



TECHNICAL UNIVERSITY OF MOMBASA
**Faculty of Engineering &
Technology**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
CERTIFICATE IN BUILDING & CIVIL ENGINEERING (CBCE 13M)

EBC 1104: ENGINEERING DRAWING I

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: MARCH 2014

TIME ALLOWED: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Drawing Instruments*

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) Construct the following angles separately without using a protractor

- (i) $3\frac{1}{2}^\circ$
- (ii) $7\frac{1}{2}^\circ$
- (iii) 15°
- (iv) $22\frac{1}{2}^\circ$
- (v) 45°

(10 marks)

b) Draw and label in 5mm high lettering the following lines:

- (i) Construction line
- (ii) Outline
- (iii) Centre line
- (iv) Breaking line

(10 marks)

Question Two

Fig. 1 shows an object. To a scale of 1:1, draw the following views in first angle projection:

- a) Elevation as seen in direction of arrow A
- b) Plan as seen in direction of arrow B
- c) Side view as seen in direction arrow C

(20 marks)

Question Three

a) (i) Sub-divide a line 130mm long into proportions of 2:3:6
(ii) Indicate the dimension of the second proportion

(10 marks)

b) Construct an octagon circumscribing in a circle of 80mm diameter.

(10 marks)

Question Four

Use freehand sketches to draw pictorial drawing of the following tools:

- (i) Mallet
- (ii) Nail punch
- (iii) Warrington hammer
- (iv) Sliding bevel
- (v) Mitre box

(20 marks)

Question Five

Show by sketches conventional indication of the following:

- (i) Earth
- (ii) Hardcore
- (iii) Stone
- (iv) Plaster

(v) Planed timber

(20 marks)