



FACULTY	HEALTH SCIENCES AND VETERINARY MEDICINE		
SCHOOL	SCHOOL OF VETERINARY MEDICINE		
DEPARTMENT	PARACLINICAL STUDIES		
SUBJECT	VETERINARY PARASITOLOGY I		
SUBJECT CODE	V3731AP		
DATE	JUNE 2025		
DURATION	3 hours	MARKS	150
FIRST OPPORTUNITY EXAMINATION PAPER			

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This examination consists of four (4) sections: A, B, C and D.

Instructions

1. This Memorandum consists of **6 pages**, including this cover sheet.
2. Write your student number clearly on each page.
3. Carefully read the instructions at the start of each section.
4. Read the questions carefully.
5. Write clearly and concisely.
6. Any form of malpractice is unacceptable.

Section A: GENERAL INTRODUCTION TO HELMINTHS [20 marks]

1. State whether the following statements are **True** or **False**.
 - a. Endoparasites live and feed on the exterior of their host. [1 mark]
 - b. "Thin sow syndrome" is associated with *Oesophogastumum radiatum*. [1 mark]
 - c. Donkeys are a source of lungworm infection for horses. [1 mark]
 - d. In *Spirocerca lupi* the dung beetle plays a role as an intermediate host. [1 mark]
 - e. FAMACHA is used to determine the level of anaemia in small stock. [1 mark]
 - f. Trans-mammary route of infection is the least important route of infection for *Ancylostoma caninum*. [1 mark]
 - g. The adults of *Habronema* and *Draschia* species reside in the colon of the horse. [1 mark]
 - h. Adult *Oxyuris equi* feed on the ingesta of the host. [1 mark]
 - i. When a helminth is in hypobiosis it is easy to diagnose the infection through faecal analysis. [1 mark]
 - j. Humans can get infected with *Trichinella* species from consumption of undercooked infected meat. [1 mark]
2. Define the following terms in relation to parasitology.
 - a. Amensalism. [2 marks]
 - b. Final/definitive host. [2 marks]
 - c. Direct life cycle. [2 marks]
 - d. Incubation period. [2 marks]
 - e. Mechanical vectors. [2 marks]

Section B: Nematodes [80 marks]

1. Concerning cyathostomins, what is the clinical significance of hypobiosis? [2 marks]
2. Name the parasite (genus and species) for which active bleeding lesions in warm weather are pathognomonic. [2 marks]
3. Mention three factors that influence the pathogenesis and pathology of *Dictyocaulus* species. [3 marks]
4. Answer the following questions about *Ascaris suum*.
 - a. Name the route of migration. [1 mark]
 - b. List the economic losses associated with infection. [2 marks]
5. *Trichuris suis* (whipworms) are medium-sized parasites of pigs, causing colitis, which presents as haemorrhagic diarrhoea. With the clinical presentation not considered pathognomonic, diagnosis is mostly based on the demonstration of eggs in faecal samples. Briefly discuss the challenges associated with this diagnostic method when dealing with a pig enterprise where a disease outbreak is suspected. [7 marks]

6. Complete the following table. [8 marks]

	<i>Parafilaria bovicola</i>	<i>Parafilaria multipapillosa</i>
Hosts [4 marks]		
Intermediate host [2 marks]		
Predilection sites [2 marks]		

7. *Oxyuris equi* is a common parasite in equines with limited intestinal pathogenicity, whose clinical significance is associated with the behaviour of the adult female.

- a) Briefly discuss the behaviour of the adult female and how this results in clinical significance. [7 marks]
 - b) How can you diagnose an *Oxyuris equi* infection in horses? [3 marks]
8. Describe the Five Point Check used in the control of parasites. What does it assess? [12 marks]
9. Answer the following questions about haemonchosis.
- a) List the determinants of clinical outcome in haemonchosis. [3 marks]
 - b) What are the principles of haemonchosis control? [3 marks]
 - c) Discuss the role of refugia in the control of haemonchosis. [7 marks]
10. Discuss **autoinfection** in relation to the epidemiology of *Strongyloides* infection. [10 marks]
11. Discuss the pathogenesis and pathology associated with *Dictyocaulus arnfieldi* infection in horses under the following sub-headings:
- a. Prepatent phase. [5 marks]
 - b. Patent phase. [5 marks]

Section C Cestodes [30 marks]

1. Explain why *Anoplocephala* is one of the most common parasites of horses. [4 marks]
2. You were called out to a farm where you diagnosed *Taenia hydatigena* in the dogs. Discuss the advice you should give the farmer in terms of the control of the disease. [6 marks]

3. Complete the following table. [10 marks]

<i>Taenia</i> species	Final host	Intermediate host(s)	Cyst/Larval stage
a	humans	Cattle	b
c	d	Pigs and humans	e
f	g	Sheep, goats and pigs	<i>Cystercercus tenuicollis</i>
<i>Taenia multiceps</i>	dog	h	i

4. As a veterinarian in a region where taeniosis is endemic, you are asked to talk to the community on the prevention of taeniosis in humans. What advice should you give to the community? [10 marks]