



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

DMLS

AML 2214: MEDICAL LABORATORY PRACTICALS

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 3 HOURS

DATE: Pick Date May 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **SIX** Question(s). Attempt ALL questions.

Do not write on the question paper.

QUESTION 1 (Microbiology)

You are provided with a plate labeled 'A' and overnight culture with the reagents provided identify the organism to the species level.

- (a) Identify spot I and state the use.

Total marks 30.

Question 2 (Clinical Chemistry)

You are provided with a specimen labeled B. With reagents provided, perform Pandy test and answer the following questions:

- a) Describe the test performed and report your findings **(13 Marks)**
- b) (i) What name describes the procedure for collection of specimen "B"

(3 Marks)

(ii) Name the important precaution to be considered during the procedure in B “T” above **(2 Marks)**

c) Name any three pathological conditions which may be diagnosed using the specimen “B” **(6 marks)**

SPOTS

Spot I

i) Name the spot **(3 marks)**

ii) Give one use of the spot **(3 Marks)**

Question 3 (haematology)

- a. With apparatus and reagents provided, perform a microhematocrit test and record your results (brief procedure is required) (13mks)
- b. Using results above, calculate the following indices (show your workout)

Note:

Haemoglobin concentration 13.4 gms/dl

Total RBC count 5.4×10^{12} cells/ltr

- a. MCV (4mks)
b. MCH (4mks)
c. MCHC (4mks)

Question 4 (Blood transfusion)

There has been a road traffic accident in your locality and an emergency transfusion request has been issued. You are on normal work rotation in the hospital blood transfusion lab/blood bank.

- a. With apparatus and reagents provided, perform the grouping and crossmatch and issue blood that is compatible to the patient (brief procedure is required). (20mks)

SPOTS

Spot II (5mks)

- i) Identify the spot labelled I
- ii) State its use in the blood transfusion laboratory
- iii) What is the full name of the anticoagulant
- iv) List two disadvantages of using the anticoagulant

Spot III (5mks)

- i) What are the contents in the bag labelled II
- ii) State three reasons why it cannot be used
- iii) What is the recommended method of disposal?

Question 5 (Histology)

You have been provided with a smear on a slide: with the reagents provided, stain and report your findings
(18mks)

SPOTS

Spot IV

- i) Name the spot (1mk)
- ii) Give the use of spot II (1mk)
- iii) Name two alternatives for spot II (2mks)

Spot V

- i) Name the spot (1mk)
- ii) List two uses of the spot (2mks)

SPOT VI

- I) Name the spot (1mk)
- II) Outline three uses of spot the spot (3mks)
- III) Describe the condition of its storage (1mk)

Question 6 (Parasitology)

You are provided with blood specimen labelled P using the reagents and apparatus process this sample.

Process the specimen and write down the procedure and report your findings.

(20marks)

SPOTS

Spot VII

- i. Identify the spot (2.5 marks)
- ii. What is its medical importance (2.5marks)

Spot VIII

Identify the spot (2.5marks)

What is its medical importance (2.5marks)