FACULTY	HEALTH SCIENCES AND VETERINARY MEDICINE		
SCHOOL	VETERINARY MEDICINE		
DEPARTMENT	PARA-CLINICAL		
SUBJECT	GENERAL PATHOLOGY		
SUBJECT CODE	V3720AG		
DATE	NOVEMBER 2024		
DURATION	3 HOURS	**MARKS**	150

SECOND OPPORTUNITY EXAMINATION

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External Moderator: Prof G. Marruchella

This Exam paper consists of 8 (eight) pages including this front page.

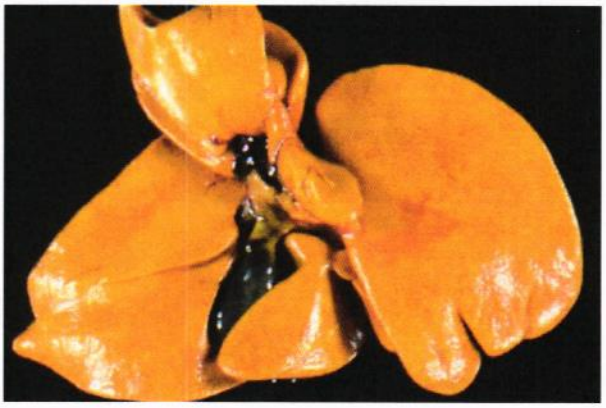
Instructions:

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 failing grade
5. **Hand in this question paper together with the answer booklet**

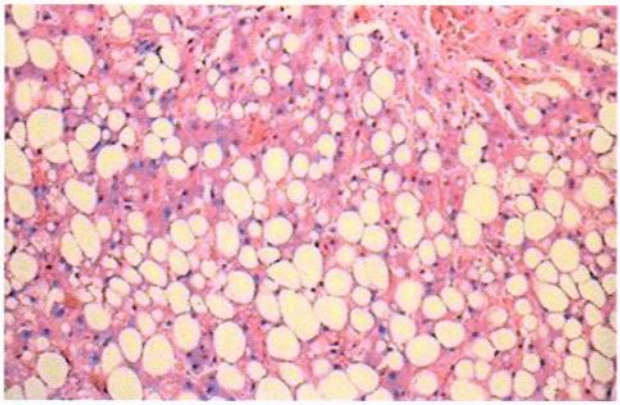
QUESTION 1. **[10]**

The photographs **A** and **B** shown below were obtained from a dog that died after showing pigmentation changes in the mucous membranes.

A



B



a. Describe the gross lesions seen in the photograph **A.** [2]
b. Describe the histopathological lesions seen in the photograph **B**. [2]
c. What is your diagnosis? [1]
d. Describe the pathogenesis of this condition. [5]

QUESTION 2. **[10]**



a. Name the type of pathological change shown in this picture. [1]
b. Describe the two (biggest) gross lesions seen in the picture. [2]
c. Describe the factors that influence the development of an infarct. [3]
d. List and describe (with the aid of diagrams) the microscopic nuclear changes that may occur in a cell that undergoes necrosis. [4]

d. List at least 5 ways in which the body responds to necrotic tissue. [5]

QUESTION 3.

[20]

The picture below shows a Holstein cow that was found dead in the kraal in the morning at Neudamm farm. The farm manager reported that the cow has been showing signs of dyspnea for a month.

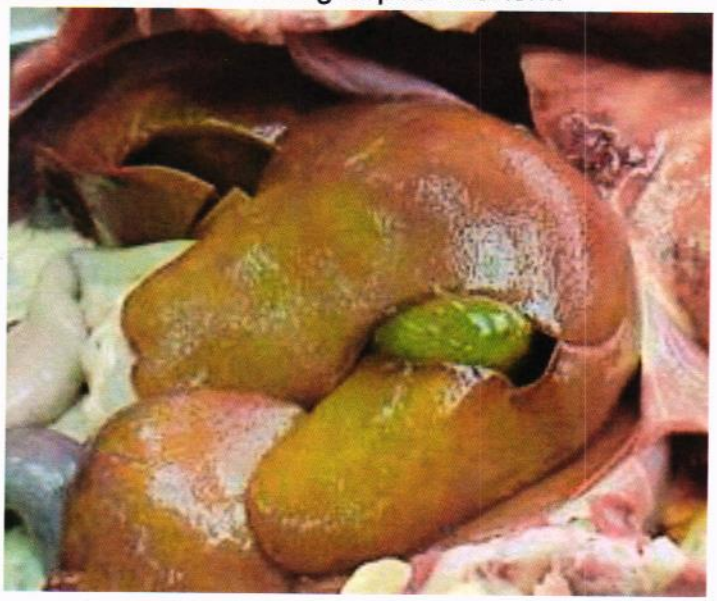


a. Give 2 terms that can possibly give the specific diagnosis of the condition shown in this picture. [1]
b. Give 10 causes of such a lesion in any part of the body of an animal. [5]
c. Does such a condition have any clinical significance if seen in a live animal in any part of the body of the animal? [6]
d. Discuss how lesions in this category are classified according to size, shape, and location. [8]

QUESTION 4.

[10]

The picture below shows the liver of a dog at post mortem.



i. Describe the lesion seen in the picture. [1]

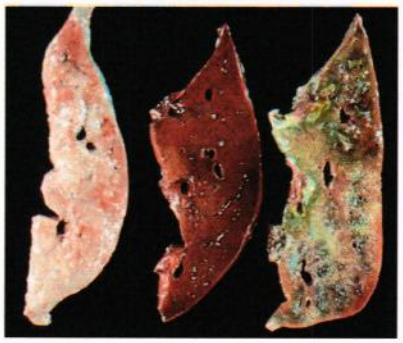
ii. Name the lesion. [1]

iii. Describe how this lesion is formed. [2]

iv. Name any six other changes in animals that are in the same class as the lesion above. [6]

QUESTION 5 **[15]**

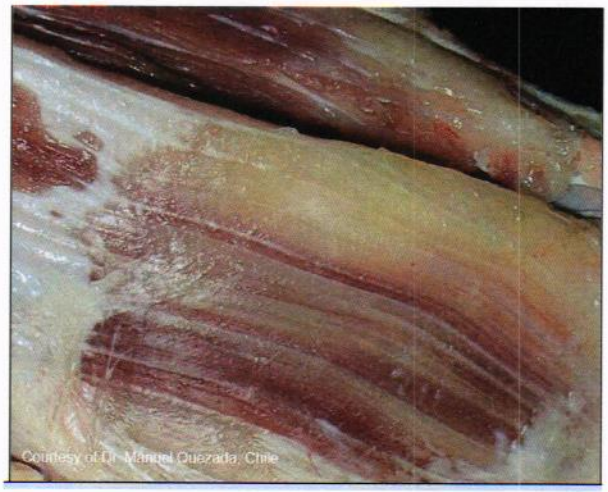
The pictures below show cross sections of livers from three different pigs at different stages of postmortem changes.



a. Give the type of post-mortem change that is shown by these livers. [1]
b. State the cause of such a post-mortem change. [1]
c. List at least 3 factors that affect the rate of progression or development of this type of post-mortem change. [3]
d. Describe the post-mortem changes that may likely occur in the heart after somatic death. [4]
e. Write briefly notes on the term "pseudomelanosis". [3]
f. Write brief notes on the term "putrefaction". [3]

QUESTION 6. **[15]**

The diagram below shows a piece of the gluteal musculature from a calf. One muscle fascicle is lighter than the other.



a. Name the specific term used to describe this type of lesion in such a tissue. [1]

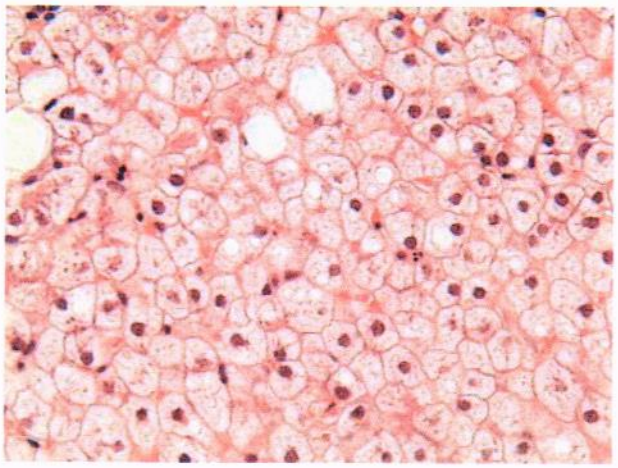
b. Describe the gross and microscopic lesions shown by the type of necrosis that you gave in 2b above. [6]

c. List 3 causes of the type of necrosis shown in this picture. [3]

d. Describe the pathogenesis for this lesion. [5]

QUESTION 7. **[10]**

The picture below shows the histological appearance of a liver of a steer.



a. Describe at least 3 histopathological findings as shown in the slide above. [3]
b. Give your diagnosis. [1]
c. Describe the gross morphological findings that you expect to find in a bovine liver affected by the condition that you gave in **b** above. [5]
d. What special stain should the pathologist use to confirm the diagnosis. [1]

QUESTION 8. [10]

Answer the following questions:

a. Name and define four (4) growth disturbances that can occur in the body. [4]

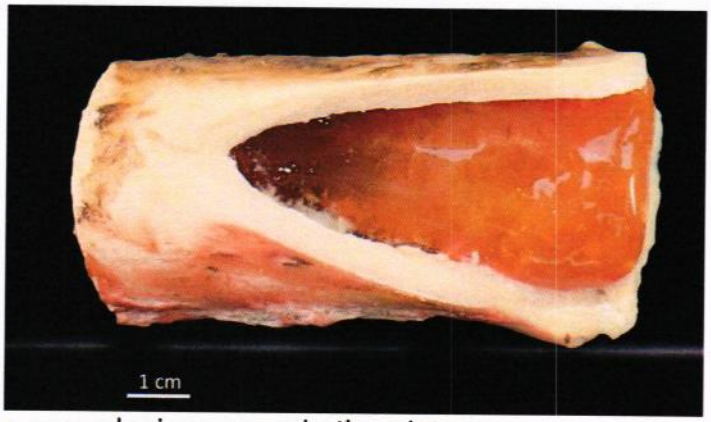
b. Describe barrett esophagus. [1]

c. Define hyperplasia and describe endometrial hyperplasia. [2]

d. Name any three examples of cellular adaptation. [3]

QUESTION 9 [10]

The picture below shows bone and bone marrow of a dog.



a. Describe the gross lesions seen in the picture. [2]
b. Name the lesion seen in the picture. [1]
c. What 2 conditions that can cause this condition? [2]
d. Briefly describe the pathogenesis of this lesion. [3]
e. Name two other areas of the body where the lesion is common. [2]

QUESTION 10. [10]

A: A sheep was euthanized on a farm after a long history of swellings in the parotid region below the ear. On postmortem examination, the following lesions (shown in picture below) were seen in lymph nodes. [5]





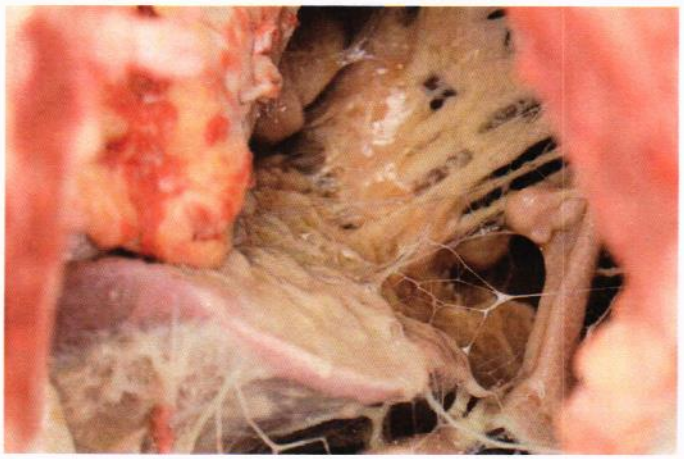
a. Describe the gross lesions. [2]

b. Name the disease. [1]

c. Name the etiological agent. [1]

d. Name the common inflammatory cells seen in this lesion. [1]

B: A cow died after a short history of respiratory distress. On post-mortem examination, the lesions shown in the picture below were seen. [5]

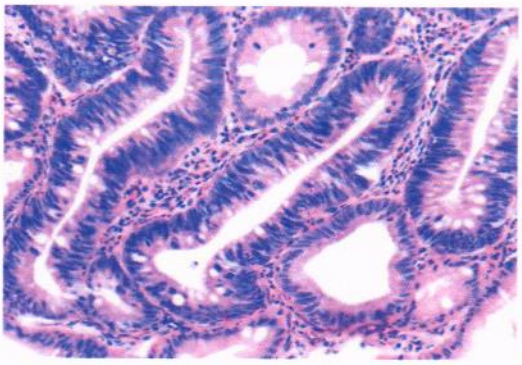


a. Describe the lesions seen. [3]

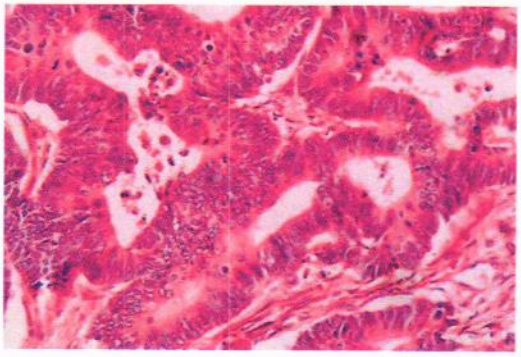
b. What is your complete morphological diagnosis. [2]

QUESTION 11. **[10]**

The two photographs below (A and B) show two different neoplasms in the thyroid gland.



A



B

a. Describe the lesions seen in the picture on the left (A). [2]
b. Describe the lesions seen in the picture on the right (B). [2]
c. Categorise the neoplasm in picture A. [1]
d. Categorise the neoplasm in picture B. [1]
a. Describe the gross characteristics that can be seen in the neoplasm on the right (picture B). [10]

QUESTION 12. **[10]**

Part A: Define "metastasis" and describe the various routes of metastasis. [4]
Part B: Describe the morphological characteristics seen in benign neoplasms. [6]

QUESTION 13 **[10]**

The picture shown below is a liver of a cat that died after a short illness (one week). Answer the following questions based on this picture.



a. Describe the lesions seen in the picture? [4]
b. Name the distribution pattern of the lesions seen. [1]
c. Briefly describe five other distribution patterns of lesions. [5]

~~~END OF SECOND OPPORTUNITY EXAMINATION ~~~