



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

BRIDGING TO HIGHER DIPLOMA IN BUILDING & CIVIL ENGINEERING

(BHD 12J)

EBC 2417: CIVIL ENGINEERING WITH CAD I

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Laptop/Desktop Computer*

This paper consists of **TWO** sections **I & II**.

Section **I** has **30 marks** and section **II** has **40 marks**.

Attempt **ALL** questions in section **I** and **TWO** questions in section **II**

- **Create a folder on the Desktop with your full names. Save your answer in AutoCAD using your Student Number.**

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

SECTION I (Compulsory)

Question One (30 marks)

- a) Define the terms below as used in AutoCAD.
 - i) Absolute Co-ordinates (1 mark)
 - ii) Relative Co-ordinates (1 marks)
 - iii) Zoom window (1 mark)
 - iv) Tool bars (1 mark)
 - v) Osnap (Briefly describe how to make Osnaps active assuming they are not turned on. (4 marks)
 - vi) What are layers in AutoCAD? (1 mark)
 - vii) What is the purpose of having layers, briefly describe how layers are used? (6 marks)
- b) Describe how to chamfer two connecting lines. (5 marks)
- c) Briefly describe A Osnap modes. (6 marks)
- d) Describe a cutting edge, which command is used to prompt the cutting edge. (4 marks)

SECTION II (Answer any TWO questions)

Question Two (20 marks)

Design a two-bed roomed bungalow showing a labeled and dimensioned floor plan, back elevation side elevation and the roof plan. (20 marks)

Question Three (20 marks)

Draw the section through a roof and show the following details each with its size.

- a) Wall plate
- b) Purling
- c) Ties and struts
- d) Rafters
- e) Galvanized Iron sheets (Give the gauge)
- f) Tie beam
- g) Fascia board. (20 marks)

Question Four (20 marks)

- a) Redraw the drawing in figure one using layers: Use layer details given below. (20 marks)

LAYER	LINE COLOUR	LINE WEIGHT	LINE TYPE
Wall	Magenta	0.35	Continuous
Door	Cyan	0.30	By block

Windows	Green	0.30	By layer
Dimensions	Yellow	0.25	Continuous
Wording	Blue	0.35	Continuous

Question Five (20 marks)

Design and Draw a gable roof plan of figure two. Redraw the elevations as seen, complete with the roof and name the elevations.