

THE OPEN UNIVERSITY OF SRI LANKA  
DEPARTMENT OF ZOOLOGY  
BSc DEGREE PROGRAMME  
FINAL EXAMINATION 2019 / 2020  
COURSE TITLE: PARASITOLOGY  
COURSE CODE: ZLU3184  
DURATION: TWO HOURS



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DATE: 24 December 2019

TIME: 1.30 pm – 3.30 pm

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ANSWER ANY **FOUR (4)** QUESTIONS.  
ILLUSTRATE ANSWERS WITH LABELLED DIAGRAMS WHERE NECESSARY.

1. Flatworms have adaptations to live as successful parasites. Justify this statement citing relevant examples. [100 marks]
  
2. A laboratory received a fresh stool sample of a 10-year old child who had been eating regularly from the school canteen. The stool sample was watery, with blood and mucus. Wet mounts and trichrome stained preparations of the watery stool showed spherical stages measuring 15-20  $\mu\text{m}$  with ingested red blood cells, and having a single nucleus with a centrally placed karyosome and uniformly distributed peripheral chromatin.
  - (i) What is your diagnosis of the disease and the parasite species causing the infection? [05 marks]
  - (ii) Illustrate the life cycle of this parasite using a detailed line diagram. [50 marks]
  - (iii) Explain how this infection is transmitted. [25 marks]
  - (iv) What advice will you give the parents on preventive measures to avoid re-infection? [20 marks]
  
3. Describe the pathogenicity and clinical symptoms associated with an infection of each of the following parasite species in humans.
  - (i) *Ancylostoma duodenale*. [60 marks]
  - (ii) *Ascaris lumbricoides*. [40 marks]

Contd.

4. Describe the following with respect to *Plasmodium falciparum*.
- (i) Development in the mosquito vector. [50 marks]
  - (ii) Pathogenesis and clinical symptoms of an infection in human. [50 marks]
5. (i) Outline a generalised life cycle for the *Schistosoma* species. [64 marks]
- (ii) List the distinctive features that differentiate between the life cycles of *Schistosoma mansoni* and *Paragonimus westermani*. [36 marks]
6. Write notes on two (02) of the following.
- a) *Sarcoptes scabiei*. [50 marks]
  - b) Tick infestations. [50 marks]
  - c) Hydatid cyst of *Echinococcus granulosus*. [50 marks]

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