



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

## *Faculty of Engineering and Technology*

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

HIGHER DIPLOMA IN BUILDING

## **COMPUTER AIDED DESIGN**

SEMESTER 1 EXAMINATION

**SERIES:** APRIL/MAY 2010

**TIME :** 2 HOURS

### **Instructions to candidates:**

This paper consists of **FIVE** questions.

Answer question **ONE** from section **A** and any other **TWO** questions from section **B**.

### **Question ONE**

- a) State any **TWO** latest versions of AutoCAD. **(2marks)**
- b) Explain **TWO** benefits of CAD. **(8marks)**
- c) With the aid of a diagram, explain the following types of co-ordinates used in Auto CAD drawing:
- i. Absolute co-ordinates
  - ii. Polar
  - iii. Cartesian
  - iv. Relative co-ordinates **(20marks)**

### **Question TWO**

- a) Define the following terms as applied in CAD:
- i. Menu bar
  - ii. Status bar
  - iii. Screen menu
  - iv. Drawing area
  - v. Command line **(10marks)**
- b) Explain the following draw commands as applied in AUTOCAD:
- i. Line command
  - ii. Spline command
  - iii. Rectangle command
  - iv. Circle command
  - v. Arc command **(10marks)**

### **Question THREE**

- a) State methods used to draw the following shapes
- i. Ellipse
  - ii. Donut **(2marks)**
- b) From the point (1,1), complete the diagram using the dimensions given below:
- (41,10),(45,22),(@23,0),(@14<30),(@2.1),(@16 <120),(@-13,0),(@0,-14),  
(@22<135), (@-10,0), (@15<225),(@-10,0),(@23 <-60),(10,10) **(18marks)**

#### **Question FOUR**

With the aid of a diagram, explain the following types of co-ordinates as used in AutoCAD drawing:

- i. Cartesian
- ii. Polar
- iii. Absolute co-ordinates
- iv. Relative co-ordinates

**(20marks)**

#### **Question FIVE**

a) Explain the function of the following:

- i. Drawing Grid
- ii. Ortho mode
- iii. Snap Mode
- iv. Polar tracking

**(12marks)**

b) With the aid of diagrams, differentiate between a standard orthogonal grid and isometric grid.

**(8marks)**