FACULTY	FACULTY OF HEALTH SCIENCES & VETERINARY MEDICINE		
SCHOOL	VETERINARY MEDICINE		
DEPARTMENT	VETERINARY PARA-CLINICAL STUDIES		
SUBJECT	SYSTEMIC PATHOLOGY		
SUBJECT CODE	V3803AS- SECOND OPPORTUNITY EXAMINATION		
DATE	NOVEMBER 2023		
DURATION	3 HOURS	**MARKS**	150

SECOND OPPORTUNITY EXAM

Examiners: Dr. J. Yabe and Dr. D. Mudimba

Internal Moderator Professor C. Ntahonshikira

External Moderator: Professor G. Marruchella

This EXAMINATION consists of 9 pages including this front page.

Instructions:

1. Follow the instructions preceding each section
2. Answer all questions
3. Write neatly and legibly
4. Please be reminded that cheating in the examination will result in a failed grade
5. **Hand in this question paper together with the answer booklet**

QUESTION 1 [9]

The picture below depicts a postmortem that was conducted at the School of Veterinary Medicine in the Neudamm postmortem hall. The attending clinician reported that the cow presented with tachycardia, muffled heart sounds, asynchronous abnormal heart sounds, distension of the jugular veins and submandibular, brisket and ventral abdominal oedema. Treatment was attempted for 1 week but the cow did not respond to treatment and eventually died.

a. List 2 types of exudates shown in this picture. [2]



Pathological Basis Veterinary Diseases (2006), 5th Ed., Mosby-Elsevier

b. What is the morphological diagnosis in this case? [2]

c. Give one cause of this condition in cattle. [1]

d. Describe how such a lesion may develop. [3]

e. Name any disease that presents with similar lesions in cattle. [1]

QUESTION 2 [10]

The picture below is of a 6 months old dog with a history of cardiac problems which was later diagnosed by a cardiologist as valvular pulmonic stenosis. The dog was brought to the veterinary clinic for an elective procedure. The dog died during surgery. The owner requested a postmortem to be done.



Pathological Basis Veterinary Diseases (2006), 5th Ed., Mosby-Elsevier.

a. List 4 possible gross postmortem findings that you are likely to find in this dog. [4]
b. List 4 samples that you will collect for histopathology. [4]
c. Give the precautions that you will take as you collect the samples [2]

QUESTION 3 [15]

The picture below is for one of the goats at a farm 10 km from Otjiwarongo. Twenty three (23) goats from a total herd of 82 goats were presenting with clinical signs as indicated in the picture below. Nine (9) of the 23 sick goats had died.



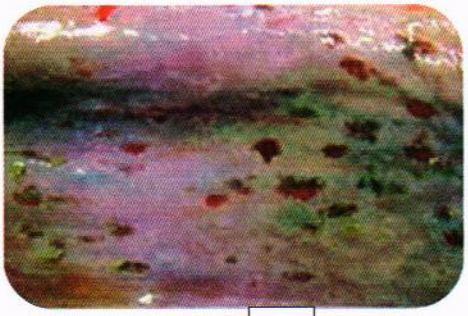
Otjiwarongo 2017

a. What could be your preliminary clinical diagnosis in this case? [1]
b. Give 5 differential diagnoses of this condition. [5]
c. Give 4 other morphological conditions that you are likely to see during the postmortem [4]
d. List 5 causes of such lesions. [5]

QUESTION 4 [10]



A



B



C

Images: Pathological Basis Veterinary Diseases (2006), 5th Ed., Mosby-Elsevier

These specimens are from a cow. Before death the cow exhibited symptoms characterized by fever, dysenteric diarrhoea, inappetence, dehydration, erosive lesions of the nares and mouth. Death occurred within a few days of onset of clinical signs.

a. Name the disease as indicated by these specimens. [1]
b. List three (3) viral diseases from which you should differentiate this disease [3]
c. Describe the gross and microscopic features of this disease. [3]
d. Name foetal pathological conditions associated with this disease. [3]

QUESTION 5 [10]



Pathological Basis Veterinary Diseases (2006), 5th Ed., Mosby-Elsevier

These are lungs from a cat that showed anorexia, poor weight gain, fluctuating pyrexia that was non-responsive to drugs such as antibiotics or non-steroidal anti-inflammatories. On postmortem there was severe effusive peritonitis and fluid in the thorax.

b. Name the type of pneumonia in these lungs. **[1]**
c. Name the disease that this cat could have likely suffered from. **[1]**
d. List four (4) general causes of this type of pneumonia. **[4]**
e. Give the infectious cause of this type of pneumonia in the following animal species: cattle (2), horses (2), and dogs (4). **[4]**

QUESTION 6 [22]

SECTION A [12]

The specimen below was obtained from a cow that had dystocia. The Veterinarian performed a caesarean section and removed dead calf with some developmental defects as shown in A and B.





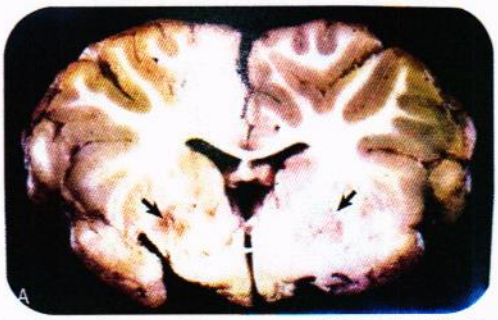
Pathological Basis Veterinary Diseases (2006), 5th Ed., Mosby-Elsevier

a. Name the developmental defect shown in picture A [1]
b. Name the developmental defect shown in picture B [1]
c. The developmental defect shown in B is one among many other developmental defects that can be associated with developmental defect in A. Name any 4 (four?) other developmental defects that can be associated with developmental defect shown in A. [4]

d. List 5 viruses that can cause developmental defects of the central nervous system. [5]

SECTION B **[5]**

The photomicrograph below is from a lamb in a flock where several lambs were exhibiting some neurological symptoms accompanied with unthriftness, diarrheoa and sudden death.

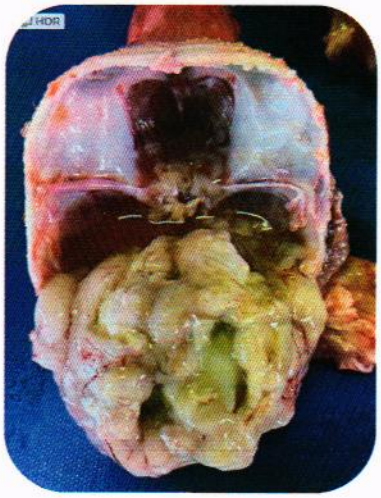


Pathological Basis Veterinary Diseases (2006), 5th Ed., Mosby-Elsevier

a. Describe the lesion shown by the arrows. [1]
b. Name the bacterial disease where this lesion is common. [1]
c. Describe how the gross pathological changes? in this disease develop. [3]

SECTION C [6]

The picture below is from a 4 month old puppy postmortem that was conducted in the postmortem hall at the School of Veterinary Medicine at Neudamm. The attending clinician reported that the puppy had a history of neurological symptoms for 2 months. The puppy also had bilateral strabismus and tetraparesis.

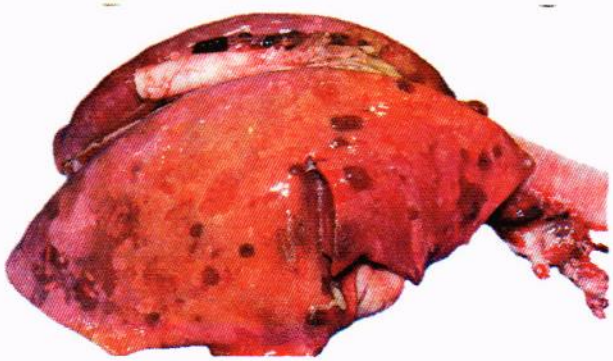


Unam 2022.

a. Describe the lesions shown in the picture above [1]
b. Give the morphological diagnosis of the lesion shown. [1]
c. Briefly discuss the classification of the condition you gave in point b above [4]

QUESTION 7 [14]

The picture below shows an embolic pneumonic lung from a cow that died acutely after showing signs of respiratory distress and bilateral epistaxis.



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a. Describe the distribution of the lesions shown. [2]

a. Describe the gross and microscopic lesions associated with this condition. [5]

b. Name the common portal of entry of the causative agent of this type of pneumonia. [1]

c. List 4 causes of this type of pneumonia in cattle. [4]

d. Name any other cause of this kind of pneumonia in dogs. [1]

e. Name the common sequelae. [1]

QUESTION 8 **[10]**

As a practicing veterinarian, you are presented with an intact male dog that has a history of infertility. On physical examination, you notice that it has only one testis in the scrotum. You conduct surgery and remove the contralateral testis in the abdominal cavity.

a. What condition would you suspect? [2]

b. Describe the gross features you would see in the contralateral testis. [4]

c. Describe the pathogenesis of this condition. [4]

QUESTION 9 **[10]**

PART A Define the following terms: [6]

a. Pustule [1]

b. Wheal [1]

c. Erosion [1]

d. Parakeratotic hyperkeratosis [1]

e. Dyskeratosis [1]

f. Acantholysis [1]

g. Vesicle [1]

PART B – Describe the skin lesions of lumpy skin disease in cattle. [4]

QUESTION 10 **[10]**

Answer the following questions about testicular tumors in dogs.

a. Name three important testicular tumors common in dogs. [3]

b. Name the tumor that appears lobulated, large and firm to hard. [1]

c. Name the testicular tumor that causes feminization in dogs. [1]

d. Describe the sequelae and pathogenesis for feminization of the tumor in point c above [5]

QUESTION 11 **[10]**

PART A [4]

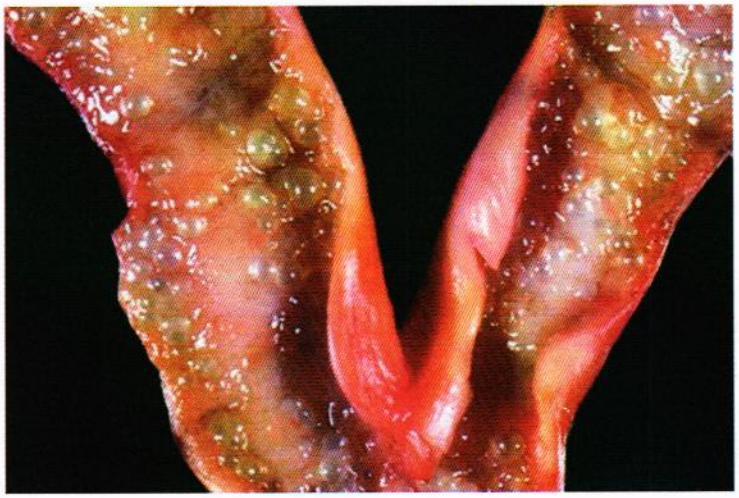
Briefly describe the causes of hyperadrenocorticism.

Part B [6]

Describe the pathological features of Blackleg (Black quarter)

QUESTION 12 **[10]**

The gross picture shown below was obtained from the uterus of a dog. Examine the pictures carefully and answer the following questions.



a. Describe the gross lesions seen. [2]
b. What would be your diagnosis? [1]
c. Name the causes (factors) of such a condition in various animal species. [4]
d. Name the common morphological sequela seen in bitches. [1]
e. Define the following conditions. [2]
   - Adenomyosis. [1]
   - Endometriosis [1]

QUESTION 13 **[10]**

Describe the pathological features of rickets in animals.

END OF SECOND OPPORTUNITY EXAMINATION