TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBCE 13S)

EBC 2105: ENGINEERING DRAWING & DESIGN

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2013
TIME ALLOWED: 2 HOURS

<u>**Instructions to Candidates:**</u>
You should have the following for this examination
- *Answer Booklet*

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) (i) Name and explain the use of any THREE basic technical drawing equipment. **(6 marks)**
   (ii) Explain any TWO methods of reproduction of drawings **(4 marks)**

b) Illustrate the following types of lines and state one common use of each:
   (i) Bold continuous
   (ii) Thin continuous
   (iii) Thin chain line **(6 marks)**

Question Two

A wheel, 600m in diameter is resting on a flat surface. Trace the locus of the contract point 'P' as the wheel rolls without slipping for one complete revolution. Name the locus. **(20 marks)**

Question Three

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 revolution. The point is 25mm away from the centre of the wheel. Name the locus. **(20 marks)**

Question Four

Figure 1 shows a pictorial view of a simply shaped block:

Draw in third angle projection the following views of the block:

   a) Front elevation as seen in the direction of arrow 'F'
   b) End elevation as seen in the direction of arrow "E"
   c) Plan as seen directly from above **(20 marks)**

Question Five

Figure 2 shows the side view of a truncated hexagonal pyramid. In first angle projection:

   (i) Draw the given view
   (ii) Complete plan
   (iii) Produce the auxiliary view of the frustrum as seen in the direction of arrow AV

   (20 marks)