# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

## (A Constituent College of JKUAT)
### *Faculty of Engineering and Technology*

## DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

**UNIVERSITY EXAMINATION FOR BACHELOR OF SCIENCE IN BUILDING & CIVIL ENGINEERING**

### ECE 2131: ENGINEERING DRAWING I

**END OF SEMESTER EXAMINATION**

SERIES:  DECEMBER 2011

**TIME:  2 HOURS**

<u>**Instructions to Candidates:**</u>
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions
Answer question **ONE (COMPULSORY)** from **SECTION A** and any other **TWO** questions from **SECTION B**
Maximum marks for each part of a question are clearly shown
This paper consists of **TWO**
 printed pages

## SECTION A (COMPULSORY)

**Question 1 (20 marks)**

a)  Draw a parabola given the distance between the directrix and the focus as 32mm        (7 marks)

b)  Draw an ellipse by the concentric circles method given the major and minor axis and 110mm and 70mm respectively                                                                                          (7 marks)

c)  Construct the following regular polygons:
    (i)      Octagon 78mm diameter
    (ii)     Hexagon given the length of the sides as 30mm                                      (16 marks)

**SECTION B (Attempt any TWO questions)**

**Question 2 (20 marks)**

Figure 2 shows the plan and elevation of an object in first angle orthographic projection. Draw, full size, isometric drawing of the object with point 'X' as the lowest point. (Show at least six major dimensions) (20 marks)

**Question 3 (20 marks)**

Figure 3 shows a pictorial drawing of an ornamental stone. Draw, full size, the following views (showing at least six dimensions) of the block in 'first angle' projection:

  a)  Front elevation as seen in direction A
  b)  A plan view in direction B (20 marks)

**Question 4 (20 marks)**

Figure 4 shows the elevation of a truncated cone. Draw:
  a)  The given elevation
  b)  A complete plan
  c)  A surface development of the curved surface. (20 marks)

**Question 5 (20 marks)**

The in-complete plan and the elevation of an octagonal pyramid are shown in fig. 5. Draw in first angle orthographic projection:

  a)  The given elevation
  b)  A complete plan
  c)  A side view (20 marks)