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
SECOND OPPORTUNITY EXAMINATION QUESTION PAPER			

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

Instructions

1. This examination question paper consists of **8 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. *Gaigeria* species are primarily associated with:
   A. Dogs
   B. Cattle
   C. Sheep and goats
   D. Horses

   ii. The life cycle of *Strongylus vulgaris* is characterized by:
   A. No larval migration
   B. Extensive larval migration within the host
   C. Development only in intermediate hosts
   D. Transmission exclusively by vectors

   iii. Infection with *Spirocerca lupi* may result in:
   A. Liver cirrhosis
   B. Malignant oesophageal tumours
   C. Kidney failure
   D. Skin lesions only

   iv. Anal irritation in horses infected with *Oxyuris equi* is primarily caused by:
   A. Adult male worms
   B. Larval stages in the intestine
   C. Egg-laying adult females
   D. Encysted larvae in muscles

2. Helminth infections are a hindrance to achieving maximum productivity in many livestock enterprises, often associated significant morbidity and mortality amongst the animals. **List** the various factors that influence parasite infection in livestock, under the following sub-headings:

   a. Environmental factors. **[3 marks]**

   b. Farm management factors. **[3 marks]**

3. Hypobiosis is an important phenomenon exhibited by various parasites and occurs under the influence of such factors as the host, external environmental conditions as well as the parasite overcrowding effect. Briefly **discuss** the epidemiological importance of this phenomenon (hypobiosis). **[10 marks]**

SECTION B: NEMATODES [80 marks]

1. Which group of animals are at risk of getting infected with *Cooperia* species?

[1 mark]

2. What is the veterinary and public health significance of *Gaigeria* species?

[4 marks]

3. Answer the following questions concerning *Trichinella* species.
    a. Explain how *Trichinella* species appear on post-mortem examination of an infected carcass. **[2 marks]**

    b. Name the specific equipment used for confirmation of diagnosis.

[1 mark]

    c. What is the preferred sample for diagnosis? **[1 mark]**

4. Write brief notes on periparturient egg rise. **[5 marks]**

5. *Oesophagostomum dentatum* is an important parasite in pigs.
    a. Discuss the control measures that you should implement in a piggery.

[4 marks]

    b. What is the goal of a control program at a piggery? **[2 marks]**

6. *Oxyuris equi* is an important parasite of horses. **Describe** the pathogenesis associated with infection by the parasite and the associated clinical signs/presentation. **[10 marks]**

7. *Toxocara canis* is capable of undergoing somatic migration during the infection process in dogs, especially older dogs. **Briefly discuss** this under the following sub-headings:
   a. Factors which influence somatic migration. **[6 marks]**

   b. Migratory pathway adopted by the larvae. **[4 marks]**

8. *Ancylostoma caninum* is an important helminth of domestic dogs, often associated with bloody diarrhoea in puppies and can cause death. The parasite is characterised by many transmission routes, with the trans-mammary transmission pathway being one of the most important. **Briefly discuss** this transmission pathway (trans-mammary), emphasising its epidemiological importance. **[10 marks]**

9. Haemonchosis due to *Haemonchus contortus* infection in sheep and goats can be categorised into three (3) syndromes, namely hyperacute, acute and chronic. **Briefly discuss** the **hyperacute and chronic** syndromes, including the classes of affected animals, possible pathogenesis and clinical presentation. **[10 marks]**

10. You are called to a farm during a hot summer season, with the farmer complaining of severe bleeding lesions on the skin of his cattle. You observe that there are a lot of

flies around the farm and on the animals. Based on the complaint and your observations, answer the following questions:

a. What is the likely cause of the 'bleeding' reported by the farmer? **[2 marks]**

b. **Briefly discuss** how the observed lesions develop on the animals (pathogenesis of infection). **[5 marks]**

c. Mention two (2) diagnostic tests that you can use to aid in your diagnosis of the likely parasitic cause of the lesions. **[3 marks]**

11. *Ascaridia galli* is one of the most common nematodes of birds, with domestic chickens serving as the principal hosts. The parasite exhibits a non-migratory life cycle, with the small intestines being the predilection site of infection. **Briefly outline** the pathogenesis and pathology associated with infection by the following parasite stages:

a. Larval stage **[7 marks]**

b. Adult stage **[3 marks]**

SECTION C: CESTODES (30 MARKS)

1. **Describe** the following metacestode forms:
    a. Cysticercus. **[2 marks]**
    b. Hydatid cyst. **[2 marks]**
    c. Coenurus. **[2 marks]**
    d. Strobilocercus. **[2 marks]**
    e. Plerocercoid. **[2 marks]**

2. **Describe** the risk factors for cattle to human transmission of *Taenia saginata*. **[4 marks]**

3. **Briefly discuss** the pathogenesis and pathology of *Anoplocephala perfoliata* infection in horses. **[10 marks]**

4. *Dipylidium caninum* is a parasite of veterinary public health significance due to its zoonotic nature. **Outline** the pathogenesis of infection in dogs and the associated clinical signs. **[6 marks]**

SECTION D: TREMATODES (20 MARKS)

1. Mention **three** measures on which the efficiency of *Fasciola* control depends. **[3 marks]**

2. List seven (7) economic effects of chronic fasciolosis. **[7 marks]**

3. *Gastrodiscus aegypticus* is an important trematode of horses which can cause recurrent colic attacks in severe cases.

   i. Briefly discuss the epidemiology of this parasite **[6 marks]**

   ii. Briefly outline control measures that can be adopted. **[4 marks]**

END OF EXAMINATION MEMORANDUM