MEDICINE

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

1a. List the possible causes of bilateral epistaxis (nosebleed) in dogs. Describe your approach to the investigation of an eight-year-old Dobermann Pinscher with recurrent unilateral epistaxis. Discuss the management options and prognosis for nasal adenocarcinoma in dogs.

OR

1b. An adult mixbreed dog is presented to you with severe dyspnoea. From the history you learn that it may have been exposed to anticoagulant rodenticide poison. Describe your approach to the investigation of this case. Outline how you would treat a confirmed case of anticoagulant poisoning.

OR

2a. Describe the clinical syndromes that are caused by *Erysipelothrix rhusiopathiae* (Swine erysipelas) infection in pigs. How may these conditions be treated and prevented on the modern pig farm?

OR

2b. Write an account of the aetiology, clinical signs, diagnosis, treatment and prevention of post weaning multisystemic wasting syndrome (PMWS) in pigs.

OR

3a. A six-year-old neutered female Boxer presents to you with a two-year history of bilaterally symmetrical flank alopecia. It is overweight and the owners report it is drinking more than usual, but is otherwise well.

i) Briefly outline how you would determine whether the dog is truly polydypsic.

ii) List five different diagnoses for the alopecia, and comment on clinical features that would be associated with each condition.

iii) Outline your approach to achieving a diagnosis in this case.

iv) Choose a likely diagnosis from one of those you have listed, and outline treatment options and prognosis.
3b. You are called to a recently calved dairy cow who is recumbent in a straw yard. The owner reports that one quarter of her udder is very hard to the touch. Describe in detail how you would examine and treat the case.

MEDICINE
SECTION B (answer all questions)

1. An eight-month-old kitten is presented with icterus, tremor and ataxia. You suspect non-effusive feline infectious peritonitis (FIP) infection. Explain which tests are useful in making a diagnosis of FIP.

2. List the characteristics of a diet appropriate for the management of acute diarrhoea in dogs. Briefly explain why these characteristics are beneficial.

3. List the typical findings in the history and physical examination of a cat with hyperthyroidism.

4. Outline a typical vaccination policy for a nine-week-old kitten.

5. Write short notes on the causes, clinical signs, treatment and prevention of kennel cough in dogs.

6. What factors contribute to the onset of pregnancy toxaemia in ewes? Describe concisely how you would manage and treat a case.

7. Write a concise account of the clinical signs, diagnosis and treatment of ragwort (Senecio jacobea) poisoning in the horse.

8. Write a concise account of the possible causes, clinical signs, diagnosis and treatment of traumatic pericarditis in the cow.

9. List the forms of mange infestation that are recognised in goats in the UK. Describe concisely the clinical signs of each form you list. Describe briefly how you would deal with ONE of the mange infestations you have listed.

10. Write short notes on the cause, clinical signs, diagnosis, treatment and prevention of Equine Influenza.

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

1a. A three-year-old Collie was injured in a road traffic accident 24 hours ago. It has sustained a grade II, open fracture of the mid-diaphyseal radius and ulna. No other abnormalities are evident on physical examination.

a) List three orthopaedic complications that may be associated with the treatment of this fracture.

b) What main factors contribute to the development of these complications?
c) Describe briefly how you would manage this dog so as to minimise the possibility of these complications developing.
d) How would you stabilise this fracture?

OR

1b. A five-year-old Labrador is presented with acute onset paraplegia.

a) LIST four possible causes.
b) Describe how you would investigate this case to establish a diagnosis.

2a. Define hypoxaemia and state why it is detrimental in an anaesthetised animal.

a) List five causes of hypoxaemia in a dog under gaseous general anaesthetic.
b) How may hypoxaemia be treated in this dog?

OR

2b. Why are the risks of equine general anaesthesia so much higher than for other domesticated species? Indicate the measures, which should be taken to minimise the peri-operative fatality rate in the horse.

3a. Compare and contrast the indications for dental extraction in horses and dogs. What techniques would you use to decide whether or not a tooth requires extraction in these species?

OR

3b. A horse is presented to you with a penetrating wound to the caudal aspect of the fetlock. Describe how you would assess the severity of the injury and how you would manage it.

SURGERY

SECTION B (answer all questions)

1. LIST five advantages of autoclaving as a method of sterilising surgical instruments.

2. A Great Dane is presented with a suspected gastric torsion.
   (a) List the likely life-threatening metabolic changes.
   (b) Describe a surgical technique for preventing a recurrence of this condition.

3. What are the typical synovial fluid changes that occur in septic arthritis?

4. (a) Briefly describe the radiographic technique for evaluating a dog’s elbows using the protocol of the BVA/KC Elbow Dysplasia Scheme.
   (b) Draw a diagram of a medio-lateral projection of the elbow and label the anatomical features that can be evaluated using this view.

5. A six month terrier underwent a routine mid-line ovariohysterectomy two days before you see it. It has a swelling of its ventral abdomen, a serosanguinous discharge from the wound and fatty tissue protruding between two of the simple interrupted skin sutures.
   (a) What is the most likely diagnosis?
   (b) LIST the potential complications of this condition.
   (c) How would you manage this case?

6. Briefly outline the endoscopic features, which may be present in the following disorders of the equine upper respiratory tract:
   (a) epiglottal entrapment.
   (b) progressive ethmoidal haematoma.
   (c) arytenoid chondritis.
7. Name two sites where squamous cell carcinoma commonly arises in the horse. Summarise the surgical management of one of them.

8. With the aid of diagrams explain the anatomical relationships, which arise in the bovine abdomen when the abomasum is normally sited, when it is displaced to the left and when it is displaced to the right.

9. Identify the potential radiation hazards, which may arise during radiography of the equine head and indicate how they may be avoided.

10. Briefly describe how you would treat an umbilical hernia in a calf.

**REPRODUCTION**

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

1a. A dairy farmer seeks your advice about synchronising oestrus and ovulation in a group of 35 fifteen-month-old Freisian/Holstein heifers with a view to using fixed time Artificial Insemination (AI).

   (a) Describe the method you would recommend.
   (b) Discuss the physiological principles behind the method that you have described.
   (c) Comment on the type of bull you would recommend and the recommended body condition of the heifers.

   OR

1b. During a routine health and fertility visit you are asked to examine a fourth parity cow that calved normally 10 weeks before but has not been seen in oestrus since.

   (a) Describe how you would examine the cow.
   (b) What are the likely causes of this problem?
   (c) How would you diagnose them?
   (d) Describe how you would treat one of those named above.

2a. About six weeks before the expected start of lambing in a 500 ewe lowland flock, five have very recently developed cervical-vaginal prolapse.

   (a) How would you treat the affected ewes?
   (b) What are the factors which predispose to the disorder?
   (c) What are the consequences if the ewes are not treated?
   (d) What evidence would you give regarding the management of the rest of the flock?

   OR

2b. A 10 year old mare is presented to you in oestrus in May, having been served at both the seasons that she has had that year.

   (a) Describe the examinations you would carry out on the mare.
   (b) Give TWO causes for this situation.
   (c) Select ONE of these two causes and discuss your likely findings.

3a. A 12 month old bitch which is in season escaped from the owner for about 12 hours and they are worried that she might have been mated. She is brought to your clinic 12 hours after she has been found as the owners definitely do not wish her to have puppies at this stage of her life, but do so when she is older.

   (a) What are the options available to you?
(b) Select TWO of these options and discuss the physiological mechanisms involved, and discuss the advantages and disadvantages of these methods.

OR

3b. A three-year-old bitch is due to travel to stud with only a single mating being available.
   (a) List five methods of determining the optimum time for mating.
   (b) Select TWO of those listed, and describe the physiological mechanisms justifying their use, and discuss their advantages and disadvantages.

REPRODUCTION
SECTION B (answer all questions)

1. (a) List the five commonest causes of abortions in sheep in the UK.
   (b) Briefly outline how you would control and prevent one of those listed.

2. (a) What is pseudo-pregnancy in the doe goat?
   (b) How would you diagnose and treat the disorder?

3. (a) What are the indications for the induction of farrowing in sows?
   (b) Briefly outline a suitable regimen that you would use for the procedure.

4. (a) Define endometritis and list the clinical signs in the cow.
   (b) Describe ONE method of treatment which you would use.

5. (a) List the consequences of retained foetal membranes in the mare.
   (b) Briefly outline how you would treat a case.

6. (a) List FIVE of the signs, which can be observed in a pseudopregnant bitch.
   (b) Give two methods of treatment for this condition and outline the principles behind these therapies.

7. You are asked to investigate a female cat, which is showing no signs of cycling.
   (a) Give THREE reasons for such a problem.
   (b) Select one and describe how you would investigate it.

8. (a) List FIVE sperm defects, which are commonly seen in semen samples from sub fertile dogs.
   (b) Outline how you would assess the prognosis for the future breeding of this type of dog.

9. (a) List the signs of postpartum metritis in the bitch.
   (b) Outline how you would treat this situation.

10. (a) List the clinical signs of Granulosa-thecal tumours in the mare.
    (b) Briefly describe how you would confirm a diagnosis.

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

1a. Describe the factors that influence air hygiene within animal accommodation. Citing specific disease examples, explain how air hygiene influences the health, productivity and welfare of animals.

OR

1b. During a visit to your practice to pay his bill, a local pig farmer mentions that he has had some litters with only 6 to 7 piglets born alive. In addition to this, piglets are dying in
the first few days of life. Describe how you would proceed to investigate this problem and briefly outline control strategies for any factors that you suspect may contribute to this problem.

2a. Describe briefly the methods of slaughter commonly practised in red meat abattoirs and poultry slaughter plants in the UK.

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

OR

2b. An isolated hill farm extending to 1500 acres has 850 out wintered spring lambing Cheviot ewes and 100 suckler cows plus followers. Suckled calves are sold at one year old through local markets. A welfare complaint has been made alleging that sheep were collapsing when brought in and carcases could be seen on the hill.

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

3a. Discuss the potential benefits of a dairy farm assurance scheme for dairy cattle, farmers, consumers and veterinary surgeons.

OR

3b. The use of the Hazard Critical Control Programme (HACCP) has been used in the food industry since 1985 and is now being applied on the farm.

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.

ANIMAL HEALTH
SECTION B (answer all questions)

1. List the factors that can affect milk protein and butterfat levels.

2. Write short notes on the importance of trace elements (micronutrients) in farm animals.

3. Write short notes on the diagnosis, treatment and prevention of coccidiosis in lambs.

4. Describe briefly your recommendations for the winter feeding of a 600 kg horse being ridden hard three times weekly throughout this period.

5. List the main factors influencing dry matter intake in the dairy cow and give the approximate range for a lactating Holstein Friesian dairy cow.

6. A dog presents with acute onset diarrhoea. You take a sample of faeces for culture and the report is faxed to you in 4 days. Compare the significance of a finding of *Campylobacter jejuni* with a finding of *Salmonella typhimurium* in the sample with regard to the advice you would give to the owner.
7. List four possible types of residues that may be found in food of animal origin. Indicate briefly the controls that are in place to reduce or eliminate the risk of residues being present and how the consumer can be assured.

8. What is a zoonosis? List 4 zoonoses that may be found in cats and dogs.

9. Describe the action you would take on finding the following at post-mortem inspection:
   
a) a calf with a swollen umbilicus.
b) a lamb with adhesions on the pleura.
c) a cattle carcase with yellow coloured fat.
d) a pig with extensive haemorrhagic lesions on the kidney.
e) a broiler with air sacculitis.

10. Describe the action required on finding tuberculous-like lesions in a bronchial lymph node of a beef animal, at routine post mortem inspection in an abattoir in England.