



**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES  
DEPARTMENT OF BIOMEDICAL AND LABORATORY SCIENCES**

**NSLS207: PARASITOLOGY, MYCOLOGY AND VIROLOGY**

**END OF SEMESTER EXAMINATIONS**

**LECTURER: DR S. MUTAMBU**

**NOVEMBER 2025**

**DURATION: 3 HOURS**

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**INSTRUCTIONS**

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1. Write your candidate number on your answer sheets.
  2. Answer any all questions.
  3. Marks for each question are indicated in brackets at the end of the question.
  4. Credit will be given for logical, systematic and neat presentations
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**Answer any ALL questions****Question 1 (40 marks)**

**Dumi** who just turned 20 has been going to the small dam close to his village every day for the past 2 years to fish so that he and his two brothers can have at least one decent meal daily. He uses nets to fish and almost half of his body is immersed under water during this fishing activity. This morning he presented at the local health facility with abdominal pain, a slightly enlarged liver and problems in passing urine.

**Dumi** has been requested to provide **Sample A** in a specimen collection jar which he has brought to the laboratory for you to examine.

- a) Examine **Sample A** in the specimen collection jar and give a full account of your findings. (5 marks)
- b) Perform **Procedure B** shown below and identify the organism in **Sample A** in the specimen collection jar (10 marks)

**PROCEDURE B**

1. Mix well the provided **Sample A** in the specimen collection jar.
  2. Put 5 mls of **Sample A** in a conical tube and spin for 3 minutes.
  3. Discard the supernatant using a Pasteur pipette.
  4. Remix the sediment well by tapping the bottom of the tube.
  5. Put a small drop of the well mixed sediment on a glass slide followed by a drop of Iodine.
  6. Cover the iodine stained sediment with a cover slip and examine it under the microscope using the 10X and 40X objective lens.
- c) Draw and label the organism that you have identified in **Sample A**. (5 marks)
- d) Briefly outline the life cycle of the organism that you have drawn. (10 marks)
- e) Discuss in detail the methods used to control the disease caused by the infective organism that you have identified in **Sample A**. (10 marks)

**Question 2 (20 marks)**

You are provided with an organism in a petri dish on the bench.

- a) Name the organism and the disease it causes. (2 marks)
- b) Discuss its life cycle (10 marks)
- c) Briefly discuss the methods used to control the disease it causes. (8 marks)

**Question 3 (40 marks)**

On the workbenches, you are provided with slides, petri dish and pictures with a variety of parasites.

- a.** Identify the parasite and draw the stage of its life cycle on slides **D, E, F** and **G** under the microscope (8 marks)
- b.** What disease does each parasite on slides **D, E, F** and **G** cause? (4 marks)
- c.** How is the disease caused by **E** spread? (4 marks)
- d.** What can one do to control the spread of disease caused by **E**? (4 marks)
- e.** Draw and label any three parts of the parasite that you have identified on **slide D**. (4 marks)
- f.** Identify the parasite and stage of its life cycle shown in pictures **H** and **I**. (4 marks)
- g.** Label any two (2) parts of the parasite in picture **I**. (2 marks)
- h.** What disease does each parasite in pictures **H** and **I** cause? (2 marks)
- i.** Identify the parasite and stage of its life cycle shown in petri dish **J** and on slide **K**. (4 marks)
- j.** How does one get infected with parasites **J** in the petri dish and **K** on the slide? (4 marks)

**END**