THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)
Faculty of Engineering and Technology

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

DIPLOMA IN CIVIL ENGINEERING & COMPUTER AIDED DESIGN (DCC 09A)

EBC 2217: CIVIL ENGINEERING CAD

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2011

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination
- *Answer Booklet*
- *Labtop/Desktop Computer*

This paper consists of **FIVE** questions in two sections **A & B**
Answer question **ONE (COMPULSORY)** and any other **TWO** questions.
Maximum marks for each part of a question are clearly shown
This paper consists of **FIVE** printed pages

SECTION A (COMPULSORY)

Question 1

a) Explain the **SEVEN** major stages involved in the design process   (14 marks)
b) List down the steps involved when plotting or printing a drawing   (8 marks)
c) The figure below shows a third angle isometric projection of a solid. Draw the 3D solid in the Three: Right viewport   (8 marks)

Figure 1

SECTION B (Answer any TWO questions from this section)

Question 2

The figure below shows the dimensions of a proposed two-bed roomed house. Construct the 3D drawing of the house on the two: Vertical viewporton a well landscaped compound. Provide well designed doors, windows and roof   (20 marks)

Figure 2

Question 3

The figure below is a floor plan of a one bedroomed house. Design the 3D view on a well landscaped compound. Provide well designed doors, windows and roof   (20 marks)

Figure 3

Question 4

The two-view projection shows a stand consisting of two hexagonal prisms. Circular holes have been cut right through each face of the smaller hexagonal prism and rectangular holes with rounded ends have been cut right through the faces of the larger. Construct a 3D model of the stand on a Three: Left viewpoint (20 marks)

Figure 4

Question 5

a) Working to the dimensions given in the outline drawing shown below, construct the 3D model of a wine glass on a Three: Left viewport (10 marks)
   Figure 5

b) Construct the figure shown below on a suitable viewport and revolve it through 360o to form a 3D solid. (10 marks)

   Figure 6