



# **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** (Compulsory)

- a) Explain two benefits of CAD. **(8marks)**
- b) Define the following terms as used in AutoCAD:
- i) Menu bar
  - ii) Status bar
  - iii) Screen menu
  - iv) Drawing area
  - v) Command line **(10marks)**
- c) Explain the following draw commands as used in AutoCAD:
- i) Line command
  - ii) Polyline command
  - iii) Rectangle command
  - iv) Donut command
  - v) Arc command **(10marks)**
- d) State methods used to draw the following shapes
- i. Polygon
  - ii. Circle **(2marks)**

### **Question TWO**

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 THREE**

- a) State any **TWO** latest versions of AutoCAD. **(2marks)**
- b) From the point (1,1), complete the diagram using the dimensions given below:
- (4.1,1),(4.5,2.2),(2.3,0),(1.4<30),(@0,2.1),(1.6 <120),(@-1.3,0),  
(@0,-1.4), (@2.2<135), (@-1,0), (@1.5<225),(@-1,0),(2.3 <-60),(1,1)
- (18marks)**

#### **Question FOUR**

- 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)**

#### **Question FIVE**

- a) Explain the function keys given below:  
F7, F8, F9 and F10 **(8marks)**
- b) State the steps required to accomplish the following task:
- i) Copy an object
  - ii) Move an object
  - iii) Mirror an object
  - iv) Erase an object **(12marks)**



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**HDB09**

**AUTO CAD**

SEMESTER 1 EXAMINATION APRIL/MAY 2010

TIME : 2 HOURS

## **Instructions**

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

### **Question ONE**

- a) State any 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:
  - i. Menu bar
  - ii. Status bar
  - iii. Screen menu
  - iv. Drawing area
  - v. Command line(10marks)
- b) Explain the following draw commands:
  - 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:

(4.1,1),(4.5,2.2),(@2.3,0),(@1.4<30),(@0,2.1),(@1.6 <120),(@-1.3,0),  
(@0,-1.4), (@2.2<135), (@-1,0), (@1.5<225),(@-1,0),(@2.3 <-60),(1,1)

(18marks)

#### Question FOUR

With the aid of a diagram, explain the following types of co-ordinates 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)