



"Investing in Africa's Future"

COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

DEPARTMENT OF BIOMEDICAL AND LABORATORY SCIENCES

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS

NSLS205: MICROBIOLOGY: BACTERIOLOGY PRACTICAL

END OF FIRST SEMESTER EXAMINATIONS

LECTURER: MR Z. CHIWODZA

DURATION: 3 HOURS

INSTRUCTIONS

1. Answer **all** questions in both Sections **A** and **B** on separate answer sheets provided.
2. Mark allocation for each question is indicated at the end of the question.
3. Credit will be given for logical, systematic and neat presentations.

SECTION A [50 marks]

Answer all questions

1. You have been provided with a slide labelled **X**.
 - a) Give the identity of the organism on the slide. **(2 marks)**
 - b) List 4 clinical samples from which we can find the organism. **(4 marks)**
 - c) Name 2 diseases which can be caused by the identified organism. **(2 marks)**
 - d) Give a detailed description of the test and principle that was performed to give the reaction on the slide. **(12 marks)**
 - e) Give a brief description of the limitations of the test you described in **(d)** above. **(5 marks)**

2. You have been provided with different culture media labelled **A, B, C** and **D** showing the reactions that occurred from a blood culture isolate of a patient with bloody diarrhoea and high grade fever.
 - a) Give the name of the media and the result of the reactions shown in each media. **(4 marks)**
 - b) Describe the biochemical reactions that have occurred to get the result obtained in all of the media you listed above. **(16 marks)**
 - c) What is the possible identity of the organism. **(1 mark)**
 - d) What further tests can you do to correctly identify the organism. **(3 marks)**
 - e) Name a disease that is caused by the organism. **(1 mark)**

SECTION B [50 marks]

Answer all questions

1. You have been provided with a urine sample labelled **Bv-27-02**.
 - a) Culture the sample on the appropriate culture media. Label the plates with your student number and place them in the incubator. **(15 marks)**
 - b) List 2 possible bacterial causes of a urinary tract infection. **(2 marks)**
 - c) Describe the tests you would do on the first day of receiving a urine sample. **(8 marks)**

2. The MacConkey agar and Blood agar plates labelled **Bo-26-01** show an isolate from High Vaginal Swab.
 - a) Perform the gram test on the isolate and record the results. **(10 marks)**
 - b) Name and perform an additional test that will help you identify the organism. Record your result and explain the biochemical reactions that occurred during the test. **(15 marks)**

TOTAL 100 marks

THE END