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
FIRST 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 paper consists of **8 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. Define the following terms:
    a. Propagative biological transmission. [2 marks]

    b. Transovarial transmission. [2 marks]

    c. Myiasis. [2 marks]

    d. Parthenogenesis. [2 marks]

    e. Vector competence. [2 marks]

Section B. Nematocera and Brachycera.

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

1. Describe the infection process (life cycle stages in the host) of *Gastrophilus* species. **[10 marks]**

2. Discuss the preventive measures one can institute against blowfly strike in sheep, under the following subheadings:
   a. Shearing. **[4 marks]**

   b. Crutching. **[3 marks]**

   c. Deworming. **[3 marks]**

3. Myiasis can be broadly classified based on the part of the body that is infested. Briefly describe the different anatomical classifications of myiasis. **[10 marks]**

4. Discuss the veterinary importance of *Haematobia irritans irritans* on a commercial cattle ranch. **[10 marks]**

Section C. Arachnids

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

1. In a table form, compare and contrast the families Argasidae and Ixodidae, under the following sub-headings:
    a. Scutum **[2 marks]**
    b. Location of mouthparts. **[2 marks]**
    c. Feeding duration and frequency. **[4 marks]**
    d. Excretion of excess water from the body. **[2 marks]**

2. Attainment of endemic stability is considered an ideal situation that reduces costs associated with tick control. Define the term endemic stability and list the requirements for its attainment and the postulates for its attainment. **[10 marks]**

3. *Ornithodoros savignyi* (eye tampan/sand tampan) is one of the important soft ticks in the southern part of Namibia. Briefly discuss this tick under the following sub-headings:
    a. Pathogenic significance. **[4 marks]**
    b. Epidemiological considerations that have increased its veterinary significance. **[6 marks]**

4. *Psoroptes ovis* infestation (sheep scab) is a notifiable condition in sheep. Discuss the pathogenesis associated with infestation by this mite in sheep and how this results in the observed clinical presentation. **[10 marks]**

5. Lice can be broadly classified as either Anoplura or Mallophaga, based on their morphology and biology. Compare and contrast the two groups under the following sub-headings:

    a. Appearance of mouthparts **[2 marks]**

    b. Type of feed. **[2 marks]**

    c. Head to thorax ratio. **[2 marks]**

    d. Claws. **[2 marks]**

    e. Hosts. **[2 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 **indirect methods** available for laboratory identification of protozoa. **[2 marks]**

2. Classify and name the treatment of choice for ***Anaplasma platys*** infection in dogs and advise on the recommended duration of treatment. **[3 marks]**

3. Name the main natural vector (full name) for each of the following ***Ehrlichia*** species: a) *Ehrlichia canis*; b) *Ehrlichia ewingii*; c) *Ehrlichia* chaffeensis. **[3 marks]**

4. Name the main ***Babesia*** species (full name) transmitted by the following natural vectors: a) *Haemaphysalis elliptica*; b) *Rhipicephalus sanguineus*; c) *Rhipicephalus decoloratus*. **[3 marks]**

5. Name the following epidemiological aspects of **East Coast Fever**: a) protozoal species implicated (full name); b) main host; c) main vector (full name). **[3 marks]**

6. Briefly describe the main route transmission of ***Hepatozoon*** species infection in cats. **[3 marks]**

7. Name the three main stages of disease manifestation in a case of **Dourine**. **[3 marks]**

8. Name three of the main ***Isospora*** species that commonly infect domestic pets. **[3 marks]**

9. Describe the diagnostic cytology on which a diagnosis of ***Leishmania infantum*** can be based. **[3 marks]**

10. What is the most important clinical feature of disease in a cow infected with ***Eimeria zuernii***? **[3 marks]**

11. Name the three main intermediate hosts of ***Besnoitia besnoiti*** infection in cattle. **[3 marks]**

12. How can ***Sarcocystis*** infection be tentatively diagnosed using a direct laboratory technique? **[3 marks]**

13. Name any three genera of tissue-cyst forming coccidia that can be confused with ***Toxoplasma gondii*** oocysts on diagnosis. **[3 marks]**

14. Explain the usefulness of faecal flotation in screening for ***Cryptosporidium***. **[3 marks]**

15. Briefly describe the clinical features of ***Neospora caninum*** in puppies. **[3 marks]**

16. Name the faecal characteristics commonly associated with ***Giardia intestinalis*** infection. **[3 marks]**

17. What are the general considerations regarding satisfactory control of ***Tritrichomonas foetus***? **[3 marks]**

END OF EXAMINATION