



MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

UNIVERSITY ORDINARY EXAMINATION

2018/2019 ACADEMIC YEAR

**SECONDYEAR FIRST SEMESTER EXAMINATION FOR DIPLOMA IN
ELECTRICAL AND ELECTRONICS**

ECU 056- ENGINEERING DRAWING II

DURATION: $2\frac{1}{2}$ HOURS

DATE: 23RD APRIL 2019

TIME: 9:00-11:30AM

Instructions to candidates:

1. Answer question One and Any Other Two questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION ONE (30 MARKS)

- (a) List four major steps in the PCB design and fabrication process. (4marks)
- (b) Explain any three precision requirements in Auto CAD models. (6marks)
- (c) Draw the following electrical and electronic symbols:
- i. Inductor
 - ii. Isolator
 - iii. Capacitor
 - iv. Cooker unit (4marks)
- (d) **Figure 1** shows the layout of three final circuits. Draw a wiring diagram for the circuit. (8marks)
- (e) **Figure 2** shows a truncated cone. Copy the elevation and draw the following views:
- i. Plan
 - ii. True shape (8 marks)

SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO (20 MARKS)

Figure 3 shows the ground layout plan of four bedroom house. Using the plan provided and appropriate architectural symbols design a suitable lighting and power points location for the house and make a suitable key to describe the symbols used. (20 marks)

QUESTION THREE (20 MARKS)

Figure 4 shows a frustum of a cylinder. Using the dimensions given draw the following:

- (i) Plan
- (ii) End elevation
- (iii) Development of the frustum (20 marks)

QUESTION FOUR (20 MARKS)

Draw the following electrical motor circuit diagram:

- (i) Direct on line forward control circuit (10 marks)
- (ii) Direct on line forward reversed power circuit, star terminated motor. (10 marks)