UNAM
UNIVERSITY OF NAMIBIA

FACULTY	HEALTH SCIENCES AND VETERINARY MEDICINE		
SCHOOL	VETERINARY MEDICINE		
DEPARTMENT	PRECLINICAL STUDIES		
SUBJECT	VETERINARY PARASITOLOGY I		
SUBJECT CODE	V3731AP		
DATE	JUNE 2024		
DURATION	3 HOURS	**MARKS**	150
SECOND OPPORTUNITY EXAMINATION PAPER			

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This Examination Paper consists of Six (6) pages including this cover page.

Instructions:

i. The question paper is divided into three (3) sections. Read and understand the instructions for each Section.

ii. Indicate your student number on every page of your answer script.

iii. In your answer booklet, start each question on a fresh page.

iv. Write legibly.

SECTION A: NEMATODES. [70 marks]

Answer only seven (7) questions in this section.

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

    a. Animal factors. **[4 marks]**

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

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

2. Discuss autoinfection in relation to *Strongyloides* species and its epidemiological significance. **[10 marks]**

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

4. Discuss *Capillaria* infection in birds under the following sub-headings:

    i. Crop and oesophagus infection. **[5 marks]**

    ii. Small intestine and caecum infection. **[5 marks]**

5. The primary objective in controlling *Ascaris suum* is to ensure the production of *Ascaris*-free piglets. Outline how farmers can achieve this at their piggery. **[10 marks]**

6. You are called to a farm during a hot summer season with the farmer complaining of severe bleeding lesions on the skins 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. List three (3) diagnostic methods that you can use to confirm the likely parasitic cause of the observed lesions. **[3 marks]**

7. The pathogenesis and pathology of *Parascaris equorum* can be divided into two phases, namely the migratory phase and the intestinal phase. Describe the pathogenesis and pathology associated with these two phases. **[10 marks]**

8. *Spirocerca lupi* is a beetle-transmitted nematode of dogs whose infection is associated with a unique form of pathology. Briefly describe the pathogenesis and pathology associated with *Spirocerca lupi* infection under the following sub-headings:

a. Migratory phase. **[6 marks]**

b. Predilection phase. **[4 marks]**

SECTION B: CESTODES [50 MARKS]
Answer all questions from this section.

1. Complete the table below, concerning the selected cestodes of ruminants.

[10 marks]

Cestode species	**Definitive host**	**Intermediate host**	**Predilection site**	**Pathogenic (Yes/No)**
Moniezia expansa	Ruminants			Yes
Stilesia hepatica	Ruminants			
Avitellina species	Ruminants		Small intestines	
Thysaniezia species	Ruminants			

2. **Describe** the risk factors for *Taenia saginata* transmission under the following sub-headings:

a. Human to cattle transmission. **[6 marks]**

b. Cattle to human transmission. **[4 marks]**

3. *Taenia hydatigena* is a cestode which utilises ruminants as intermediate hosts, with carnivores serving as final hosts. Discuss the control of this parasite. **[10 marks]**

4. **Compare** and **contrast** *Taenia saginata* and *Taenia solium* under the following sub-headings in a tabular format:

a. Definitive host. **[2 marks]**

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

c. Scolex. **[2 marks]**

d. Proglottids. **[2 marks]**

e. Disease in humans. **[2 marks]**

5. *Dipylidium caninum* is a parasite of veterinary public health significance due to its zoonotic nature. Answer the following concerning this parasite:

a. Outline the life cycle. **[6 marks]**

b. Describe the clinical presentation in the domestic dog. **[2 marks]**

c. List the available control methods for this parasite. **[2 marks]**

SECTION C: TREMATODES **[30 MARKS]**

Answer all questions in this section.

1. **Compare** and **contrast** *Fasciola* spp. and *Dicrocoelium* spp. under the following sub-headings in a tabular format:

   a. Hosts (Definitive and Intermediate hosts). **[2 marks]**

   b. Mode of infection of the Intermediate host. **[3 marks]**

   c. Developmental stages in the intermediate host. **[3 marks]**

   d. Pathology in the definitive host. **[2 marks]**

Parameter	***Fasciola spp.***	***Dicrocoelium spp.***
DH		
IH		
Infection of IH.		
Snail stages		
Pathology in DH		

2. With regard to the bird trematode *Prosthogonimus* species,

   a. Outline their life cycle. **[6 marks]**

   b. Indicate the predilection site of infection and the main pathology associated with infection. **[4 marks]**

3. Briefly discuss paedogenesis in relation to the biology of Trematodes and its epidemiological significance. **[10 marks]**

END OF EXAMINATION.