THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

Faculty of Engineering and Technology

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

BACHELOR OF SCIENCE IN BUILDING & CIVIL ENGINEERING

ECE 2114 : ENGINEERING DRAWING II

END OF SEMESTER EXAMINATION

SERIES: AUGUST/SEPTEMBER 2011

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer booklet*
- *Battery Powered Programmable calculators may be used*

This paper consists of **FIVE** questions in **TWO** sections **A & B**
Answer question **ONE (COMPULSORY)** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **SIX** printed pages

SECTION A (*COMPULSORY – 30 MARKS***)**

Question 1

a) Define the following terms as used in dimensioning
   (i) Dimension lines
   (ii) Extension lines
   (iii) Leaders (3 marks)

b) List the **TWO** forms of oblique projection (2 marks)

c) The figure below shows the incomplete plan and front elevation of two cylinders intersecting at an angle of 30°. Copy the two views, full size and complete the plan and the elevation showing

the curve of interpenetration. Also, in the same third angle projection, project the side view Z showing all hidden detail and develop the surface of the larger cylinder (25 marks)

SECTION B (*Answer any TWO questions from this section. Each question carries 20 marks***)**

Question 2

a) Differentiate between pure and conventional isometric drawing (2 marks)

b) Explain the basis of isometric drawings (3 marks)

c) The figure below shows the front elevation of the frustrum of a regular hexagonal pyramid which has been chopped-off at mid-height on a plane inclined at 45^{o} to the horizontal. The pyramid has a vertical height of 100m and base sides of 40mm. In third angle projection, draw a plan and development of the body of the frustrm. Show any constructions necessary (use full size scale) (15 marks)

Question 3

a) Explain what is meant by an Assembly drawing and how it differs from a Detail drawing (4 marks)

b) Collectively, what are detail and assembly drawings called (1 marks)

c) What **FIVE** considerations would you make when drawing detail or assembly drawings (5 marks)

d) The figure below shows the outline of the body of a depth gauge. Make an oblique drawing, twice full size, of the body with corner A towards you. Use cabinet projection with a projection angle of 30º (10 marks)

Question 4

a) What is a section or sectional view? (2 marks)

b) What **TWO** considerations would you make when placing sectional views on a drawing (4 marks)

c) For the object shown below:

(i) Copy the two views, full scale and dimension as shown (6 marks)

(ii) Draw sectional views as seen from the cutting planes shown (8 marks)

Question 5

a) (i) Explain what is meant by the term Axonometric projection (2 marks)

(ii) List the **THREE** forms of axonometric projection (3 marks)

b) Axonometric projection is a form of pictorial drawing. List **TWO** other types of pictorial drawings (2 marks)

c) Make an isometric drawing of the object shown below and add dimensions (13 marks)