# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE 

 (A Constituent College of Jkuat)Faculty of Engineering and Technology<br>DEPARTMENT OF BUILDING AND CIVIL ENGINEERING DIPLOMA IN BUILDING AND CIVIL ENGINEERING (DBC10A)

EBC 2217 : CIVIL ENGINEERING CAD
SEMESTER EXAMINATIONS
SERIES: AUGUST 2011
TIME: 3 HOURS

## Instructions to Candidates:

This paper consists of TWO sections: Section I and II.
Section I has $\mathbf{3 0}$ marks and Section II has $\mathbf{4 0}$ marks.
Attempt ALL Questions in Section I and only TWO Questions from Section II
You should have the following for this examination:
-Answer Booklet
-Laptop/Desktop Computer
Save your answer in AutoCAD using your FULL names followed by your student number.
This paper consists of FIVE printed pages

## SECTION I

## (COMPULSORY)

## QUESTION 1

a) Explain the use of the following co-ordinate systems as used in CAD and for each give an example.
i) Absolute co-ordinates
ii) Relative co-ordinates
iii) Polar co-ordinates
b) State FIVE advantages of using computer-aided design in creating civil engineering drawings.
c) Differentiate between the following working drawings:
i) Civil drawings
ii) Architectural drawings
iii) Structural drawings
iv) Mechanical drawings
v) Electrical drawings
vi) Plumbing drawings
d) Draw a well labeled section of a ground floor.

## ANSWER ANY TWO QUESTIONS

## QUESTION 2

The figure below shows an object drawn in the first angle orthographic projection. Construct its isometric drawing.


## QUESTION 3

Using the AutoCAD software, draw a cantilever pad foundation and a beam and slab raft foundation.
(20 Marks)

QUESTION 4
a) Construct the circles and lines shown below. Using Offset and the Ttrprompt of the Circle tool, followed by Trim, construct one of the outlines arrayed within the circle. Array the outline 12 times around the centre of the circles to produce the figure below.

b) Construct the figure shown below. All corners have been filleted R10. The strips have been constructed using the Line and Circle tools. Construct one strip and then copy it using Copy.


## QUESTION 5

Using the AutoCAD software, draw an open and a closed caisson. (20 Marks)

