FACULTY	**Faculty of Health Sciences and Veterinary Medicine**		
DEPARTMENT	**School of Veterinary Medicine**		
SUBJECT	**Production Animal Clinical Studies III**		
SUBJECT CODE	**V3851PA**		
DATE	**June 2024**		
DURATION	**3 Hours**	**MARKS**	**150**

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Internal Moderator: Dr F Chitate

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This paper consists of nine (9) pages, including this front page.

Instructions

Read the questions carefully

Answer ALL questions

Write clearly and concisely

Pay attention to the questions, where asked to explain or discuss listing of keywords is not adequate

Second Opportunity Examination

Section A

QUESTION 1:



Fig 1

A four-year-old Swiss Braunvieh cow has hind limb ataxia and collapsed while being led. The hind-limb reflexes are still present.

a) Where do you expect to find the lesion causing these clinical signs? Why? (3)
b) Give two differential diagnoses of possible lesions. (2)
c) What could you do to come to a definitive diagnosis? (3)

QUESTION 2:

What is the meaning of **hippus**? (1)

QUESTION 3:

a) What is the meaning of **nystagmus**? (1)
b) How does nystagmus help to determine the site of the lesion? (2)

QUESTION 4:

Which parts of the central nervous system are responsible for smooth coordinated voluntary limb movements? Which part has which function? (10)

QUESTION 5:

You are examining an animal with abnormal movement. How do you differentiate whether you are dealing with a neurological deficit or a musculoskeletal disease? (5)

QUESTION 6:

What is the function of the vestibular system? (3)

QUESTION 7:

A farmer was vaccinating very wild weaners which he bought on an auction. Some he had to catch in the neck-clamp to be able to inject them, others jumped on top of each other. Now he sees that one of them has a hanging front limb.

a) What are your differential diagnoses? (3)
b) How will you differentiate between them? (3)



Fig 2

QUESTION 8:

Comment on the use of serology to diagnose thrombotic meningoencephalitis (TME) in cattle showing nervous signs. (2)

QUESTION 9:

On your client's farm the second calf with hydrocephalus is born today. Will it be helpful to draw blood from the neonate in order to arrive at a diagnosis as to whether this problem is caused by a teratonogenic virus? Motivate your answer. (2)

QUESTION 10:

What is the function of the musculoskeletal system? (5)

QUESTION 11:

Which of the following statements are **false**? (2)

a) Selenium, vitamin E and Sulphur-containing amino acids in the diet work synergistically to protect tissues against oxidative damage.
b) Diets deficient in vitamin E / Selenium permit widespread lipo-peroxidation, resulting in hyaline degeneration and calcification of muscle fibres.
c) Unaccustomed and excessive exercise can accelerate the oxidative processes and precipitate clinical signs.
d) Skeletal muscle (especially large hind limb muscles), diaphragm and cardiac muscle may be affected.
e) Skeletal muscle can regenerate.
f) Cardiac muscle heals by replacement fibrosis.
g) Vitamin E / Selenium is important in young, rapidly-growing calves (2-4 months)
h) Grain-fed yearling calves usually get sufficient vitamin E / Selenium in their diet.
i) Legume pastures, e.g. Lucerne are rich in Selenium.

QUESTION 12:

What are the clinical signs of rickets? (9)

QUESTION 13:

Compare **osteomalacia** and **osteoporosis** under the following topics (11)

a) Cause
b) Changes in the bone
c) Pain

QUESTION 14:

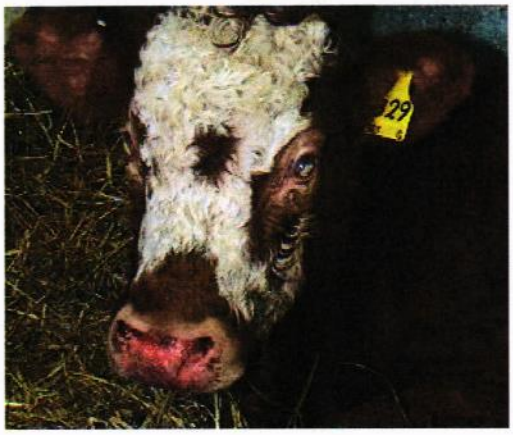
Usually vertical fissures of the claw appear to be bad but generally do not have much clinical importance.

What will lead to significant clinical signs? (2)

QUESTION 15:

What are two lesions of the claw that may occur as a result of laminitis and where will you see this lesion? (6)

Section B

1	A 15-month-old Limousin heifer presents with anorexia and is obtunded as shown in (Fig 1).It belongs to a semi intensive herd of mixed breed individuals living in close proximity with a group of domestic sheep. The rectal temperature is 41.5°C . There is marked photophobia, blepharospasm, and corneal opacity. There are slight mucopurulent ocular and nasal discharges. The muzzle is markedly hyperaemic with sloughing of the overlying epithelium which bleeds readily on contact. There is increased salivation and generalized peripheral lymphadenopathy. The heifer is hyperaesthetic to tactile stimuli, especially around the head. There are no skin lesions.  Fig 1	12
	a. What conditions would you consider and state your provisional diagnosis ? [6] b. What laboratory tests could be undertaken to confirm your provisional diagnosis? [3] c. What prevention and control measures would you recommend? [3]	

2	A one-year old healthy Friesian heifer weighing 100kg with a body condition score of 3/5 was presented to the Large Animal Unit of University Veterinary Hospital, Neudamm Campus. The owner complained of yellowish discharge around the left horn following dehorning. The heifer was dehorned one month earlier by its owner using a saw and the wound area was cauterized at the dehorned site with a hot iron. After two weeks, the owner observed that the wound did not heal properly. On physical examination A depression (1cm in diameter x 2cm in depth) was observed at the base of left horn, which had yellowish mucopurulent discharge as shown in Fig 2.. There was swelling and pain with signs of vocalization on palpation of the wound area. The cow was also reluctant to move due to the discomfort while flies were observed perching on the wound.  Fig 2 a. What is your tentative diagnosis? [1] b. How will you manage this case? [6]	7

3	A 6-year-old beef cow presents with 2 weeks' history of poor appetite and weight loss. The cow calved 2 months ago. The rectal temperature is 39.2°C. The ocular and oral mucous membranes are slightly pale. The heart rate is 70 beats per minute. The respiratory rate is 24 breaths per minute with no abnormal sounds detected on auscultation of the chest. The ruminal contractions are reduced in strength and frequency. The cow is passing normal faeces. The cow makes frequent attempts to urinate but only a small amount of urine is voided which contains some flecks of blood and a small amount of pus. The cow resents rectal palpation, which reveals thickened bladder wall and ureters a.What conditions would you consider and state your provisional diagnosis ? [7] b.How could you confirm your provisional diagnosis? [7] c.What is the prognosis? [2] d.What treatment would you recommend [2]	18

4	An 18-month-old homebred ram presents with a large firm subcutaneous swelling below the angle of the right mandible, shown in Fig 4, which has been noted by the farmer for the past 2 weeks. The swelling has not reduced in size despite 4 consecutive days' treatment with procaine penicillin. Inspection reveals no skin lesions in other rams in the group. On Fine needle aspiration a pasty thick yellow-green pus with a foul odour is withdrawn from the lesion. You have confirmed Caseous lymphadenitis, a chronic and subclinical disease of sheep and goat  Fig 4 **a.** What would you do to help this farmer? (Treatment and control measures) [10] b.What is the economic importance of this condition in small stock? [4]	14

5	A 5-year old, approximately 500 kg Cross-breed Holstein (from a dairy with 185 cows) cow was referred to the Department of Production Animal Clinical Studies, School of Veterinary Medicine, UNAM, for the treatment of a multiple large, ulcerated and hemorrhagic masses at the left side of the neck in vicinity of the jugular furrow (Fig 5a), on the tongue (Fig 5b) and on the chest (Fig 5c). The size of the masses range in size. History indicated that the condition began three months previously as a small, walnut-size swellings that gradually enlarged over this period.  Fig 5a  Fig 5b  Fig 5c a. What is your likely diagnosis (why) and state the causative agent [3] b. Briefly discuss treatment options that are available and highlight precautionary measures to be taken to prevent toxicity with the use of some of the drugs of choice [6]	9
6	a.Define the term "skin allergy" in the context of cattle health and provide examples of common allergens that affect cattle	6
	b.Discuss the principles of management and treatment of skin allergies in cattle	9
	END	