TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING

EBC 2104: ENGINEERING DRAWING I

END OF SEMESTER EXAMIANTION
SERIES: APRIL 2013
TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Paper size A2*

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 **FOUR** printed pages

Question One

a) Draw a hyperbola given the distance between the focus and the directic as 32mm and the eccentricity as 3:2 **(11 marks)**

b) Draw an ellipse by the concentric circles method given the major minor axis as 120mm and 80mm respectively. **(9 marks)**

Question Two

a) Construct the cycloid of a point on the circumstance of a circle 4mm diameter which rolls without slip a long a straight line for one and half revolutions. **(10 marks)**

b) Draw a left hand helix given the pitch and radius of the generating circle as 80mm and 30mm respectively for two complete revolutions. **(10 marks)**

Question Three

a) Construct an Archimedean spiral for a point rotating round a circle 100m diameter, given that the point stops at the centre of the circle. **(10 marks)**

b) Figure 1 shows a link mechanism in which AB is a rank which can rotate about A. The crank is pivoted at B to a rod BC. The rod is constrained to move along a straight line X – X. Draw the locus of point P for a complete revolution of the crank. **(10 marks)**

Question Four

Shown in figure 2 are the in-complete plan and front elevation of a right truneated an octagonal pyramid in first angle orthographic projection. Draw the following for the pyrramid.

a) A complete plan
b) The given front view
c) An end elevation as seen from the left **(20 marks)**

Question Five

a) Draw a parabola inside a rectangle 80mm x 60mm.

b) Figure 3 shows the plan and front elevation of a triangular laming. Draw the true shape of the lamina and state the dimensions

(20 marks)