# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

*(A constituent College of JKUAT)*
### *FACULTY OF ENGINEERING AND TECHNOLOGY*

## DEPARTMENT OF MECHANICAL AND AUTOMOTIVE ENGINEERING
DIPLOMA IN MARINE ENGINEERING

# EME 2112 : TECHNICAL DRAWING I

SEMESTER EXAMINATION
APRIL 2012 SERIES
TIME: 2 HOURS

### *INSTRUCTIONS TO CANDIDATES:*
You should have the following for this examination:
- Answer booklet
- Scientific Calculator
- Drawing Paper A2

This paper consists of **FIVE** questions
Question **ONE** is compulsory. Answer question ONE and any other TWO questions.
Maximum marks for each part of a question are as shown.

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**Question ONE**

Figure I shows a machine block drawn in Isometric projection. Draw the block to a scale 1:1, in first angle or thographic projection :

(a) Sectional front elevation along Q-Q.
(b) End elevation viewed from E.
(c) Plan

Include SIX important dimensions and the symbol of projection.          **(30marks)**


**Question TWO**

(a) Construct a scale on which 30mm represent 1Km to read to 0.01km and 5Km long.

**(10marks)**

(b) From the scale in (a) above, construct a quadrilateral PQRS such that PQ = 4.23Km, angle PQS = 37 ½ °, PQ//RS and 2.09 Km apart and RS = 1.47Km.          **(10marks)**


**Question THREE**

(a) Write down the symbols or abbreviations of the following terms:
(i)     Centreline
(ii)    Machined
(iii)   Cheese head
(iv)    Undercut
(v)     Countersunk                                    **(5marks)**

(b) A conic section is constructed such that the distance from the directix to the          local point is 40mm with an eccentricity of 2/3. Construct and name the figure obtained.

**(15marks)**


**Question FOUR**

Figure 2 shows a crane hook. Copy the crane hook showing clearly how the centres of the curves are obtained.          **(20marks)**


**Question FIVE**

Figure 3 shows three views of a block drawn in first angle orthographic projection. Draw an Isometric view of the block taking corner X as the lowest point.          **(20marks)**