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

1a. List the clinical signs of colitis in the adult horse. (20%) 
What are the possible aetiologies of colitis in the adult horse? (20%) 
Describe the diagnostic tests you would conduct to attempt to establish a diagnosis, justifying each test and explaining how the results would help you to monitor the clinical condition of the horse? (40%) 
Describe how you would manage a horse with colitis including the biosecurity measures that would be required. (20%) 

Or 

1b. You are presented with a 10 year old Warmblood gelding that has just arrived at its home stable from an international equestrian competition having been travelling by aircraft and lorry for the last 30 hours. The horse is dull and depressed, has pyrexia (41.2°C) and the groom reports that the horse has had a nasal discharge and has coughed occasionally during transport. When you observe the horse before entering the stable you notice it has increased respiratory rate and effort.

• Which body system is most likely to be affected and why? What type of disease process is most likely to be present and why? Justify your answers by making reference to the history and clinical information provided. (30%) 
• Describe in detail the clinical examination you would perform on this horse. (40%) 
• List the diagnostic tests you would carry out and justify the selection of each of the diagnostic tests you have chosen. (30%) 

2a. List the potential causes of physical obstruction of the small intestine in the horse. (30%) 
What specific findings on investigation of a horse with colic would support a view that the colic was due to obstruction of the small intestine? (30%) 
How should you generally decompress distended small intestine at surgery? (10%) 
List the major complications that might be specifically encountered post-operatively in a horse that has had small intestinal resection and anastomosis. (10%) 
Describe how you would manage one of those major complications. (20%) 

Or 

Question 2b is on the next page
2b. List the factors that have been implicated in the aetiology of osteochondrosis in the horse. (30%) 
Describe the typical signalment of horses affected with osteochondrosis. (30%) 
State the most common site for osteochondritis dissecans (OCD) lesions in the following joints: (30%) 
- Tarsocrural 
- Femoropatellar 
- Metacarpophalangeal 
What is the most common surgical treatment for OCD in the horse? (10%) 

3a. Define what is meant by the term ‘equine sarcoid’ and explain what is known about the possible aetiology of equine sarcoid. (30%) 
Describe the different clinical presentations of equine sarcoid, including their gross appearance and clinical behaviour. (40%) 
What methods are advocated for the treatment of equine sarcoid? Explain the factors you would take into account when formulating a treatment regime for a case of equine sarcoid. (30%) 
Or 

3b. What is meant by “proximal (high) suspensory desmitis of the hind limb” in the horse? (10%) 
Describe how you should use local analgesia to confirm the site of pain in a suspected case. (40%) 
Describe the abnormalities that you may find on imaging of the affected region. (30%) 
What surgical treatment is most commonly used to manage the condition in the hind limb of the horse? (20%) 

Section B 
Answer all 10 questions 

1. Describe the clinical appearance, including their typical topographical distribution on the horse, of equine eosinophilic granuloma skin lesions. (50%) 
What is the possible aetiology of these lesions? (20%) 
Describe the treatment options available for these lesions. (30%) 

2. What is meant by the term ‘perinatal asphyxia syndrome’ (previously known as neonatal maladjustment syndrome)? (30%) 
Explain the possible aetiology and risk factors for this syndrome. (20%) 
List the clinical signs associated with this syndrome. (50%)
3. List the clinical signs shown by horses affected by polysaccharide storage myopathy (PSSM). (40%) What type of horse is most commonly affected and what is known about the aetiology of this disease? (20%) How could a diagnosis be confirmed? (10%) How should an affected horse be managed? (30%)

4. Describe the clinical appearance of ocular stromal abscess in the horse. (50%) What is the aetiology of these lesions? (20%) What are the treatment options for a stromal abscess? (30%)

5. List the clinical signs that might make an owner suspicious that their horse is suffering from equine gastric ulcer syndrome (EGUS). (30%) What are the possible aetiologies of this syndrome? (30%) How would you confirm your diagnosis? (10%) How should affected horses be managed? (30%)

6. Contrast the relative advantages and disadvantages of overground endoscopy versus high speed treadmill endoscopy in the investigation of respiratory noise at exercise in the horse.

7. In relation to diagnostic ultrasound in the horse, what is meant by:
   - the “piezoelectric effect”? (30%)
   - “Time Gain Compensation” (TGC)? (30%)
What are the relative merits of low versus high frequency probes (transducers)? (40%)

8. Describe briefly the relative merits of the following characteristics of suture materials:
   - monofilament versus multifilament (40%)
   - natural versus synthetic (30%)
   - absorbable versus non-absorbable. (30%)

9. Describe what is meant by “guttural pouch tympany” in the horse. (25%) What are the typical clinical signs? (25%) What is the typical age of affected horses? (25%) What is the general approach to surgical treatment? (25%)

10. Describe the “lag screw principle” as applicable to fracture repair in the horse. (70%) List three common equine fractures in which repair is commonly effected by the use of the lag screw technique. (30%)
## Statutory Examination for Membership

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

1a. Chronic diarrhoea is a common clinical presentation in general practice in the UK, but some dogs may also have evidence of weight loss.

- Describe in detail how you would approach such a case in general practice in order to achieve a definitive diagnosis, including comments on what additional help you could obtain from specialist colleagues (70%).

- Outline the options available for the treatment of the common conditions causing chronic diarrhoea with weight loss in the dog (30%).

Or

1b. Laryngeal paralysis is recognised to occur in dogs.

- Describe in detail the possible causes of laryngeal paralysis in the dog, the historical and physical findings, the diagnostic tests used and how diagnosis is confirmed (70%).

- Describe the treatment options available for laryngeal paralysis in the dog and the likely success in the immediate and long-term. What potential complications need to be carefully considered when deciding on treatment options for this disease (30%)?

2a. A 4 year-old, 10 kg crossbred male dog is presented because he has been straining to urinate over the last 18 hours. He has only managed to pass a few drops of urine when he strains. Abdominal palpation is tolerated well, and reveals an enlarged tense bladder and no other obvious abnormalities.

- Outline your diagnostic investigation into the cause of the dysuria (30%).

- If you conclude that the dysuria is related to uroliths in the urethra and the bladder, give details of the optimum surgical procedures to resolve the immediate problem (70%). (You can assume that the patient is correctly and competently anaesthetised; NO marks will be given for details of an anaesthetic protocol.)

Or

Question 2b is on the next page
2b. A 3 year-old, 4 kg female neutered domestic short-haired cat is presented because it has been retching, vomiting and regurgitating partially digested food for the last 24 hours. Palpation is painful over the cranial abdomen but there appear to be loops of enlarged bowel. You and a colleague concur that the most likely cause of the problem is a gastrointestinal foreign body.

- Outline the diagnostic investigation you should make to confirm a gastro-intestinal foreign body (30%).

- Describe the appropriate surgical procedures for the location and removal of an intestinal foreign body in this cat, from the moment at which the patient is stabilised under general anaesthesia, to the moment at which the cat can be safely removed from the operating room (70%).

3a. Dogs and cats often present with clinical signs that can be attributed to either cardiac or respiratory disease, which can make achieving a diagnosis difficult.

- Using appropriate examples, describe how such cases tend to present themselves in the clinic, and outline what are the common associated diseases that need to be considered and the main differential features of those diseases (60%).

- Briefly describe what diagnostic tests you would then use to differentiate cardiac from respiratory causes, indicating why you have chosen such tests, what results you would expect and indicate their degree of sensitivity and specificity (40%).

Or

3b. Outline an optimum anaesthetic protocol for a 3 year-old, 20 kg bull-terrier bitch undergoing a caesarean section for dystocia due to relative foetal oversize. Justify your choices of procedure. Start from 2 hours prior to the procedure and cover the period until the bitch and all the live puppies are fully recovered. You should describe any equipment, and any drugs you propose to use but you do not have to give their trade names, only the name of the pharmacological agent.

Section B
Answer all 10 questions

1. Define regenerative anaemia and indicate the common causes in both the dog and cat in the UK.

2. Briefly describe the role of Malassezia pachydermatis in skin diseases in the dog and cats and how infection can be treated.
3. What are the main clinical features of canine epilepsy and the standard drugs used to control clinical signs?

4. Name four (4) congenital cardiac conditions of the dog and, in each case, if there are recognised breed predilections name one such breed.

5. What written instructions are legally required when dispensing veterinary prescription medicines in the UK?

6. What are the 5 most important types of conservative therapy you should discuss with a client that has an adult dog that is moderately affected by elbow osteoarthritis? (20% per therapy group) (NO marks will be given for surgical or arthroscopic therapy, or partially interventional therapy such as platelet rich plasma and stem cells, which are not conservative).

7. Describe the steps you would take to make a full examination of the oral cavity of a pet rabbit you suspect of having dental disease.

8. An adult cat is brought into your surgery within one hour of being hit by a road vehicle. All its major body systems appear normal and it can stand and walk. It has a wound over the lateral malleolus of the right tarsus, involving the loss of skin over an area 15 mm in diameter. Physical examination and radiographic study show no bony or ligamentous damage. Describe the correct management of this wound in the first 4 hours after you see it.

9. What are the clinical characteristics of cutaneous mast cell tumours (50%)? List the important points in confirming the diagnosis of a mast cell tumour and treating it effectively (50%).

10. Using physical examination ONLY, how can you confirm the presence of a ruptured cranial cruciate ligament in a 30 kg dog? Use diagrams to show how this examination relates to the function of the ligament (70%).

What other intra-articular structure is commonly affected by cranial cruciate disease and why (30%)?
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Section A

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

1a. Lungworm, caused by the roundworm parasite *Dictyocaulus viviparus* is now common in adult UK cattle.

- Describe the clinical features of lungworm infection in lactating dairy cattle. (20%)
- Discuss the reasons why lungworm infection occurs in adult cattle. (40%)
- Outline the options for the control of lungworm in dairy cattle. (40%)

Or

1b. The prevalence of foot lameness is very high in many UK sheep flocks.

- List the differential diagnoses for and causes of high prevalences of severe foot lameness in sheep. (30%)
- Describe the clinical signs that are seen in advanced cases of severe foot rot caused by virulent strains of *Dichelobacter nodosus*. (20%)
- Outline the principles of foot rot control in endemically infected sheep flocks. (50%)

2a. Describe the clinical features of hypomagnesaemia in cattle. (30%)
Discuss what the risk factors are for this condition. (30%)
Discuss the treatment of the condition. (20%)
Discuss how the condition may be prevented. (20%)

Or

2b. Describe the clinical features of pregnancy toxaemia (twin lamb disease) in sheep. (30%)
Discuss what the risk factors are for this condition. (30%)
Discuss the treatment of this condition. (20%)
Discuss how the condition may be prevented. (20%)

3a. Describe the basic primary life cycle of the protozoan parasite, *Toxoplasma gondii*. (20%)
Explain the process whereby *T. gondii* causes disease in farmed livestock. (20%)
Describe the clinical manifestation of toxoplasmosis in sheep. (20%)
Outline the principles of toxoplasmosis control in sheep. (20%)
Explain the different routes of human infection. (20%)

Or

*Question 3b is on the next page*
3b. You are asked to comment on the bulk milk tank quality results on a 200 cow dairy herd. The Bulk milk somatic cell count is 320,000 per ml.

- What type of cells are measured here? (10%)
- How should this result be interpreted? (20%)
- What action would you recommend as a result of this finding? (20%)

The Bactoscan result is 180,000 per ml.

- What is being measured in a Bactoscan test? (10%)
- How should this result be interpreted? (20%)
- What action would you recommend as a result of this finding? (20%)

**Section B**

Answer all 10 questions

1. List the steps involved in performing a Caesarean section in a beef cow.

2. Outline the options for the control of chewing lice (*Bovicola bovis*) in a spring-calving herd of beef suckler cattle.

3. Explain the life cycle and biology of the sheep roundworm parasite *Nematodirus battus*.

   Describe the principles of control of this parasite.

4. List and explain the potential problems associated with long-term sheep grazing on *Brassica* forage crops.

5. Describe the clinical signs caused by botulism in cattle.

   Explain the disease principles involved in botulism and describe the common primary sources of outbreaks of botulism seen in the UK.


7. What are the clinical signs of lead poisoning in cattle? What are the commonest sources of lead that are likely to affect cattle? How can the condition be treated? If lead poisoning is suspected in a dairy herd what action should be taken?

8. What are the clinical signs of Bovine Spongiform Encephalopathy? List the main differential diagnoses of this condition. What action should be taken if a case is suspected?
9. A 14 month old beef animal is blood sampled and tested for Bovine Viral Diarrhoea Virus (BVD). The results are:

   BVD antigen positive
   BVD antibody negative

What is the correct interpretation of this result?
When was the calf likely to have been infected?
How should you treat this calf?

10. A dairy farm regularly gets problems with diarrhoea in calves at age 10 days to 3 weeks. The calves are fed powdered milk from buckets and are weaned at approximately 8 weeks of age.

List the most likely differential diagnoses of this problem.
How would you investigate this problem to try and find the cause?
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Section A
Answer either (a) or (b) from each of the 3 pairs of questions

1a. Describe the purpose, limitations and disadvantages of post mortem meat inspection (60%). Outline the routine post mortem inspection procedures that are required for an 18-month-old bovine animal (20%). For organs that are required to be incised list two conditions that can be found and indicate whether or not they have zoonotic potential (20)?

Or

1b. Briefly describe why contamination of poultry meat by *Campylobacter jejuni* is a major issue in the poultry industry (30%).

Consider the processing of broiler chickens from on-farm to the finished poultry meat carcase and describe the risk of *Campylobacter jejuni* contamination at each stage and suggest ways in which these risks may be mitigated (70%).

2a. Describe the methods of slaughter and killing that are commonly practised in red meat and poultry slaughterhouses in the United Kingdom (40%). Indicate how these methods can be monitored to ensure that they are being performed properly to ensure optimal animal welfare (40%). What are the legislative requirements for persons undertaking these procedures, and what is the legislation that covers this (20)?

Or

2b. Welfare is often considered in terms of providing animals the Five Freedoms. How does legislation in the United Kingdom help to ensure that the ‘5 Freedoms’ of sheep are protected while on the farm, during transport and at slaughter?

3a. For each of the following zoonotic disease scenarios briefly describe the clinical signs found in animals, the risk of transmission to, and clinical signs in humans. What advice would you give to the clients in each case?

   a) A farm visitor attraction, that has regular orphan lamb feeding demonstrations with classes of school children, that has an outbreak of orf (Contagious Ovine Dermatitis) in its lambs (33.3%).

   b) A married couple with two young children (aged 4 and 6) present with a 10-week old kitten that has been diagnosed with ringworm on its paws and face (33.3%).

   c) A small holder with three adult pet pigs one of which has died recently and post-mortem investigations have revealed infection by *Erysipelothrix rhusiopathiae* to be the cause of death (33.3%).

Or

Question 3b is on the next page
3b. An established farm animal client seeks your advice regarding veterinary public health issues surrounding a proposed new ‘Open Farm’ venture where the public will be permitted contact with cattle, sheep, pigs and goats. Outline your response in terms of risk assessment for the important zoonoses (60%) and risk management aimed at avoiding infection of visitors (40%).

**Section B**

Answer all 10 questions

1. **What are the definitions of Hazard and Risk when related to food safety (50%)?**
   List five (5) zoonotic food-borne hazards likely to be encountered that are associated with pork meat, and for each of these indicate the main zoonotic risk factors (50%).

2. **List the Official Veterinarian's (OV) inspection and auditing tasks that the OV is likely to undertake in a multispecies red meat abattoir.**

3. **List the Specified Risk Material (SRM) for relevant species in the UK. What are the requirements for animal by-products (ABP) categorization, staining, storage and disposal of this material?**

4. **List six (6) zoonotic pathogens that are commonly associated with dog faeces in the United Kingdom. For one of these pathogens describe the clinical implications for humans and describe your advice for controlling infections in dogs.**

5. **Explain why the correct identification of food producing animals is necessary in the European Union. Describe the legal requirements for the identification of pigs in the United Kingdom.**

6. **List the diseases in cattle that are required to be notified to the authorities under the Animal Health Act 1981 in the United Kingdom.**

7. **Describe what the cascade is and how this is applied to the use of veterinary medicines in the United Kingdom.**

8. **List the parasitic lesions that can be found in a sheep’s carcase and offal, and for each one state the implications for animal or public health.**

9. **E coli O157 is an important zoonosis. What are the clinical signs of disease in humans (20%)? Which groups of people are at an increased risk of infection (30%)? Identify the most important steps for the prevention of infection in humans (50%).**

10. **List the foods most likely to be associated with human food poisoning due to *Listeria monocytogenes*. Identify preventive steps in the food supply chain that minimise transmission to humans.**
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