TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBCE)

EME 2105: ENGINEERING DRAWING & DESIGN

END OF SEMESTER EXAMINATION
SERIES: APRIL 2015
TIME ALLOWED: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Answer any **THREE** questions of the **FIVE** questions
Maximum marks for each part of a question are as shown
Use neat, large and well labeled diagrams where required

This paper consists of **THREE** printed pages

Question One

a) Draw an Archimedean spiral for a point on the circumference of a circle 55mm radius which stops 10 from the centre of the circle **(10 marks)**

b) Construct a hyperbola given the eccentricity as 4:3 and the distance between the diretrix and the focus as 40m **(10 marks)**

Question Two

a) Construct an eclipse by the concentric circles method given the major and minor axis as 124mm and 82mm respectively. **(10 marks)**

b) Draw the epicycloid of a point on the circumference of a circle 25mm, which rolls with slip round the outside circumference of another circle 95mm radius **(10 marks)**

Question Three

Shown in figure 1 is an oblique pictorial drawing of a machine block. Draw the following view of the block in FIRST ANGLE and to full size:

(i) Front view in the view of arrow 'F'
(ii) A plan
(iii) An End view **(20 marks)**

Question Four

Figure 2 shows the in-complete plan and front view of a hexagonal prism with a cylindrical hole through the prism. Using a scale of 1:1 and in 'first angle' draw the following views of the prism:-

(i) A complete plan
(ii) A complete front view
(iii) An end view in the direction shown **(20 marks)**

Question Five

Figure 3 shows the two views of an object in 'first angle projection'. Draw an isometric drawing of the object with 'X' as the lowest point. Dimension your figure fully **(20 marks)**