FACULTY	HEALTH SCIENCES AND VETERINARY MEDICINE		
SCHOOL	SCHOOL OF VETERINARY MEDICINE		
DEPARTMENT	PARACLINICAL STUDIES		
SUBJECT	VETERINARY PARASITOLOGY I		
SUBJECT CODE	V3731AP		
DATE	JUNE 2026		
DURATION	3 hours	**MARKS**	150
FIRST OPPORTUNITY EXAMINATION QUESTION PAPER			

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

Instructions

1. This paper consists of **9 pages**, including this cover sheet.
2. Carefully read the instructions at the start of each section.
3. Read the questions carefully.
4. Write clearly and concisely.

Section A: GENERAL INTRODUCTION TO HELMINTHS [20 marks]

1. Answer the following multiple-choice questions. Each question is worth **1 mark.**

I. A paratenic host is best described as:

A. A host in which the parasite undergoes sexual reproduction

B. A host that is essential for parasite development

C. A transport host in which no development occurs

D. A host that serves as a vector

II. Which of the following statements about direct life cycles is correct?

A. They always require an intermediate host

B. They require a biological vector for transmission

C. They do not require any intermediate host or vector

D. They only occur in aquatic environments

III. In donkeys infected with lungworms, clinical signs are typically:

A. Severe and frequently fatal

B. Mild or absent

C. Always associated with diarrhoea

D. Limited to young animals only

IV. Which of the following is a control principle for haemonchosis?

A. Increasing stocking density

B. Selective breeding for resistance

C. Eliminating all untreated animals

D. Continuous deworming of all animals

V. In refugia-based control strategies, which animals are treated with anthelmintics?

A. All animals in the herd

B. Only the youngest animals

C. Only selected animals, leaving some untreated

D. Only animals showing no clinical signs

VI. Which of the following is true regarding *Ancylostoma tubaeforme* transmission?

A. It is commonly transmitted trans-mammary

B. It is transmitted only through vectors

C. It is not transmitted trans-mammary

D. It requires an intermediate host for transmission

2. List the various factors **animal factors** that influence parasite infection in livestock. **[4 marks]**

3. Define the following parasitology terms. (2 marks each, total 10 marks).

a. Pre-patent period. **[2 marks]**

b. Intermediate host. **[2 marks]**

c. Indirect life cycle. **[2 marks]**

d. Biological vector. **[2 marks]**

e. Anhydrobiosis. **[2 marks]**

SECTION B: NEMATODES [80 marks]

1. *Ascaris suum* is one of the important parasites of pigs, associated with extensive morbidity at pig enterprises, often causing very significant economic losses. The parasite has a migratory life cycle within the host. Based on this migratory life cycle, **describe the pathogenesis and pathology** associated with the **migratory phase** of the life cycle. **[10 marks]**

2. **Describe** the enteral and parenteral phases of *Trichinella* species infection. **[10 marks]**

3. Answer the following questions concerning *Ancylostoma caninum*.
    a. Describe the parasite factors which are of epidemiological importance. **[5 marks]**

    b. Outline the control measures one can institute. **[5 marks]**

4. In a table, compare and contrast *Chabertia ovina* and *Oesophagostomum columbianum* in sheep. **[10 marks]**

	Chabertia ovina	*Oesophagostomum columbiana*
Infective stage		
Stage that penetrates mucosa		
Stage that undergoes hypobiosis		
Sensitivity of eggs and L3 to desiccation		
Immunity development after initial exposure		

5 Discuss the pathogenesis and pathology of Cyathostomins in horses. **[10 marks]**

6 Parasitic gastroenteritis (PGE) is a syndrome caused by gastrointestinal tract 'strongylids'. Discuss the pathogenesis associated with this infection in small stock. **[10 marks]**

7 Habronematidosis in equines is caused by vector-borne parasites of the genus *Habronema*. Answer the following questions regarding these parasites:

a. Name the fly species that is responsible for transmission of each of the *Habronema* species

i. *Habronema microstoma* **[1 mark]**

ii. *Habronema muscae* **[1 mark]**

b. Briefly describe the pathogenesis of cutaneous habronematidosis (summer sores). **[4 marks]**

8 *Thelazia* species cause eye infection in animals, with the clinical presentation varying from subclinical to clinical. Briefly describe the pathogenesis of infection with this parasite. **[4 marks]**

9 *Onchocerca cervicalis* and *Onchocerca reticulata* are two important filarial worms of equines. Briefly discuss the pathogenesis and pathology associated with parasite presence in the following organs:

a) Ligamentum nuchae. **[5 marks]**

b) The skin. **[5 marks]**

SECTION C: CESTODES (30 MARKS)

1. Name the cestode species where humans can act as both intermediate and final host. **[1 mark]**

2. Name the species of cestodes (tapeworms) that cause Taeniosis in humans. **[2 marks]**

3. Name two methods that can be used to 'treat' metacestode-infested beef prior to human consumption. **[2 marks]**

4. What is the common intermediate host in the life cycle of *Anoplocephala* and *Moniezia* species? **[1 mark]**

5. What is the predilection site for *Stilesia hepatica*? **[1 mark]**

6. What is the economic importance of *Stilesia hepatica*? **[1mark]**

7. List the risk factors for the transmission of *Taenia saginata* from humans to cattle. **[4 marks]**

8. Outline the control and prevention of *Echinococcus granulosus* transmission. **[8 marks]**

9. Describe the characteristics of each of the various transmission patterns of *Taenia saginata* (hyperendemic, endemic, and epidemic). **[10 marks]**

SECTION D: TREMATODES (20 MARKS)

1. Name the primary and secondary intermediate hosts of *Dicrocoelium* species.

   [2 marks]

2. *Calicophoron microbothrium* causes a condition known as paramphistomosis or caliciphorosis in ruminants. Briefly discuss the pathophysiology associated with infection by this parasite in a host. **[10 marks]**

3. Answer the following questions concerning blood flukes.
   a) Name (genus and species) of the blood fluke that is considered the most pathogenic. **[2 marks]**

   b) How should you control schistosomosis in cattle? **[6 marks]**

END OF THE EXAMINATION