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| **FACULTY** | **Health Sciences and Veterinary Medicine** | | |
| **DEPARTMENT** | **Production Animal Clinical Studies** | | |
| **SUBJECT** | **Production Animal Clinical Studies 1** | | |
| **SUBJECT CODE** | **V3830PP** | | |
| **DATE** | **June 2025** | | |
| **DURATION** | **3 hours** | **MARKS** | **150** |

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**Internal Moderator: Dr I. Kaatura**
**External Moderator: Dr R Stewart**

This question paper consists of 19 pages, including this front page.

***Instructions***

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

# First Opportunity Examination

## SECTION A

## PORCINE HEALTH AND PRODUCTION [75 marks]

1. Aggression in sows is one of the common challenges experienced in intensive pig production. Outline what measures a pig farmer can implement to minimise this challenge? [4]

2. In order to ensure maximum productivity at a piggery, a veterinarian must provide a herd health package to a pig farmer. Describe the main components of such a herd health package for a 40-sow unit. [6]

3. Good farrowing management requires that piglets receive colostrum as soon as possible after birth. Outline the timing and importance of providing colostrum to the newly born piglet? [5]

4. As a State Veterinarian you are called by a farmer in Ohangwena Region to investigate mortalities in his free-range pigs where four pigs have died from a herd of nine over the past two days. One of the dead pigs had a temperature of 41.9°C before it died and on post-mortem examination you observe the following as shown in Figure 1:

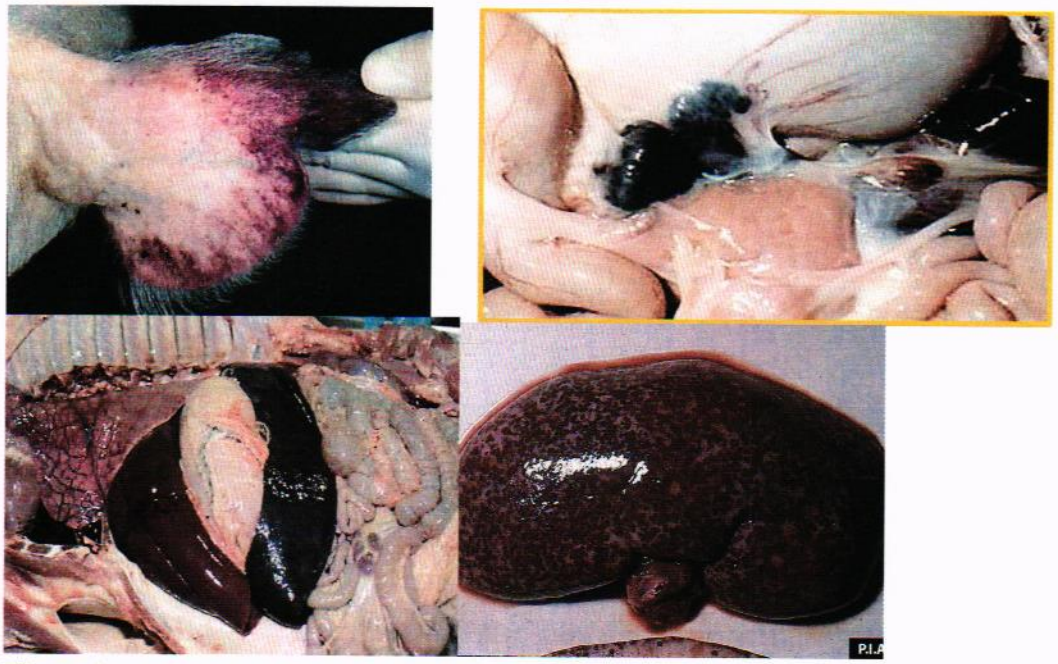


Figure 1

a) List six differential diagnoses? [6]
b) What is your tentative diagnosis? [1]
c) What samples would you collect for laboratory confirmation of your tentative diagnosis? [2]
d) What test would you request for confirmation of your tentative diagnosis? [1]
e) What control measures would you institute against your tentative diagnosis? [5]

5. A pig farmer calls you to investigate lameness affecting more than one limb in her weaners. Three weaners are affected from a herd of 35. The affected weaners show the following signs as shown in Figure 2:

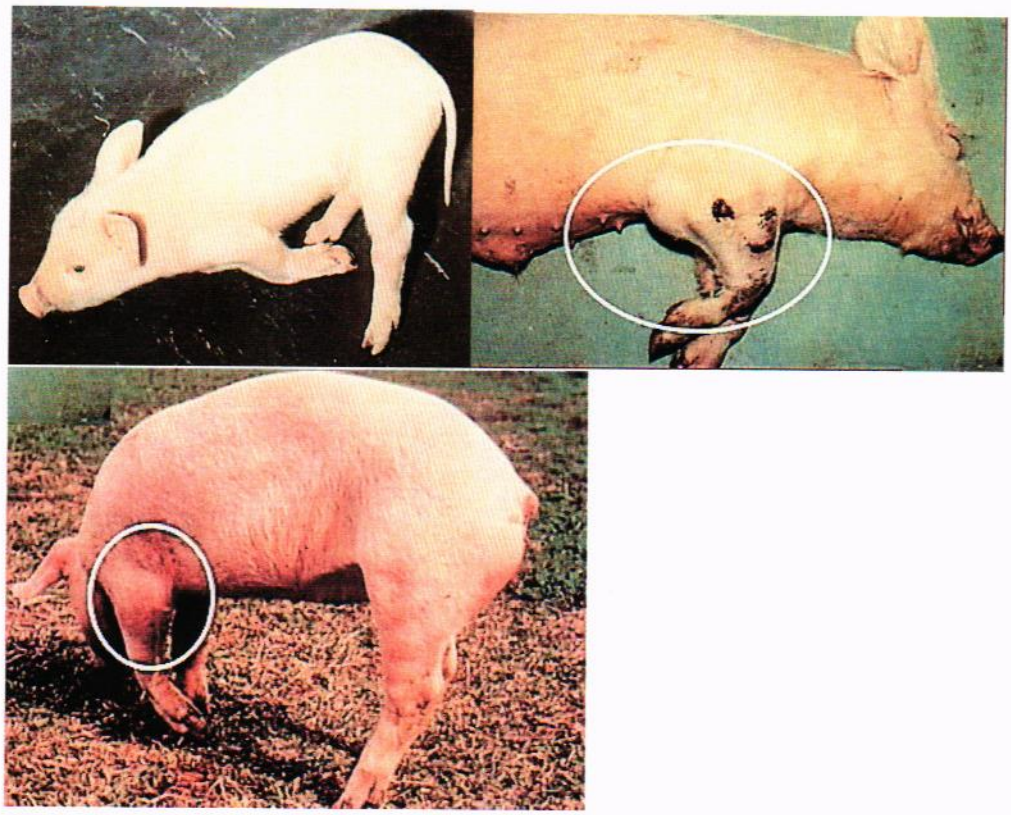


Figure 2

a) What is your clinical diagnosis? [1]
b) List five possible aetiologies of this condition? [5]
c) Describe how the infection could have been acquired? [4]
d) Discuss your treatment approach to this condition? [5]

6. Study the picture below and answer the questions which follow:



a) Give five differential diagnoses and their respective aetiologies. [5]

b) Further investigations reveal that this herd was recently diagnosed with post-weaning multi-systemic wasting syndrome. What is the most likely diagnosis? [1]

c) How would you confirm your diagnosis? [4]

d) What prevention and control measures can you recommend? [5]

7. You are called to a small-scale piggery with an outbreak of diarrhoea. Upon further investigations, you determine that only nursing piglets of several litters were affected, and the farmer has lost five piglets already. Discuss how you would handle this scenario under the following headings:

a) How would you confirm your diagnosis? Please specify the tests you would use and indicate which samples each test would require. [5]

b) Treatment, prevention and control [5]

SECTION B

POULTRY HEALTH AND PRODUCTION [75 marks]

1.Imagine you are a poultry specialist working for a large commercial poultry farm that is experiencing an increase in disease outbreaks despite regular vaccination of the flock. The farm has been following the recommended vaccination schedule and utilizing vaccines that are typically effective for the types of diseases encountered. Explain the role of vaccination in the poultry industry [5] and discuss possible reasons for vaccination failure in poultry production. [4]

2. You are a State Veterinarian under the Public Health Division at a local poultry abattoir. The health inspectors on duty have called you on the floor to pass your final judgement on the following carcasses with lesions shown below.

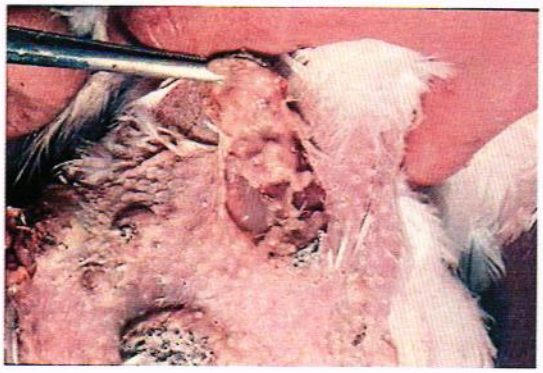


Fig 2a



Fig 2b



Fig 2c



Fig 2d

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

a) What will be your final judgement? [1]
b) List four differential diagnoses. [4]
c) Discuss the economic importance of this disease. [3]

3.An upcoming farmer from the NCA has called complaining of decreased feed and water consumption in his flock of chickens. He has noticed that there is decreased growth rate with high percentage of visibly sick birds with severe bloody diarrhea. On opening a few carcasses that he brought along, you notice that the caecum is distended ith thickened wall and extensive hemorrhage as shown in the pictures below and you highly suspect coccidiosis.



Fig 3a Fig 3b

As advice to the farmer, discuss strategies that are available for prevention and control of Avian Coccidiosis [10]

4. You have been presented with 5 carcasses of both chickens and turkeys from a farm in Outjo district with a history of sudden death. Upon further enquiry, the farm manager indicated that some of the affected birds have diarrhoea (white, watery green, mucoid) with increased respiratory rate, cyanosis and mucoid discharge from the mouth. Additional pictures of some of the affected birds have been provided below.



Fig 4ai



Fig 4aii



Fig 4aiii

On post mortem you notice the following



Fig 4bi



Fig4bii

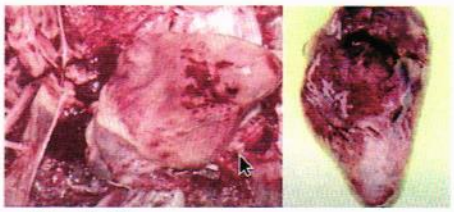


Fig 4biii

a) List your differential Diagnosis [4]
b) What is the most likely diagnosis? [1]
c) What control and prevention measures would you recommend to the affected farmer [5]

5.You have been called in June by a farmer with more than 2000 broilers at Onyanya in Oshikoto Region complaining of sudden death and has lost more than 30 birds. Upon arriving at the farm, you notice sick birds with cyanotic combs and wattles, distended abdomen, lethargy, excessive panting and laboured breathing (with gurgling sounds). (See pictures below). From the history, you have gathered that these chickens have unlimited access to feed and for security reasons, he leaves the lights continuously on. The workers rarely remove any droppings, the poultry house has high litter ammonia content.



Fig 5a



Fig 5b

a) List any four differential diagnoses. [4]
b) What is the most likely diagnosis? [1]
c) Discuss the predisposing factors [6]
d) Write short notes on the treatment attempts that can be made for this condition. [5]

6.A poultry farm has recently experienced an increased number of birds exhibiting signs of lethargy, poor growth, and muscular weakness. Several birds, mainly in the broiler flock, have been found struggling to walk and standing with difficulty. Upon necropsy, pale and necrotic muscle tissue was observed in the affected birds. The farm manager is concerned about the welfare of the flock and seeks advice from a veterinary consultant. See Pictures below

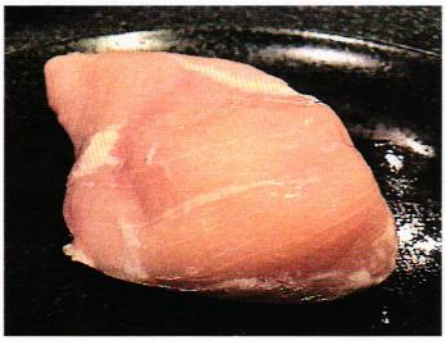


Fig 6a.



Fig 6b

a) Based on the description and post-mortem findings, what are your differential diagnoses? [4]
b) What is your tentative diagnosis? [1]
c) Describe the causes [3] of this condition in poultry and discuss preventive measures [4]

7.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 as seen in the pictures below.



Fig 7ai

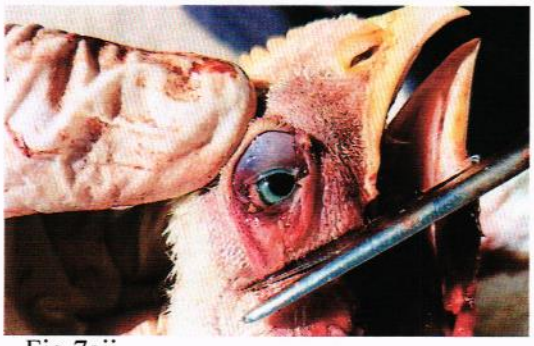


Fig 7aii



Fig 7bi

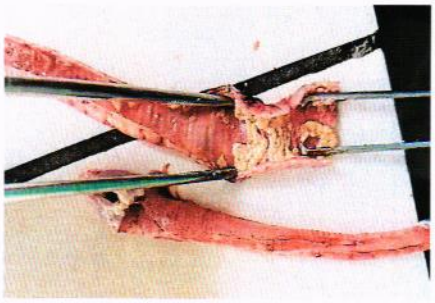


Fig 7bii

a) What are the differential diagnoses? [4]
b) What is the most likely diagnosis? [1]
c) What treatment options are available for the affected birds [5]

END OF EXAMINATION