FACULTY	**Health Sciences and Veterinary Medicine**		
DEPARTMENT	**Production Animal Clinical Studies**		
SUBJECT	**Production Animal Clinical Studies 1**		
SUBJECT CODE	**V3830PP**		
DATE	**June 2024**		
DURATION	**3 hours**	**MARKS**	**150**

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Internal Moderator: Dr I. Kaatura
External Moderator: Dr RJE Stewart

This question paper consists of 8 pages, including this front page.

Instructions
Read the questions carefully
Answer ALL questions
Write clearly and concisely

First Opportunity Examination

SECTION A
PIG HEALTH AND PRODUCTION [75 marks]

1. Define Dead Weight Feed Conversion and state its importance with regards to pig feeding management. [4]

2. You enter a farrowing house of a resettled pig farmer where there is a sow nursing ten one-week-old piglets. The piglets are seen huddling together and not suckling. What advice would you give the farmer with respect to management of the macro and micro environment? [3]

3. Dry sows are generally kept in stalls at most modern piggeries to reduce aggression, space used and thereby reduce costs and simplify management and observation. In spite of the foregoing, list animal health problems associated with sows confined in stalls? [3]

4. A pig farmer who keeps good production records calls you to investigate a pre-weaning mortality of 20% which he has not seen before. You undertake a tour of the farrowing barn including inspecting records. What advice would you give the farmer on farrowing barn management practices to reduce pre-weaning mortality? [5]

5. A farmer consults you about his four grower/finisher pigs where two died suddenly and the other two are showing the following signs: shifting leg lameness, temperature 41.5°C, depression, generalised erythema and purplish discolouration of the ears, snout and abdomen. A post-mortem examination revealed lesions as shown in Figure 1:

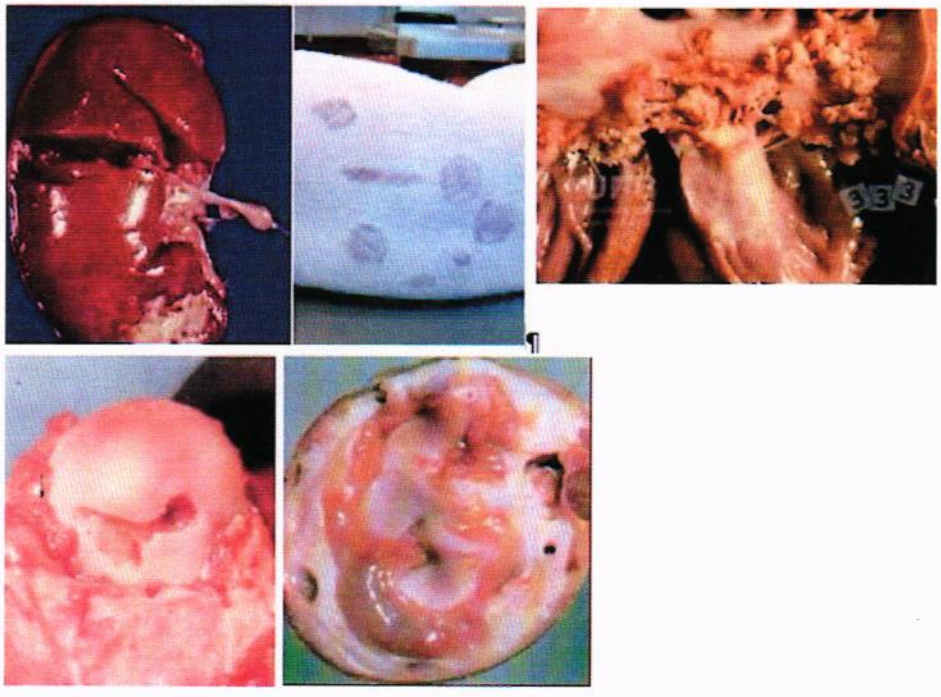


Figure 1

a. List six differential diagnoses. [6]

b. What would be your most likely tentative diagnosis? [1]

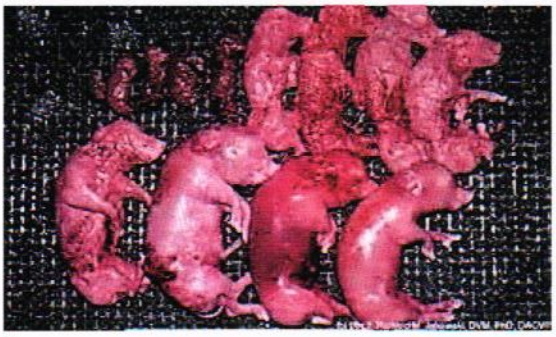
c. What samples would you collect to confirm your tentative diagnosis? [4]

d. What tests would you request from the laboratory to confirm your tentative diagnosis? [3]

e. What therapeutic treatment would you advise the farmer for acute cases of your tentative diagnosis? [3]

6. You set out to investigate abortions in a pig herd where three sows recently aborted from a herd of 20 sows. During the investigation you make the following findings as shown in Figure 2.

A



B



Figure 2

a. Describe the findings in A and B of Fig 2? [2]

b. List nine differential diagnoses. [9]

c. Apart from organs what foetal fluids would you collect for further laboratory investigation [2]

7. A pig farmer consults you concerning his weaners and growers. Some of the pigs had sudden onset hemorrhagic diarrhoea. The pictures in Figure 3 below show some of your necropsy findings.

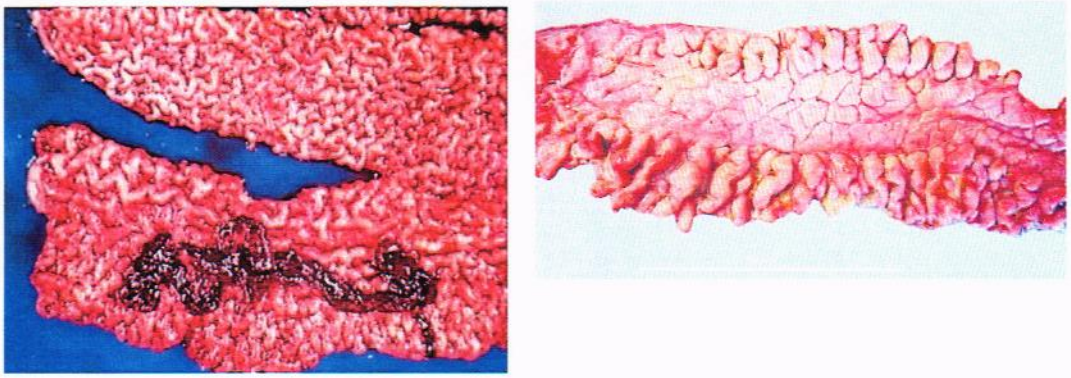


Figure 3

a. What is the most likely diagnosis and aetiology? [2]

b. How would you confirm your diagnosis? [8]

c. What would you advise this farmer? [5]

8. A small-scale pig farmer is concerned about the losses in his porkers at the local abattoir because most lungs are condemned due to various pulmonary lesions. Assume that these pigs have no other abnormalities:

a. Give six differential diagnoses and the causal agent for each. [6]

b. As a veterinarian, what measures would you take to solve this problem? [9]

SECTION B

POULTRY HEALTH AND PRODUCTION [75 marks]

1. Describe the causes [3] and clinical signs [5] of nutritional muscular dystrophy (white muscle disease) in poultry and discuss preventive measures. [4] 12

2. A commercial breeder reports nervous signs in his 3-week-old broilers which were imported as day-old chicks from another country. About 30% of the flock are showing the following signs: ataxia, tremors and weakness that progresses to paralysis and recumbency. The chickens are fed a commercial feed from a reputable feed company. The dead birds were opened and the post-mortem findings are shown in Figure 4a and 4b: 8



Figure 4a



Figure 4b

a. List four differential diagnoses. [6]

b. What is your tentative diagnosis? [1]

c. What advice would you give for disease control? [1]

3. A farmer from Zambezi Region calls you to investigate an increase in mortality in her backyard flock of chickens. The farmer lost 30 chickens of all ages from a flock of 45 in the last two days. Similar mortalities were reported by other farmers in the village. Some of the chickens died suddenly without showing signs. On examination of the flock, you note the following clinical findings: greenish watery diarrhoea, cyanosis and oedema of the head, comb, and wattle; oedema and red discolouration of the shanks blood-tinged oral and nasal discharges, opisthotonos and paralysis. A post-mortem examination revealed the following findings as shown in the pictures in Figures 5a, b, c, d and e below: 14



Fig5a

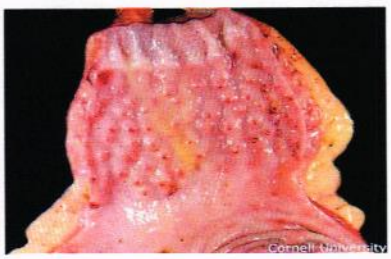


Fig5b



Fig 5c



Fig 5d



Fig 5e

a. List six differential diagnoses. [6]

b. What is your tentative diagnosis? [1]

c. What test would you request to confirm your tentative diagnosis? [1]

d. If you were the area State Veterinarian what measures would you take to control the disease? [6]

4. A contagious poultry disease presented with the following lesions and clinical signs at a Broiler Breeders Poultry Farm in Namibia. The birds are experiencing mostly respiratory signs and have variable morbidity and mortality. 15



Fig6a



Fig6b



Fig 6c

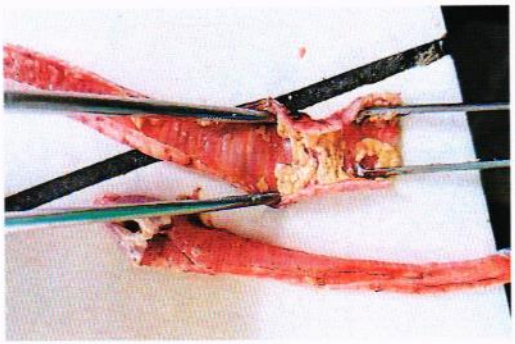


Fig 6d

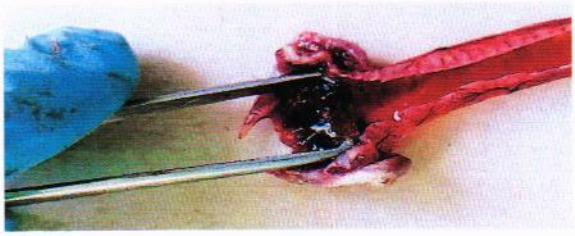


Fig 6e

a. Describe the lesions/signs in each of the pictures above in Figures 6a-e. [5]

b. What are the differential diagnoses? [4]

c. What is the most likely diagnosis? [1]

d. What treatment options are available for the affected birds [5]

5. A communal farmer calls you to investigate a disease affecting her chickens where six chickens of different ages are affected from a flock of 50. The affected chickens present with difficulties in breathing, difficulties in swallowing, nasal discharges and cutaneous lesions as shown in the pictures below in Figures 7a-b: [15]

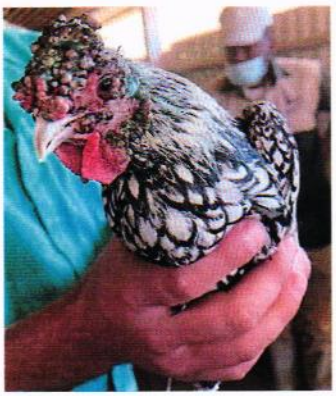


Fig 7a



Fig 7b

a. List three differential diagnoses (Mostly likely first). [3]

b. List the three forms of the disease. [3]

c. Describe modes of transmission of the disease. [3]

d. What tests would you request to confirm your tentative diagnosis? [2]

e. What advice would you give for disease control? [4]

6. You are a State Veterinarian under the Public Health Division at a local poultry abattoir. The health inspectors on duty have called you onto the floor to pass your final judgement on the following carcasses with lesions shown below in Figure 8a-d. [11]

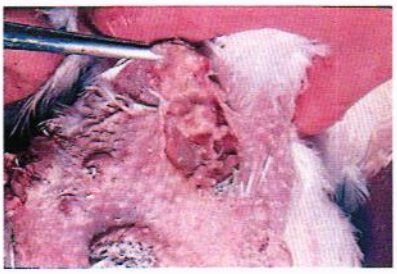


Fig 8a



Fig 8b



Fig 8c



Fig 8d

As a follow-up from the farm of origin, you learn that there are sick birds showing paralysis, opisthotonos and irregular pupil margin.

a. What will be your final judgement? [1]

b. List six differential diagnoses. [6]

c. Discuss the economic importance of this disease [4]

END OF THE EXAMINATION