

THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF ZOOLOGY
BSc DEGREE PROGRAMME
FINAL EXAMINATION 2019 / 2020
COURSE TITLE: PARASITOLOGY
COURSE CODE: ZYU5304
DURATION: TWO HOURS



DATE: 24 December 2019

TIME: 1.30 pm – 3.30 pm

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. During a medical camp held at a school in Colombo, several students were reported to have abdominal pain, fever and watery diarrhoea of five to seven days duration. The stool specimens collected from the ill students were submitted to the hospital laboratory to test for parasites. On microscopic examination, the stool specimens were found to be positive for *Cryptosporidium*.
 - (i) Name the two main species of *Cryptosporidium* that infect humans. [05 marks]
 - (ii) Who is most at risk for getting seriously ill with cryptosporidiosis? [05 marks]
 - (iii) Which stage of *Cryptosporidium* would have been present in the stools of the ill children? What are the diagnostic features of this stage? [10 marks]
 - (iv) How is cryptosporidiosis transmitted? On what routes of infection should the health officials of the school and parents mainly focus on? [30 marks]
 - (v) Outline the action that would serve to prevent transmission of the infection to the other children in the school or to family members? [50 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. Explain the following with respect to *Plasmodium falciparum*.
 - (i) Development in the mosquito vector. [50 marks]
 - (ii) Techniques available for the laboratory diagnosis of a human infection. [50 marks]

5. (i) Outline a generalised life cycle for the *Schistosoma* species. [64 marks]
(ii) Compare between the three *Schistosoma* species you have learnt about, with reference to differences between the morphology of their adult females and eggs. [36 marks]

6. Write notes on two (02) of the following.
 - a) Transmission of *Taenia solium* infections to human. [50 marks]
 - b) Prevention and control of Leishmaniasis. [50 marks]
 - c) Hydatid cyst of *Echinococcus granulosus*. [50 marks]
