



TECHNICAL UNIVERSITY OF MOMBASA
**Faculty of Engineering &
Technology**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN CIVIL ENGINEERING

ECE 2102: ENGINEERING DRAWING II

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2013

TIME ALLOWED: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Answer question **ONE (Compulsory)** and any **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One (Compulsory)

A pentagonal lamina of 40mm side lies on the ground. The corner which is nearest to PP is 15mm behind it and an edge containing that corner is making 45° with PP. The station point is 40mm in front of PP,

50mm above GP and lies in a central plane which is at a distance of 70mm to the left of the corner nearest to the PP. Draw the perspective projection of the lamina. Perspective projection is drawn by visual ray method using top and front views: **(30 marks)**

Question Two

Construct the development, plan and front elevation of the frustum of a hexagonal pyramid whose base is inscribed in a circle of radius 15mm the height of the pyramid is 50mm and the cutting plane is at 30° and cuts the axis of the pyramid at mid-point. **(20 marks)**

Question Three

Determine the lines of interpenetration between the hexagonal based prism and the square based prism. shown in figure 1 below: **(20 marks)**

Question Four

Draw the isometric sectional view across C-C of the figure 2 below. Draw the plan of the section and the front elevation in the direction marked X **(20 marks)**

Question Five

Figure 3 shows the details of the parts of an open bearing. Assemble these parts correctly and then draw the following views to scale 1:1.

- (i) Front view, right-half in section
- (ii) Top view
- (iii) Side view as viewed from left

Indicate the heading and scale used. Dimension the drawing.

(20 marks)