Name:.....ADM No:.....Class:....

488/2

**DRAWING AND DESIGN** 

PAPER 2

AUGUST-SEPTEMBER 2022

2½ hours

## MECS CLUSTER JOINT EVALUATION

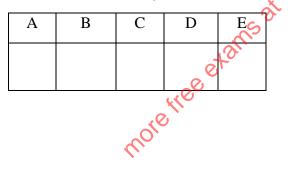
#### FORM FOUR END OF TERM TWO EXAMINATION 2022

# **DRAWING AND DESIGN**

## **INSTRUCTIONS TO CANDIDATES**

- 1. Write your name, index number and class in the spaces provided above.
- 2. The paper contains **2 PRINTED** pages make sure all **PAGES ARE PRINTED** and **NONE IS MISSING**
- 3. Answer **ALL** the questions
- 4. All the answers and working must be written on the question paper in the spaces provided below each question or in A3 paper provided.
- 5. Label every drawing drawn on A3 paper provided

#### For examiner use only



#### **GRAND TOTAL**



Page 1 of 3

#### **DESIGN PROBLEM (40 marks)**

A physically challenged patient with partial walking difficulties requires a device that can assist in walking. The device can also be used as a seat when necessary.

Design the device considering the following:

- 1. It should be used to assist in walking with ease.
- 2. It can be used as a seat
- 3. It can be adjusted to desired height
- 4. It can be folded and stored when not in use
- 5. It should have a suitable braking system.

#### **Requirements**

a. Make freehand sketches of two possible solutions for your design  $^{\circ}$ 

(6 marks)

b. Select one of the design in (a) above and make are fined labelled pictorial sketch

- c. Make detailed sketches for the mechanisms to allow for each of the considerations above (15 marks)
- d. List three materials used and state one reason for the choice of each. (3 marks)
- (2 marks) e. State two methods of joining the parts and state where each is used

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