

2a. A dairy farmer with 100 cows contacts you because he is concerned about mastitis in his herd. The Bulk Milk Somatic Cell Count is currently 380,000/ml. Records indicate that there have been 60 cases of clinical mastitis in the previous 12 months.

• What do these results indicate?

(40%)
• Describe a logical approach as to how you would investigate the herd and what advice you would give to reduce the somatic cell count and the number of mastitis cases in the herd.

(60%)

OR

2b. A beef farmer calls you with an emergency. Several six month old bullocks have become dull and stopped eating overnight. Some have become recumbent and one has been found dead. The bullocks are raised in an intensive system where they are fed a high proportion of barley in the diet.

• List the possible differential diagnoses in this case.

(30%)
• Describe what you would do to investigate to reach a diagnosis.

(30%)
• Discuss how you would manage and treat these animals and give an indication of the likely prognosis and cost effectiveness of the various treatment options you consider.

(40%)

3a. Following disappointing pregnancy diagnosis results, a farmer client with 200 Angus cross cows has asked for your advice about the reproductive management of his herd. The farmer’s objective is for a spring calving herd, although his cattle currently calve throughout the year.

Describe and explain the advice that you would give. (100%)

OR

3b. A dairy farm has a calving index of 435 days. The owner contacts you because he has been advised that he would be more profitable if the calving index was
365 days. He asks for your advice about why reducing his calving index would be desirable and how this could be achieved.

What advice would you give him? (100%)

SECTION B
Answer all 10 questions

1. Twenty-five (25) Greyface wether lambs from a group of 350 have been found dead during a 3 week period in October, following a move onto a crop of forage rape.
   - List the three most likely potential causes of sudden death in these lambs. (30%)
   - Summarise why these diseases occur commonly under the circumstances described. (20%)
   - Outline your approach to the investigation of this problem. (30%)
   - What other disease problems might result from the practice of finishing lambs on forage rape? (20%)

2. Five comatose newborn lambs are brought into your surgery after a wet and cold night.
   - How would you treat these lambs? (30%)
   - What factors govern your choice of treatment? (30%)
   - Outline the principles involved with the prevention of similar problems during subsequent years. (40%)

3. You are asked to examine a valuable Texel gimmer with severe unilateral thoracic limb lameness, despite a course of penicillin treatment. There is heat and swelling over the coronary band of the abaxial digit, which appears to be splayed outwards from its normal axis. Sinuses discharging thick pus are present in the interdigital space and laterally above the hoof at the level of the coronary band.

   Describe how this case should be managed with the aim of minimising further suffering.

4. You are asked to treat a 12 day-old, housed, spring-born, beef calf with signs of watery diarrhoea, slight dehydration, abdominal distension and weakness. The farmer has been administering oral glucose and electrolyte therapy for the previous 36 hours.

   Outline your approach to the management of this case.
5. In March, you are asked to investigate the cause of pruritus and patchy hair loss, predominantly over the shoulders and rump in a spring calving herd of beef cattle. You identify large numbers of *Bovicola bovis* parasites on hair samples collected from the lower neck region of both cows and calves. The calves were treated with a doramectin pour-on at housing during October.

- How would you manage this problem?  
  (30%)
- List the potential problems that might be associated with different management options.  
  (30%)
- How might the problem be avoided during subsequent years?  
  (40%)


7. A group of beef cows are grazing a lush pasture in May. One is found recumbent with a very distended rumen. What is the most likely problem and how would you treat this cow?

8. A sow has recently farrowed and her piglets appear to be in good health. Five days after farrowing she is unable to rise despite gentle encouragement. How would you investigate this case and what are the likely causes?

9. A calf aged seven months old has been performing badly— it is not growing well and is frequently seen to be dull. A blood test for Bovine Viral Diarrhoea Virus (BVDV) has shown the following result:

   BVDV Virus: Positive  
   BVDV Antibody: Negative

   What does this result indicate and when is this calf most likely to have become infected with the virus?

10. A group of 3 week old calves are suffering with mild to moderate diarrhoea. **List** the most likely causes and make brief **notes** on your diagnostic approach to the case.
Examination | STATUTORY EXAMINATION FOR MEMBERSHIP
---|---
Examination Subject | VETERINARY PUBLIC HEALTH – 3 hours

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

1a Hazard Critical Control Programmes (HACCP) have been used in the food industry since 1985. As part of Good Hygiene Practice (GHP) on farms the Principles of HACCP are now being applied behind the “farm gate”.

Consider the possible hazards in food of animal origin on a dairy farm and identify, using a diagram if appropriate, where control points exist and comment on the level of control that may be achieved. (100%)  

OR

1b A red meat abattoir routinely receives bovine animals subjected to on farm emergency slaughter.

- What questions must be asked in order to determine if an animal fulfils the criteria for emergency slaughter? (30%)
- On arrival at the abattoir, what important information must be established before the dead body of the bovine animal is considered eligible to enter the food chain? (50%)
- Describe the current testing requirements in respect of BSE for bovine animals admitted as emergency slaughter. (20%)

2a The Senior Partner at the mixed practice where you work has asked you to prepare an information sheet for the Practice Website on the topic of *Toxoplasma*. Outline the disease hazards presented (20%), the sources and routes of transmission (40%), and the methods for prevention (40%).

OR

2b A group of 100 pigs has recently arrived at an abattoir and it is reported to the Official Veterinarian by the lairage worker, who just started to unload them, that around one third of the group are lethargic and unwilling to stand. Some of the pigs have areas of red discolouration of the skin.

- What investigations do you expect the Official Veterinarian to undertake? (40%)
- Discuss the key features and possible consequences for 2 different causes for the abnormalities observed in the pigs. (60%)
3a An isolated hill farm extending to 1500 acres has 850 out wintered spring lambing Cheviot ewes, 100 suckler cows plus followers, suckled calves sold at one year old through local markets. A welfare complaint has been made alleging that sheep were collapsing when brought in and carcases of cattle and sheep could be seen on the hill.

Describe how, as the veterinary practitioner for this farm, you would investigate and deal with such a complaint. (100%)

OR

3b Following an outbreak of sickness and diarrhoea after a school visit to a local dairy farm, the school’s headmaster has asked you to draw up a discussion document detailing:

- the most likely disease agents and their significance in humans and animals (50%)
- the precautions that you recommend should be applied to future visits where the children come into contact with farm livestock. (40%)

Are any legal obligations placed on the farmer or the school? (10%)

SECTION B
Answer all 10 questions

1. List the possible Categories of Animal by-Product waste produced by red meat. (33.3%)

Give one example for each of the Categories. (33.3%)

Describe the correct method of disposal for each Category. (33.3%)

2. Describe briefly the methods of slaughter commonly practised in red meat abattoirs and poultry slaughter plants in the UK. (60%)

Indicate how an effective stun would be recognised by the inspection team and identify the relevant legislation concerning slaughter of animals. (40%)

3. Discuss briefly why identification of the bacterial species alone is insufficient in the investigation of a disease outbreak of public health significance.

4. A 20 month old bullock is submitted to the abattoir as a positive reactor in the herd intradermal tuberculin test.

- When inspecting the carcase, list the gross pathology you will
be seeking and its likely location(s)  
- What judgement options are available for the carcase and what additional actions might you require?  

5. At routine post mortem meat inspection the following conditions have been identified. For each give the judgement and action required by current meat inspection legislation.

- Thickened bile ducts in a bovine liver from an animal with no other visible lesions  
- Retention cysts in a pig kidney  
- Caseous lesion in neck of a sheep  
- Suppurative lesion in a pig

6. Outline the mechanisms currently in place to prevent the entry of rabies into the UK in cats or dogs.

7. Identify the key veterinary elements of a program to reduce the prevalence of hydatid disease, triggered by an outbreak in humans in a village in Wales.

8. Identify the key legislation that protects the welfare of production animals specifically:

- On farms
- In transport
- At the abattoir prior to and up to the point of slaughter

Identify, in each instance, the Competent Authority responsible in England for enforcing these pieces of legislation.

9. Write short notes on veterinary public health aspects of 3 examples of animal bites in the UK, considering the causes, consequences, and prevention for each.

10. Write short notes on the clinical signs and diagnosis of Chlamydophila (Chlamydia) psittaci infection in birds (50%). What recommendations would you make to the owner of an infected pet budgerigar in order to minimise the likelihood of zoonotic transmission (50%)?

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