

METABOLISM 2023
QUESTION AND ANSWER SESSION – Friday 4 August 2023

PATHOPHYSIOLOGY

Question 1



Dog

Name the condition.

List **three** potential underlying mechanisms.

Question 2



Dog with ascites due to liver disease

What are **two** mechanisms by which liver disease can cause ascites?

Question 3



Friesian cow

Name the **most likely** condition.

Briefly outline the pathogenesis of this condition.

Question 4



Dogs with hepatic encephalopathy

List **three** other clinical signs that this condition might provoke in these dogs.

Briefly outline the pathogenesis of hepatic encephalopathy.

What lesions would be present in the brains of these dogs?

GROSS ANATOMY AND HISTOLOGY

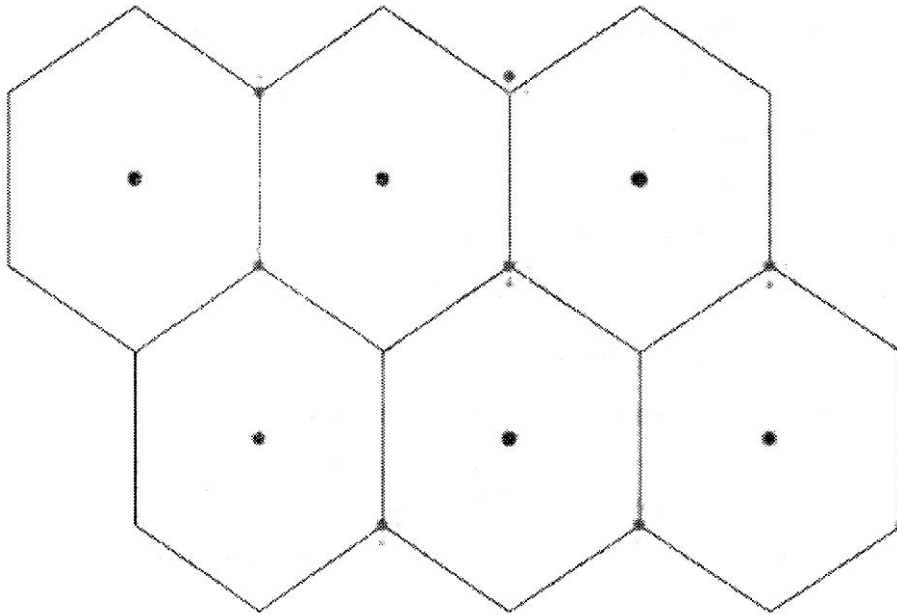
Question 5

Name **four** structures that enter or exit the liver at the porta.

Question 6

On the diagram below of the parenchyma of the liver, indicate and label the positions of the following:

- a) a portal lobule
- b) the structures that indicate the boundaries of this portal lobule
- c) the structure forming the central axis of this portal lobule



Question 7

What forms the walls of the bile canaliculi?

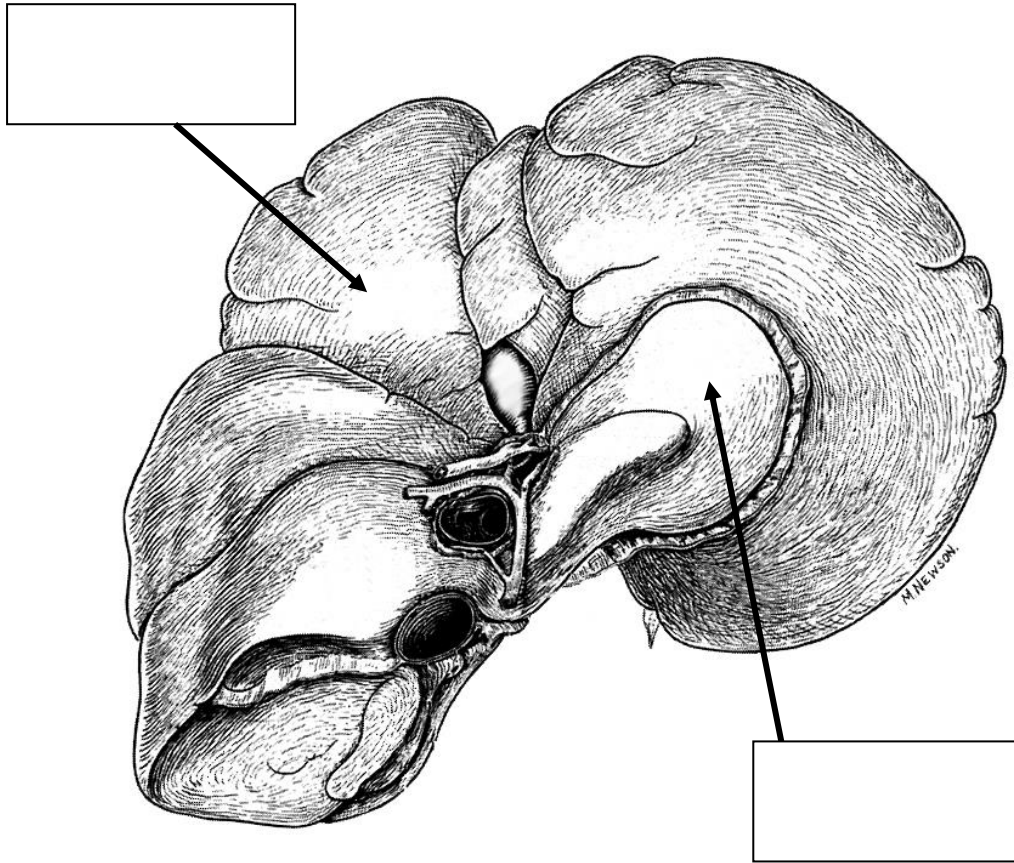
Question 8

Write the most appropriate terms in the blank spaces in the following passage:

The hepatic cords are formed by hepatocytes. Specialised blood channels slightly larger than capillaries, called, extend between cords of liver cells. These are lined by endothelial cells and cells. The latter are phagocytic cells (macrophages) that are extremely efficient at removing micro-particles and old red blood cells. cells are pericytes, found in the perisinusoidal space, and are the major cell type involved in liver fibrosis.

Question 9

Label the indicated features/structures on this diagram of a canine liver.



CLINICAL PATHOLOGY

Question 10

Which of the following enzymes is **most specific** for hepatocellular damage in dogs and cats?

- a) Aspartate aminotransferase (AST)
- b) Glutamate dehydrogenase (GLDH)
- c) Alanine aminotransferase (ALT)
- d) Creatine Kinase (CK)
- e) Alkaline phosphatase (ALP)

Question 11

All the following analytes may be affected in cholestasis **except**:

- a) Alkaline Phosphatase (ALP)
- b) Cholesterol
- c) Gamma glutamyl transferase (GGT)
- d) Urea
- e) Bilirubin

Question 12

All of the following analytes are used to assess liver function **except**:

- a) Cholesterol
- b) Urea
- c) Glucose
- d) Albumin
- e) Creatinine

Question 13

Which of the following is **not** an isoform of ALP in dogs?

- a) Muscle
- b) Hepatic
- c) Corticosteroid
- d) Bone
- e) Intestinal