THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN CIVIL ENGINEERING

ECE 2101: ENGINEERING DRAWING I

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2012
TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Drawing Paper A2 size*
- *Drawing Board and Instruments*

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

Question One (Compulsory)

a) Draw the **SIX** Principal views of the object show in figure 1 and present them in the standard arrangement for first angle projection. **(15 marks)**

b) Draw the **SIX** principal views of the object shown in figure 1 and present them in the standard arrangement for third angle projection. **(15 marks)**

Question Two

Figure 2 is a diagrammatic outline of a crank connected to a piston by a link. The crank OA is constrained to move in a circular rotation at its fixed end 0. A pin joint at A connects the link AB to the crank OA. The end B of the link AB is constrained to move in a straight line along OB. Plot the locus of the Point P on the link AB. **(20 marks)**

Question Three

Draw the following profiles of standard screw thread forms used in construction industry.

a) Sharp V **(4 marks)**
b) Metric **(4 marks)**
c) Square **(4 marks)**
d) Whitworth standard **(4 marks)**
e) Buttress **(4 marks)**

Question Four

a) State the **THREE** types of perspective drawings that can be generated based on the number of varnishing points. **(4 marks)**
b) Draw sketches to illustrate the **THREE** type of perspective drawings stated in (a) above. **(12 marks)**
c) What is a varnishing point in perspective drawing projection? **(4 marks)**

Question Five

Using the squared grid paper provided, draw orthographic sketches of the objects shown in isometric projections. Use the dimensions of the objects to generate the three basic views for each object in figure 3. **(20 marks)**