"Investing in Africa's Future"

COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

DEPARTMENT OF HEALTH SCIENCES

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS

NSLS101: LABORATORY PRINCIPLES PRACTICAL

END OF FIRST SEMESTER EXAMINATIONS

NOVEMBER 2018

LECTURER: MR G. MALUNGA

DURATION: 3 HOURS

INSTRUCTIONS

Answer **all** questions in both sections A and B on separate answer sheets provided.

Mark allocation for each question is indicated at the end of the question.

Credit will be given for logical, systematic and neat presentations.

SECTION A: SPOT EXAM [40 MARKS]

There are 10 stations which have been set up in the laboratory numbered 1 to 10. For each station (a) Name the item/s shown
(b) State it's/their use in the laboratory

SECTION B [60 MARKS]

Question 1

You are provided with Sodium Chloride granules, 5% Sodium Hypochlorite solution and absolute ethanol. Use these provided chemicals to prepare the following solutions.
Fully describe the method of preparation of each solution showing all the calculations, masses and volumes used.
Label your solutions clearly showing your candidate number and the name of the solution.
Submit the prepared solutions for marking.

(a) 100ml of physiologic saline. [10]
(b) 80ml of 0.1% Sodium hypochlorite solution using 5% Sodium hypochlorite solution. [10]
(c) 90ml of 70% ethanol. [10]
(d) State one laboratory use of each of the solutions which you have prepared. [3]
(e) Name two other disinfectants which are commonly used in a clinical laboratory. [2]

TOTAL: 35 MARKS

Question 2

You are provided with a urine sample labeled **T.** Mix the urine thoroughly and pour it in a centrifuge tube and centrifuge it at 3000 rpm for 5 minutes. Pour away the supernatant and keep the sediment. Tap off the sediment and place a sufficient amount of the sediment on a glass slide and cover with a cover slip. Observe the sediment under a microscope.

(a) Obtain a clear focus of one field using the 40X objective lens and make a good drawing of what you are observing. [20]

(b) Which safety precaution measures must be considered when using a

(i) Microscope

(ii) Centrifuge [5]

TOTAL: 25 MARKS