



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)
University Examinations for 2015/2016

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

FIRST SEMESTER EXAMINATION FOR CERTIFICATE IN CIVIL ENGINEERING

BCE BT 206: ENGINEERING DRAWING III

Date: 9/12/2015

Time: 8:30 – 10:30 AM

INSTRUCTIONS:

- **This paper comprises of FIVE questions**
- **Question ONE is compulsory and carries 30 marks**
- **Answer any other TWO questions**

QUESTION ONE

Fig. 1 shows the front elevation of a hexagonal pyramid of sides 35mm and a vertical height of 75mm. Draw in 1st angle projection the following views of the truncated pyramid:

- (a) The given elevation
- (b) Plan
- (c) End elevation
- (d) True shape of the cut surface
- (e) Surface development (30 marks)

QUESTION TWO

- a) Draw an archimedian spiral starting at the centre of a circle given the radius as 50mm (10 marks)

- b) Draw the involute of a circle given the radius of the circle as 25mm. (10 marks)

QUESTION THREE

Fig. 2 shows three views of a block. Draw an isometric view of the block as seen in the direction of arrow A. (20 marks)

QUESTION FOUR

Fig. 3 shows a block in pictorial projection, copy the figure and show all the dimensions (20 marks)

QUESTION FIVE

Fig. 4 shows two pipes of unequal diameters meeting obliquely, draw the following:

- a) Copy the given elevation (5 marks)
- b) Draw the plan (5 marks)
- c) Show the line of intersection (5 marks)
- d) Draw the surface development of pipe 'A' (5 marks)