



Technical University of Mombasa

Faculty of Engineering and Technology
DEPARTMENT OF MEDICAL ENGINEERING

DIPLOMA IN MEDICAL ENGINEERING
(DME 113)

EME 2105
ENGINEERING DRAWING AND DESIGN

END SEMESTER EXAMINATIONS

SERIES: DECEMBER, 2013
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

-This paper consists of **FIVE** questions

-You should have the following:-

- Drawing instruments
- Scientific calculator

-Answer question **ONE COMPULSORY** and any other **TWO** questions.

This paper consists of **3 PRINTED** pages

QUESTION ONE (COMPULSORY)

- (a) Figure 1 shows the profile for an engineering component. Use geometrical construction techniques to construct the given profile on a scale of 1:2.

NB: All constructional details should be shown.

(30 marks)

QUESTION TWO

Draw the polygon shown in Figure 2 and

- (i) Construct to show the triangle of equal area to the polygon
- (ii) Determine the area of the triangle converted in mm^2

(20 marks)

QUESTION THREE

Construct a decagon whose side length is given as 40 mm

(20 marks)

QUESTION FOUR

Construct a diagonal scale 50 mm to represent 1 mm to read up to 3 mm with an accuracy of 0.01 mm

- (i) State the RF for the scale
- (ii) Indicate reading of 1.24 mm and 2.63 mm

(20 marks)

QUESTION FIVE

Construct the polygon shown in Figure 2 and using radial method, reduce the polygon on a ratio of 3:5 with AB as the base line.

(20 marks)