



**UNIVERSITY OF SWAZILAND**  
**Faculty of Health Sciences**  
**Department of General Nursing**

**MAIN EXAMINATION PAPER MAY 2018**

**TITLE OF PAPER : INTRODUCTION TO PARASITOLOGY FOR NURSES**  
**COURSE CODE : GNS104**  
**DURATION: : 2.0 HOURS**  
**PROGRAMME: : BACHELOR OF NURSING SCIENCE**  
**MARKS : 100**  
**PAGES : THERE ARE FIVE (5) PAGES**

**INSTRUCTIONS**

1. READ THE QUESTIONS AND INSTRUCTIONS CAREFULLY.
  2. ANSWER QUESTION 1 AND ANY OTHER THREE (3) QUESTIONS.
  3. EACH QUESTION **CARRIES 25** MARKS
  4. WRITE NEATLY AND CLEARLY
  5. NO PAPER SHOULD BE BROUGHT INTO OR OUT OF THE EXAMINATION ROOM.
  6. BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER.
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DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR

QUESTION 1

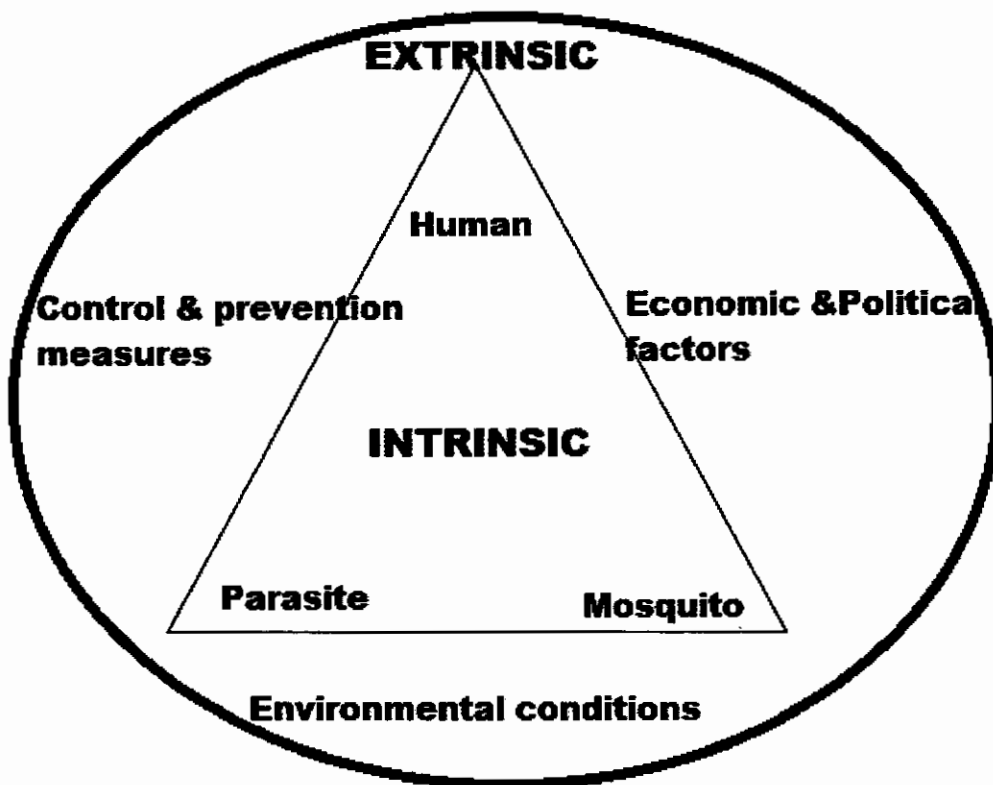


FIGURE 1

Discuss the extrinsic and intrinsic factors associated with malaria parasite ecology by using Figure 1 shown above. [25 Marks]

QUESTION 2

Write short notes on the following;

- a) Symbiotic parasite relationships. (5)
- b) Rapid diagnostic tests. (5)
- c) Antimalaria based combination therapy. (5)
- d). Parasite mechanisms for evading the host defense response. (5)
- e) Chemoprophylaxis. (5)

[25 Marks]

**QUESTION 3**

- a). Briefly outline the generalized life cycles of Trematodes and Cestodes. (10)
- b). The knowledge of the life cycles of parasites is critical for effective prevention and control. Explain this statement using Trematodes and Cestodes (5)
- c). Briefly describe, giving five (5) examples of general parasite modes of host entry. (5)
- d). List the reasons why some parasites must migrate to certain locations within hosts to complete their life cycle. (5)

[25 Marks]

**QUESTION 4**

- a. Flukes form developmental stages in second intermediate host following escape from the primary intermediate host. What is the primary host of flukes? (2)
- b. Write down ONE second intermediate host of each of the following flukes. (3)
- i. *Fasciola hepatica*
  - ii. *Fasciolopsis buski*
  - iii. *Paragonimus westermanni*
- c. What are the common names of the following flukes of man? (2)
- i. *Fasciola hepatica*
  - ii. *Fasciolopsis buski*
  - iii. *Paragonimus westermanni*
- d. Describe the symptoms that would lead to suspicion of infection with the following fluke diseases; (4)
- i. Fascioliasis
  - ii. Paragonimiasis
- e. *Fasciola hepatica* and *F. gigantica* are common flukes found infecting cattle in Swaziland. How do cattle acquire infection with these flukes? (2)

- f. *Fasciola hepatica* and *F. gigantica* eggs are often identified during routine analysis of faeces of man. Does finding of these eggs always suggest danger of human hosts in which they are recovered? Give a reason for your answer. (4)
- g. Describe **FOUR** interventions you may initiate at a community with high human and cattle hepatica infections to reduce incidence of human fascioliasis. (8)

[25 Marks]

**QUESTION 5**

- a) Give **FOUR** characteristics of the members of the Class Nematoda that distinguishes them from other members of the Sub-Kingdom Metazoa. (4)
- b) Discuss the typical composition of the reproductive system of members of the Class Nematoda, showing clear contrasting features with members of other Metazoan parasites. (4)
- c) A typical nematode, *Ascaris lumbricoides*, is a common parasite of children in tropical and rural areas of rural sub-saharan Africa.
- i. Explain why *Ascaris lumbricoides* infections are more common in children than adults? (4)
  - ii. Explain why *Ascaris lumbricoides* is more common in tropical and sub-tropical climates as opposed to temperate climates? (2)
  - iii. Give **TWO** reasons why *Ascaris lumbricoides* is more common in rural areas of sub-saharan Africa? (4)
- d) Explain what causes tropical pulmonary pneumonia (Löffler's Syndrome) and cyanosis (Blueness of skin) among children infected with *Ascaris lumbricoides*. (3)
- e) High prevalence rates of *Ascaris lumbricoides* among children may be reduced through mass treatments or chemotherapy. Explain how mass treatment is effective in reducing prevalence of infection among children. (4)

[25 Marks]

QUESTION 6

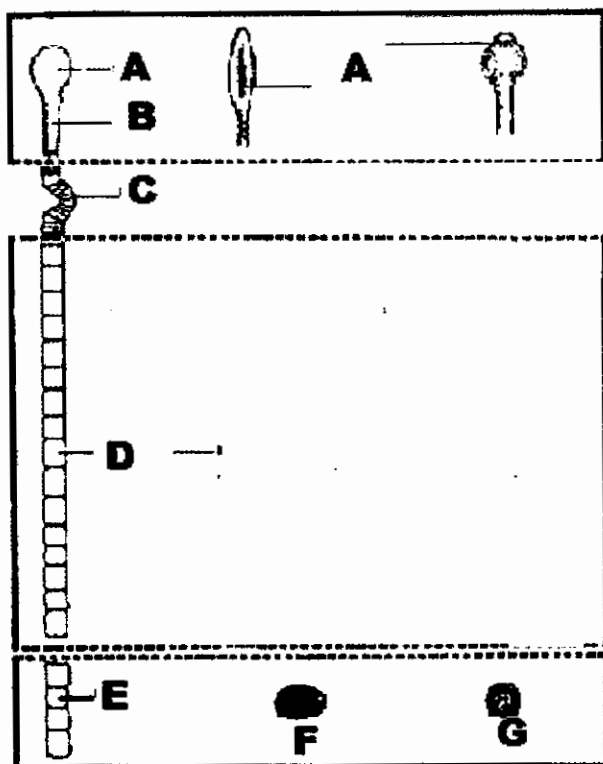


FIGURE 4

Examine Figure 4 above, and answer the following questions;

- i. Write the names of the parasite structures labeled A,B,C,D,E,F,G. (7)
- ii. Give **TWO** names of parasites of medical importance. (3)
- iii. Mention the site of infection in man. (2)
- iv. Explain the method of transmission to man. (2)
- v. Describe the method of parasitological diagnosis. (3)
- vi. Briefly describe the control measure for the parasite. (5)
- vii. Explain the method of treatment for the parasite. (3)

[25 Marks]

END OF QUESTION PAPER