



# **MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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## **University Examinations 2013/2014**

FIRST YEAR, FIRST SEMESTER EXAMINATION FOR CERTIFICATE IN ELECTRICAL  
INSTALLATION

### **EMC 0101: TECHNICAL DRAWING I**

**DATE: APRIL 2014**

**TIME: 3 HOURS**

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**INSTRUCTIONS:** Answer question *one* and any other *two* questions

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#### **QUESTION ONE – (30 MARKS)**

- (a) Construct an ellipse given that its minor axis is 90mm. Indicate the size of the major and minor axes on your drawing. (10 Marks)
  - (b) Construct a horizontal line 60mm long, use an appropriate construction method to construct a regular pentagon and octagon using the horizontal line drawn above as the base. (15 Marks)
- Produce a complete title block along with question 1 (5 Marks)

#### **QUESTION TWO – (15 MARKS)**

Draw a series of guidelines 6mm apart and spaced out at 10mm and print the following passage in upper case letters.

‘The ability to read a drawing is the most important requirement of all technical people in any engineering discipline. The method is brief and clear compared to verbal or written description. Some of its applications include building drawings for civil engineers, machine or assembly drawing for mechanical engineers as well as computer graphics using ArchiCAD or AutoCAD for all’.

(15 Marks)

**QUESTION THREE – (15 MARKS)**

Construct an isometric cube of side 70mm and upon each face construct an isometric circle of diameter 60mm. Use the approximate arcs method. (15 Marks)

**QUESTION FOUR – (15 MARKS)**

Construct a diagonal scale where 50mm represent 1 metre to read up to 4m and down to 0.01m. Mark off the following lengths upon your diagonal scale;

- 2.34m
- 3.87m

(15 Marks)