

Sample exam questions

A. Essay questions (sample)

Q1

You are the new vet in charge of a Spanish sheep farm with 1500 animals of a meat breed and a semi-extensive management system, where the lambs are confined and the sheep graze in the fields during the day and are housed with the lambs at night. The farmer calls you because he realized that two sheep, aged 3 and 5 years, were snoring and sneezing. When you explore the animals you find the clinical signs showed in Figures 1, 2, and 3. The farmer tells you that two years ago he had another similar case in the flock and the animal was losing weight until it died two months later. You decide to humanely kill one of the sheep based on the level of deterioration. Figure 4 shows the skull section at necropsy.

Figure 1



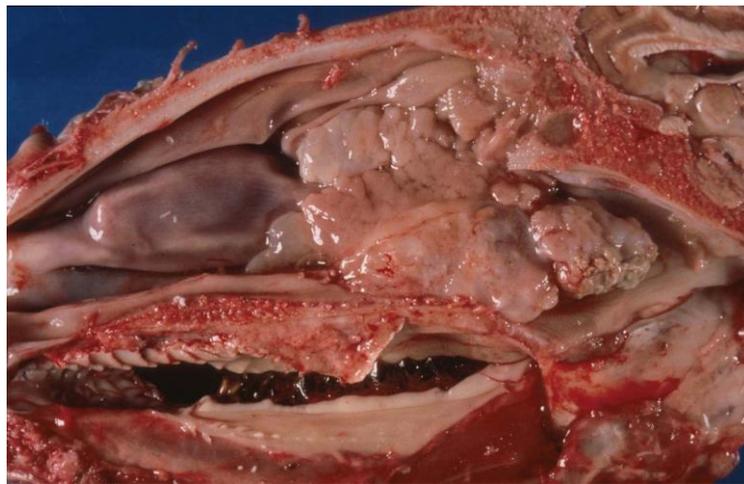
Figure 2



Figure 3



Figure 4



What disease are these animals suffering from?

Describe the aetiology, clinical features, pathology, differential diagnosis, treatment, prophylaxis and control measures.

Q2

SCANNING & LAMBING DATA

Background

First flock health planning visit to a new client that runs a 700 acre lowland family-run farm of 450 North Country Mules and Suffolk-cross Mule breeding ewes. The farm buys in ewe replacements from a local sheep market. The farm produces store lambs and sells fat lambs direct to the slaughterhouse. Apart from a primary course of combined clostridial and *Pastuerella* vaccine to ewe replacements in autumn and annual flock boosters, no other prophylactic vaccines are administered. The producer is keen to improve the flock and particularly scanning performance. They were disappointed with the overall flock pregnancy scanning results last year (174%) and reported a number of stillborn lambs, some small and aborted lambs, and a few weak-born lambs that died shortly after lambing or at turnout.

You acquire the following records that were maintained last year:

Records	number	%
Ewes tupped	450	
Barren ewes at scanning	25	
Lambs expected from scanning	783	174%
Lambs born	783	
Lambs born alive	722	
Lambs born dead (including abortions)	61	
Lambs turned out (first week after lambing)	727	
In field losses	21	
Lambs sold/still on farm	692	
Ewe mortality rate (%)	-	3.5%
Culling rate (%)	-	12.5%
Replacement rate (%)	-	18%

Questions

1. **Assess** the flock records and perform any necessary **basic calculations** to assess the lamb loss records.
2. Briefly summarise the **potential** disease risks that may be introduced when buying in purchased sheep of unknown source(s) from a local market and any relevance to reduced scanning performance and lamb losses.
3. Suggest **common causes** of failure to conceive or maintain early pregnancy in sheep.
4. Briefly outline the sampling considerations and **routine samples** to collect during veterinary diagnostic investigations of ovine abortion cases.

5. List **four** key costs that you would consider when trying to formulate a reasonable estimate or “best guess” cost of a single ovine abortion case.
6. **Calculate** the main financial costs and benefits (you may like to summarise this in a table) of implementing a prophylactic abortion vaccination program, for example for Toxoplasmosis, for ewe replacements in this flock, based on the following cost estimates and assumptions:

Assume that the farm can purchase vaccine at £4.50/head from the veterinary practice, that they would vaccinate 80 replacement ewes, and assume that the future flock average scanning result is 180%. Assume that without vaccination, ten animals will abort due to Toxoplasmosis and that vaccination at the appropriate time will prevent these cases. The farmer may need to pay a labourer for the gathering and vaccinating (4 hours at £10 per hour) and disposal costs in the area are approximately £1.50 per lamb. To assess costs and losses in terms of potential for finished lambs, the producer estimates the average value of a slaughter lamb to be £90/head and a relevant costings book suggest it costs approximately £10 to rear lambs to slaughter.

B. Multiple choice questions (sample)

Q1

In general practice cerebrospinal fluid is collected from what site using which of the following methods:

- A Cisternal sample under local anaesthesia
- B Cisternal sample under general anaesthesia
- C Lumbar sample under local anaesthesia
- D Lumbar sample under general anaesthesia
- E Cisternal sample under deep sedation

Q2

In brainstem disease, depression progressing to stupor is attributed to a specific lesion in the:

- A cerebral cortex
- B cerebellum
- C red nucleus
- D vestibulo-cocchlear nucleus
- E ascending reticular activating system

Q3

Border Disease viraemia during acute infections in feedlot lambs is characterized by:

- A Leucopaenia and fever
- B Leucocytosis and anemia
- C Leucopaenia and anemia
- D Leucocytosis and fever
- E Normal haematological values

Q4

The main E. coli sero-group associated with septicaemia in lambs is:

- A O157
- B O111
- C O78
- D O26
- E K99

Q5

Which of the following have been reported as being caused by chronic lead poisoning in 3 to 12 week old lambs?

- A Stiffness and recumbency
- B Diarrhoea
- C Polioencephalomalacia
- D Jaundice
- E Wool loss

Q6

An imbalance in levels of calcium and phosphorous in the diet predisposes to the urinary tract precipitation of:

- A calcium oxalate crystals
- B ammonium phosphate crystals
- C magnesium crystals
- D struvite crystals
- E it doesn't precipitate anything

C. Extended questions (sample)

Q1

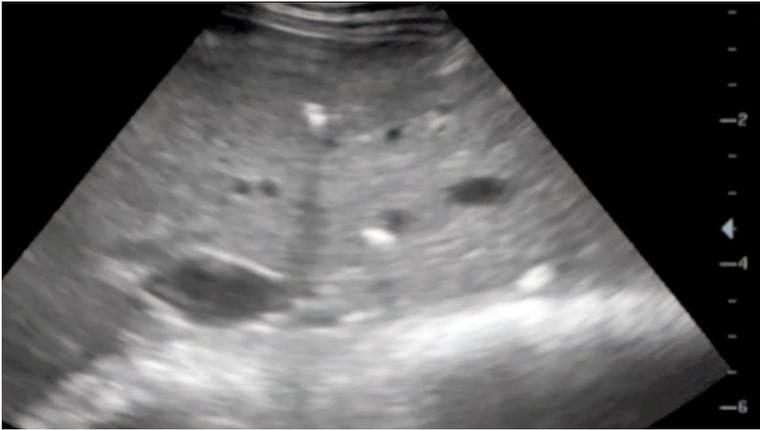
During early winter you are presented with several adult sheep in low body condition score and poor fleece quality despite an appropriate grazing. There is submandibular oedema and marked marked anaemia.

Ultrasound examination of the liver using a 5 MHz sector scanner is shown in figure.

Describe the abnormal sonographic changes.

What do these changes represent?

How would confirm your suspicions?



Q2

A 10 week-old lamb presents in very poor bodily condition with a dull, open fleece. The lamb is depressed, dehydrated, and frequently stands over the water trough. The rectal temperature is normal. Its co-twin, and other lambs in the group, are healthy and growing well. The lamb is euthanased for welfare reasons; the only abnormality noted are the kidneys (figure).

What is your diagnosis? (One mark)

How could you have confirm you diagnosis in the live sheep? (Two marks)

What control measures would you recommend?

