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**University Examinations 2016/2017**

FIRST YEAR FIRST SEMESTER EXAMINATION

FOR

DIPLOMA IN CIVIL ENGINEERING

DIPLOMA IN ELECTRICAL ENGINEERING

**EMC 2100: ENGINEERING DRAWING I**

**DATE: DECEMBER 2016 TIME: 3 HOURS**

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

**QUESTION ONE (30 MARKS)**

1. Using appropriate drawings, describe two dimensioning rules for each of the following categories of technical drawings.
2. Linear plane figures
3. Pictorial drawings.
4. Circular plane figures (3 marks)
5. Draw two circles of radii 27 and 33, vertical distance of 67 c/c. Blend the two circles with an external arc radius 75mm and internal radius 70mm, on either sides (8 marks)
6. Draw an ellipse minor diameter 62mm and major diameter 110mm (7 marks)
7. In third angle projection, draw the front and end views of the shapes block shown in Fig 1

(12 marks)

**QUESTION TWO (15 MARKS)**

1. Draw a regular pentagon of side length 44mm. (7 marks)
2. Draw a regular hexagon that can fit inside a circle of ϕ 91 (8 marks)

**QUESTION THREE (15 MARKS)**

A pictorial drawing of a bracket is shown in Fig 2. In first angle projection, draw the following

* Front elevation in the direction of the arrow (5 marks)
* End elevation (7 marks)
* Symbol for first angle projection (3 marks)

**QUESTION FOUR (15 MARKS)**

Orthographic views of a casing are shown in Fig 3. Draw an isometric view of the casting and insert 3 major dimensions (15 marks)