



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering and Technology

DEPARTMENT OF MECHANICAL AND AUTOMOTIVE ENGINEERING
CERTIFICATE IN MECHANICAL ENGINEERING (PLANT)

EME 1101 : ENGINEERING DRAWING I

YEAR I SEMESTER I

SPECIAL/SUPPLEMENTARY EXAMINATION
February 2013 SERIES
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

You should have the following for this examination:

- Drawing paper A2
- Drawing Instruments
- Calculator

This paper consists of **FIVE** questions

Attempt question **ONE** and any other **TWO** questions. Maximum marks for each part of a question are as shown.

This paper consists of 3 printed Pages

Question ONE

Figure I shows a mechanical block . Draw in first angle orthographic projection, scale full size, the following:-

- a) Front elevation viewed from arrow F
- b) End elevation viewed from arrow E
- c) Plan.

(30marks)

Question TWO

Refer to the hook shown in figure 2. Draw the profile of the hook full size. Show your working

(20marks)

Question THREE

- a) Sketch the convention for the following
 - (i) Compression spring
 - (ii) Tensions spring
 - (iii) Holes on circular pitch
 - (iv) Diamond knurl
 - (v) Splined shaft
- b) Write in full the meaning of the following abbreviations:-
 - (i) Fig.
 - (ii) NO.
 - (iii) A/C
 - (iv) A/F
 - (v) HEX HD
 - (vi) Pneu
 - (vii) S'face
 - (viii) MAX
- c) Draw the following types of lines
 - (i) Hidden detail lines
 - (ii) Centre line
 - (iii) Pitch circle diameter line
 - (iv) Projection line
- d) Write FOUR drawing paper sizes used in the drawing

(20marks)

Question FOUR

- a) Draw the component show in figure 3 fall size. Show your working.

(20marks)

Question FIVE

- a) Construct a regular pentagon given its side length as 35 millimetres
- b) Construct an internal tangent to two circles of diameters 55 and 26 millimetres
- c) Construct a triangle with one length of 65 millimetres, two angles of $22\frac{1}{2}^\circ$ and 135° .

(20marks)