



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBC 13J)

EBC 2101: ENGINEERING DRAWING I

END OF SEMESTER EXAMINATION

SERIES: APRIL 2013

TIME ALLOWED: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Drawing Paper Size A2*
- *Drawing Instruments*

This paper consists of **FIVE** questions.

Answer any **THREE** questions
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One

- a) State the **THREE** main purposes of drawing in engineering. **(6 marks)**
- b) Illustrate the following types of lines stating **ONE** common use of each:
- (i) Thin short dashes
 - (ii) Thin continuous line
 - (iii) Thin chain line
 - (iv) Bold continuous line **(8 marks)**
- c) Print the following statement in 5mm high upper case letters. “The main purpose of lettering is to provide a brief but clear information which is not easily conveyed by the drawing”. **(6 marks)**

Question Two

Construct the locus of a point on a spoke of a wheel of 72mm ϕ , as the wheel rolls without slipping along a straight line for one complete convolution. The point is 25mm away from the centre of the wheel. Name the locus. **(20 marks)**

Question Three

Figure 1 shows a line diagram of a slider crank mechanism. The slider “A” is constrained to move along the groove XY while crank OB rotates about centre “O”. Plot the locus of point “P” on the connecting rod AP. **(20 marks)**

Question Four

Figure 2 shows a pictorial view of a simply shaped block. Draw in third angle projection the following views of the block:

- (i) Front elevation as seen in the direction of arrow “F”
- (ii) End elevation as seen in the direction of arrow “E”
- (iii) The plan as seen directly from above **(20 marks)**

Question Five

Figure 3 shows the elevation of a cut right-cone

Draw the true shape of the cut section. Name the shape. **(20 marks)**