



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

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

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING
UNIVERSITY EXAMINATION FOR DEGREE IN BACHELOR OF
TECHNOLOGY IN BUILDING & CIVIL ENGINEERING

ECE 3131: ENGINEERING DRAWING I

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2011

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer booklet*
- *Drawing paper size A2*
- *A Set of Drawing Instruments*

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

- 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 as 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 300mm (16 marks)

SECTION B (Answer any TWO questions from this section)

Question 2

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

Question 3

Figure 3 shows a pictorial drawing of an ornamental stone. Draw full size, the following views (showing at least six major 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

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

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

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