THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A CONSTITUENT COLLEGE OF JKUAT)

Faculty of Engineering and Technology

DEPARTMENT OF MECHANICAL AND AUTOMOTIVE ENGINEERING
Certificate in Mechanical Engineering (Plant Option)

EME 1101
ENGINEERING DRAWING I

YEAR 1 SEMESTER I

SPECIAL/SUPPLEMENTARY EXAMINATIONS

SERIES: MARCH, 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination:
- Drawing Paper (A2)
- Drawing Instruments
- Scientific Calculator

This paper consists of **FIVE** Questions. Answer Question **ONE (Compulsory)**
and any other **TWO** Questions.
Maximum marks for each part of question are as shown.
This paper consists of *THREE printed pages*.

Question ONE

Figure 1 shows a dovetailed packing piece. Draw, scale full size first angle projection:-

(a)   An end elevation-arrow B.
(b)   Plan.
(c)   A front elevation – arrow B.

(30 Marks)

Question TWO

Figure 2 shows a part of a jack plane. Draw the plane full size. Show all your working.   **(20 Marks)**

Question THREE

(a)   Draw an inscribed circle for an equilateral triangle of side lengths 50 millimetres.

(b)   Draw a nonagon whose side length is 25 millimetres.

(c)   Draw a straight line 67 millimetres long. Divide the lines in the ratio of 2:3:4.

(20 Marks)

Question FOUR

(a)   Use sketches to illustrate the following terms:

    (i)   Pitch circle diameter (V) A/C.
    (ii)   Across flats.
    (iii)   Inside diameter.
    (iv)   Outside diameter.

(b)   State the meaning for the following abbreviations used in engineering drawing:

    (i)   HEX HAD
    (ii)   RH
    (iii)   MATL
    (iv)   DRG
    (v)   No.
    (vi)   A/C

(c)   Draw the following types of lines:

        (i)   Centre line
        (ii)   Hidden details line
        (iii)   PCD line

(20 Marks)

Question FIVE

Figure 3 shows the profile of gasket. Draw the gasket full size showing all your working. **(20 Marks)**