FACULTY	HEALTH SCIENCES AND VETERINARY MEDICINE		
SCHOOL	SCHOOL OF VETERINARY MEDICINE		
DEPARTMENT	PARACLINICAL STUDIES		
SUBJECT	VETERINARY PARASITOLOGY II		
SUBJECT CODE	V3732AP		
DATE	November 2024		
DURATION	3 hours	**MARKS**	150
SECOND OPPORTUNITY EXAMINATION PAPER			

Examiner 1:	Prof S. Chitanga
Examiner 2:	Dr L. De Villiers
Internal moderator:	Dr A. Samkange
External moderator:	Prof B. Penzhorn (UP)

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

Instructions

1. This Question paper consists of **7 pages**, including this cover sheet.
2. Answer sections **A-C in an answer booklet** and **start each question on a new page**.
3. Answer **section D on the question paper**.
4. Write your student number clearly on each page.
5. Carefully read the instructions at the start of each section.
6. Read the questions carefully.
7. Write clearly and concisely.
8. Pay attention to the questions; where asked to explain or discuss, listing of keywords is not adequate.
9. Any form of malpractice is unacceptable.
10. Hand in this question paper together with the answer booklet.

Section A. Introduction to Entomology

This section contributes **10 marks** to the examination. Answer all the questions in this section.

1. Arthropods play a significant role as vectors of various pathogens and this process can either be mechanical or biological. Describe **any two (2)** qualities that would make an arthropod an ideal vector. **[10 marks]**

Section B. Nematocera and Brachycera.

This section contributes **40 marks** to the examination. Answer all the questions in this section.

1. Discuss the veterinary significance of *Oestrus ovis* under the following sub-headings:
   a. Larval stages. **[8 marks]**

   b. Adult stages. **[2 marks]**

2. Discuss the use of the sterile insect release technique in the control of *Glossina* species. **[10 marks]**

3. Discuss the veterinary importance of Tabanid flies. **[10 marks]**

4. Briefly discuss the veterinary significance of blowfly strike in sheep. **[10 marks]**

Section C. Arachnids

This section contributes **50 marks** to the examination. Answer all the questions in this section.

1. Ticks can be categorized based on the number of hosts that they feed on before the completion of their life cycle. Discuss the epidemiological importance of each of the three (3) different categories of ticks in the family Ixodidae (one-host ticks, two-host ticks, three-host ticks). **[10 marks]**

2. Discuss the veterinary significance of the tick *Ixodes rubicundus*. **[10 marks]**

3. Tick control is currently considered the mainstay of control of tick-borne pathogens. Discuss the following treatment schedules, highlighting the situations in which it is mostly applied as well its advantages and disadvantages;
    a. Intensive treatment. **[5 marks]**

    b. Strategic treatment. **[5 marks]**

4. Discuss the pathogenesis of infestation by *Knemidocoptes mutans* (cause of scaly leg) in chickens. **[10 marks]**

5. Discuss the pathogenic significance of *Ctenocephalides canis*. **[10 marks]**

Section D. Protozoology. **Examiner: Dr L. De Villiers**

This section contributes **50 marks** to the examination. Answer the questions on the question paper.

Section total: ____ / 50

1. Name two main organelles associated with **locomotion** in protozoa.

[2 marks]

2. Name the treatment options for ***Anaplasma marginale*** infection.

[3 marks]

3. Which are the main considerations for tentative diagnosis of ***Ehrlichia ruminantium*** infection in a live animal? **[3 marks]**

4. Describe the main challenges faced with using Primaquine phosphate for treatment of **feline babesiosis**. **[3 marks]**

5. Which cytological characteristics are used to distinguish **Corridor Disease** on a blood smear and splenic impression smear from East Coast Fever?

[3 marks]

6. Briefly describe the role of immunocompetence and co-infection in ***Hepatozoon canis*** infection. **[3 marks]**

7. Name the following epidemiological aspects of **Nagana**: a) most pathogenic protozoal species implicated (full names); b) main route of transmission. **[3 marks]**

8. How is ***isosporiasis*** mainly transmitted in canines? **[3 marks]**

9. Explain the main challenges associated with treatment of ***Leishmania infantum***. **[3 marks]**

10. Name the two most important ***Eimeria*** species that cause bovine coccidiosis, and indicate which species is more pathogenic. **[3 marks]**

11. Briefly explain the clinical importance of **bovine besnoitiosis** during post-mortem inspection in the abattoir. **[3 marks]**

12. Name any three genera of tissue-cyst forming coccidia that can be confused with ***Sarcocystis*** oocysts at diagnosis. **[3 marks]**

13. Briefly describe the possible transmission routes of ***Toxoplasma gondii*** infection. **[3 marks]**

14. Name the main species of ***Cryptosporidium*** associated with infection in dogs and humans. **[3 marks]**

15. Why are molecular techniques recommended to diagnostically differentiate ***Neospora caninum*** from *Toxoplasma gondii* infection? **[3 marks]**

16. Explain the recommended approach to in-house diagnosis of ***Giardia intestinalis*** infection. **[3 marks]**

17. What are the general considerations regarding the treatment approach to ***Tritrichomonas foetus*** infection for a cow? **[3 marks]**

END OF EXAMINATION