UNAM
UNIVERSITY OF NAMIBIA

FACULTY	HEALTH SCIENCES AND VETERINARY MEDICINE		
SCHOOL	VETERINARY MEDICINE		
SUBJECT	VETERINARY DIAGNOSTIC IMAGING		
SUBJECT CODE	V3721CD		
DATE	JUNE 2026		
DURATION	2 HOURS	**MARKS**	100

SECOND OPPURTUNITY EXAMINATION

Examiners: Dr. L. Hepplestone
Internal Moderator: Dr. L. De Villiers
External Moderator: Dr. A Celliers

INSTRUCTIONS

1. Please answer all the questions on the examination paper provided.
2. Write your student number clearly on each page.
3. Answer ALL the questions. Total marks 100.
4. Any form of malpractice is unacceptable.
5. **This paper consists of 9 (NINE) questions and 10 (TEN) pages, including the cover sheet.**

Student number _____

QUESTION 1. (16 marks)

1.1. Name the 3 (THREE) 'radiation units' used to measure the technician exposure to radiation. (3 marks)

1.2. Define each of the radiation units in 1.1. (½ x 8 = 4 marks)

1.3. Name 5 (FIVE) ways of reducing personnel exposure through practice of appropriate radiographic technique. (5 marks)

1.4. Describe in which instance the use of a grid is recommended. (2 marks)

1.5. Name the 2 (TWO) different types of equipment used in direct digital radiography. (2 marks)

QUESTION 2 (16 marks)

Examine the radiograph IMAGE 1 and answer the questions below:

IMAGE 1



2.1. Name the body region depicted in IMAGE 1. (1 mark)

2.2. Describe at which phase of respiration this radiograph must be taken. Justify the answer. (4 marks)

2.3. Name and describe the radiopacity of the main artefact seen in IMAGE 1. (2 marks)

2.4. Name the 5 (FIVE) radiographic opacities mediums, arranged in order of most radiolucent to most radiopaque. (6 marks)

2.5. Name the radiographic view for this body region taken. Name 1 clinical reasons when this radiographic view is not recommended. (3 marks)

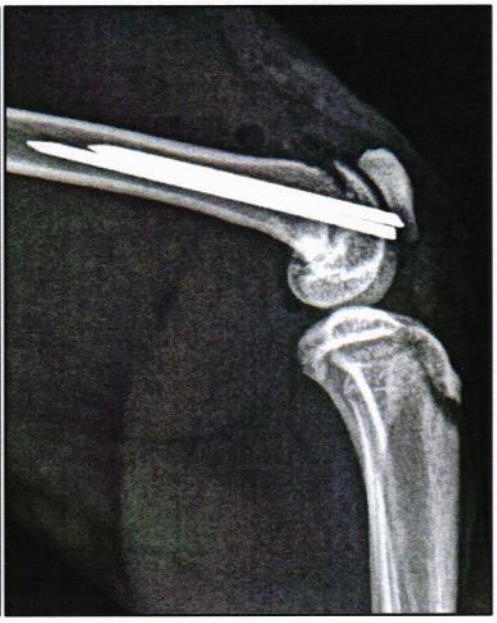
QUESTION 3 (7 marks)

Examine the radiographs IMAGE 2 and IMAGE 3, which originate from the same animal and same body part, and answer the questions below:

IMAGE 2



IMAGE 3



3.1. Name the body part depicted in radiographs IMAGE 2 and IMAGE 3. (1 mark)

3.2. Name the species depicted in IMAGE 2 and IMAGE 3. Justify the answer. (2 marks)

3.3. Name the radiographic view depicted in IMAGE 2. (1 mark)

3.4. Name the radiographic view depicted in IMAGE 3. (1 mark)

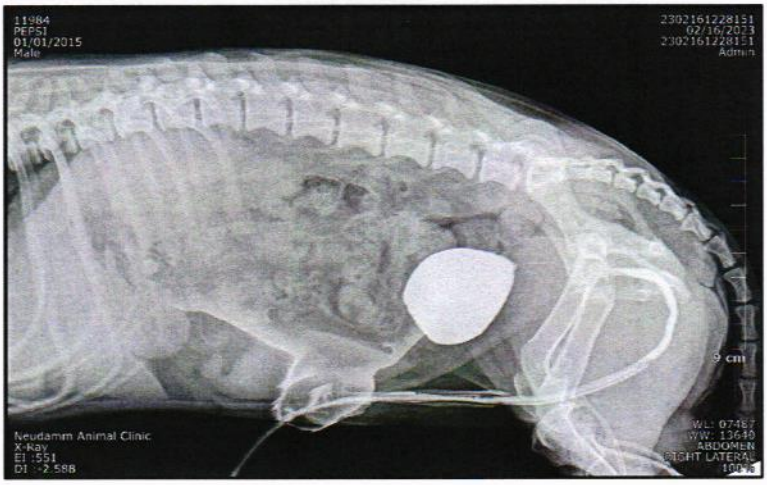
3.5. Determine whether the standard orientation for viewing is respected in IMAGE 2. Justify the answer. (1 mark)

3.6. Determine if the standard orientation for viewing is respected in IMAGE 3. Justify the answer. (1 mark)

QUESTION 4 (10 marks)

Examine the radiograph IMAGE 4 and answer the questions below:

IMAGE 4



4.1. Name the procedure depicted on IMAGE 4. (1 mark)

4.2. Name 2 (TWO) main indications to perform the procedure in IMAGE 4. (4 marks)

4.3. Name the main contrast agent recommended to perform the procedure in IMAGE 4. (1 mark)

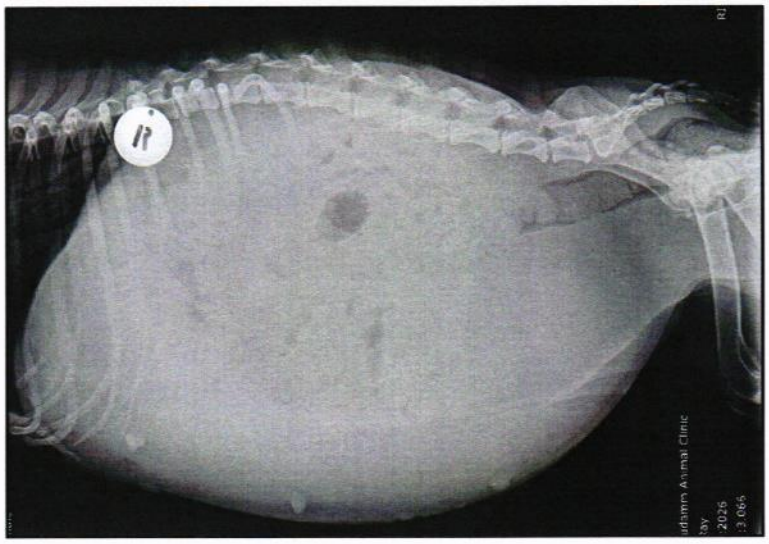
4.4. Name 2 (TWO) adverse effects which may result from the use of the contrast agent in 4.3. (2 marks)

4.5. Explain how to inject the contrast agent into the organ to perform the procedure in IMAGE 4. (2 marks)

QUESTION 5 (11 marks)

Examine the radiograph IMAGE 5 and answer the questions below:

IMAGE 5



5.1. Name the body region represented in IMAGE 5. (1 mark)

5.2. Name the standard views for the body region in IMAGE 5. (3 marks)

5.3. Describe the soft tissue opacity change seen in IMAGE 5. (1 mark)

5.4. Name the radiographic abnormality observed in IMAGE 5. (1 mark)

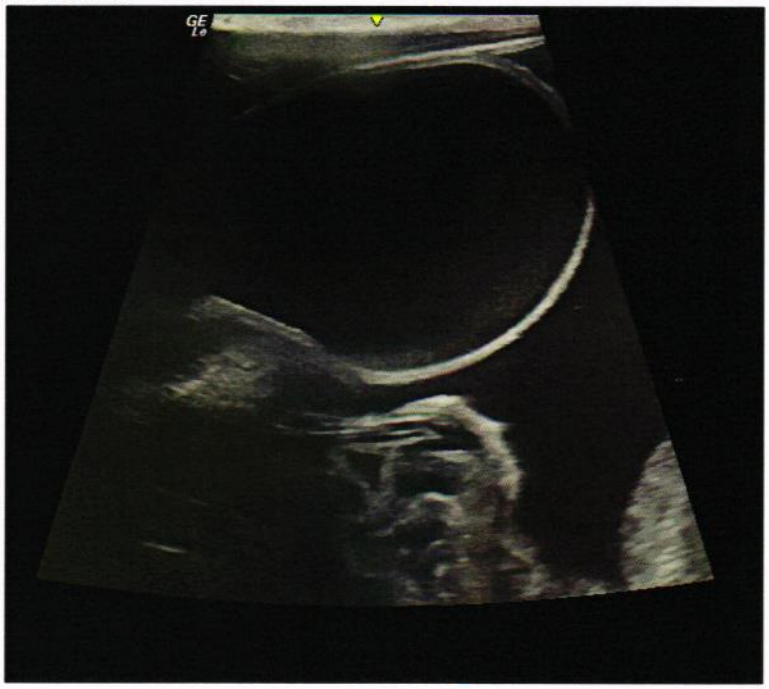
5.5. Explain how the radiological abnormality in 5.4 is typically formed. (4 marks)

5.6. Provide a possible cause for the radiological abnormality in IMAGE 5. (1 mark)

QUESTION 6 (8 marks)

Examine the ultrasound IMAGE 6 and answer the questions below:

IMAGE 6



6.1.e organ seen in IMAGE 6. (1 mark)

6.2. Describe the echogenicity of the medium indicated with an arrow in IMAGE 6. (1 mark)

6.3. Name the medium that the echogenicity in 6.2. represents. (1 mark)

6.4. Name the AFAST view depicted in IMAGE 6. (1 mark)

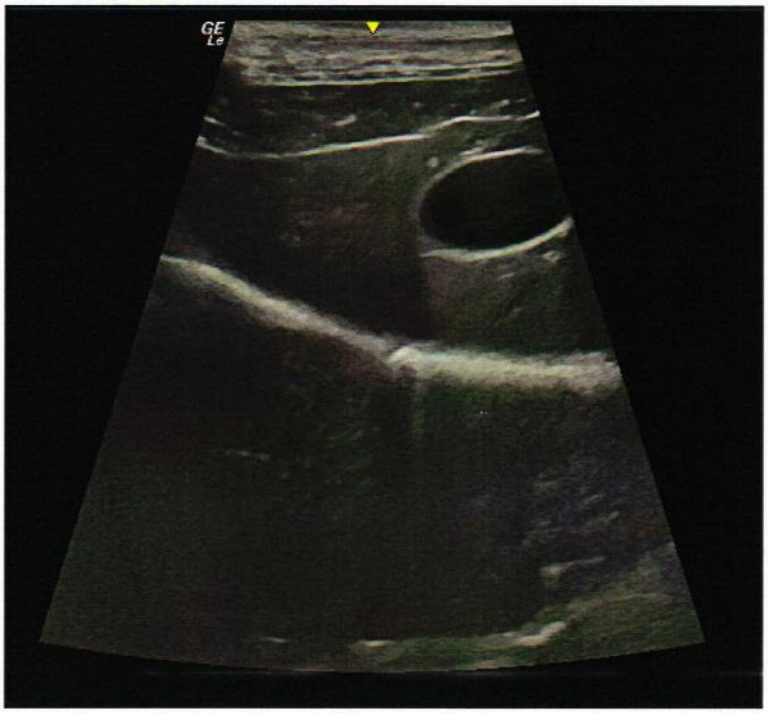
6.5. Score the AFAST view in IMAGE 6. Justify the answer. (3 marks)

6.6. Describe a clinical condition which may result in the abnormality in IMAGE 6. (1 mark)

QUESTION 7 (12 marks)

Examine the ultrasound IMAGE 7 and answer the questions below:

IMAGE 7



7.1. Name the ultrasonography artefact illustrated in IMAGE 7. (1 mark)

7.2. Explain the formation of the artefact in IMAGE 7. (4 marks)

7.3. Recognize the organ depicted in IMAGE 7. (1 mark)

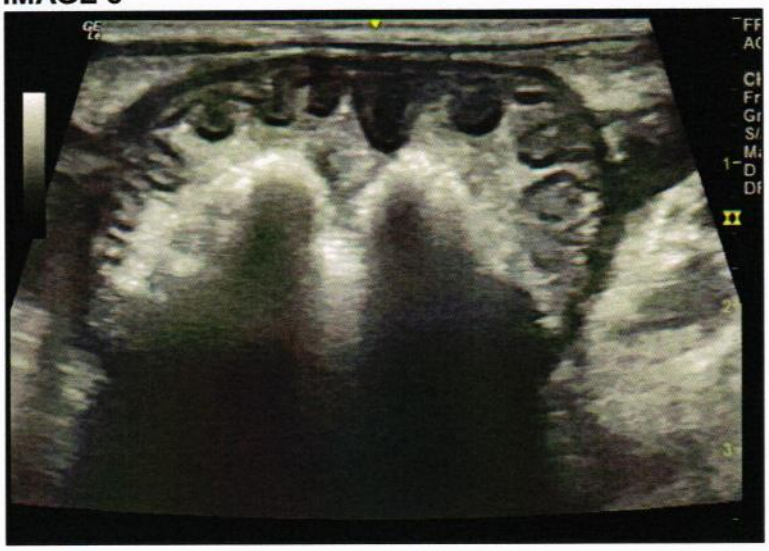
7.4. Name the anatomical structure indicated by a star in IMAGE 7. Justify the answer. (3 marks)

7.5. Identify the structure indicated by the arrow in IMAGE 7. Justify the answer. (3 marks)

QUESTION 8 (13 marks)

Examine the ultrasound IMAGE 8 and answer the questions below:

IMAGE 8



8.1. Name 3 (THREE) ultrasound modes and describe their principal use, respectively. (6 marks)

8.2. Name the organ depicted in IMAGE 8. Justify the answer. (2 marks)

8.3. Name the 2 (TWO) main ultrasonographic views used to evaluate the organ in IMAGE 8. (2 marks)

8.4. Name the movement needed to switch between the two views mentioned in 8.3. (1 mark)

8.5. Explain the localisation of the organ in IMAGE 8 during an ultrasound examination. (2 marks)

QUESTION 9 (7 marks)

9.1. Describe both an advantage, and a disadvantage, of MRI compared to CT imaging. (2 marks)

9.2. Describe the type of disease which fluoroscopy is mainly used to diagnose. (1 mark)

9.3. Name 4 ultrasonographic artifacts in total, of which 1x environmental- caused, 1xoperator induced, and 2x Sound-beam-patient artifacts. (4 marks)

THE END

Student number _____