



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

Faculty of Engineering

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

DIPLOMA IN CIVIL ENGINEERING
(DCC 09)

EB 2307: COMPUTER AIDED DESIGN

END OF SEMESTER EXAMINATION

SERIES: APRIL/MAY 2010

TIME: 3 HOURS

Instructions to Candidates:

You should have the following for this examination:

- Answer Booklet
- Laptop/Desktop Computer

This paper consists of **FIVE** questions.

Answer question **ONE** and any other **TWO** questions.

Maximum marks for part of question are as shown.

Create a folder in My Documents and name it DCC09. Save ALL your answers in Word and Auto CAD files using your FULL names followed by your student number.

QUESTION ONE (Compulsory)

(a) Define the following standard working drawings:

- (i) Design layout drawings
- (ii) Detail drawing
- (iii) Assembly drawings
- (iv) Combined drawings
- (v) Tabular drawings.

(10 marks)

(b) Using computer aided design software plot the boundary of a plot of land with the following information. (10 marks)

LEG	BEARINGS			DISTANCES IN METRES
	°	'	''	
AB	37	36	44	12.000
BC	100	24	39	15.200
CD	125	17	40	17.300
DE	238	39	57	19.100
EF	180	00	00	25.000
FG	256	21	39	44.400
HJ	37	03	34	35.434
JA	90	21	39	33.500

(c) Explain the **TWO** methods of entering text in the CAD program. (4 marks)

(d) In each of the following cases, give **TWO** practical examples of the drawings that fall in that category.

- (i) Architectural design
- (ii) Engineering drawings
- (iii) Civil engineering drawings

(6 marks)

QUESTION TWO

The figure below shows a simply shaped object. Using Computer Aided Design software draw, in first angle projection, the following orthographic views.

- (a) The front elevation as seen in the direction of arrow F.
- (b) The plan as seen in the direction of arrow P.
- (c) The end elevation as seen in the direction of arrow E.

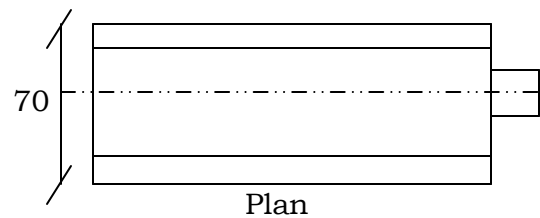
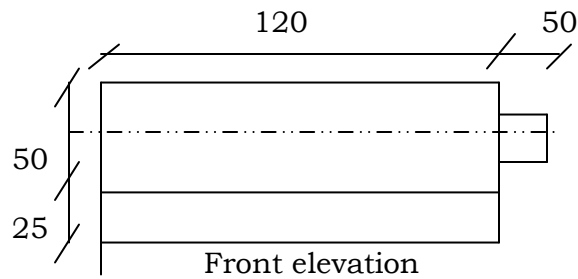
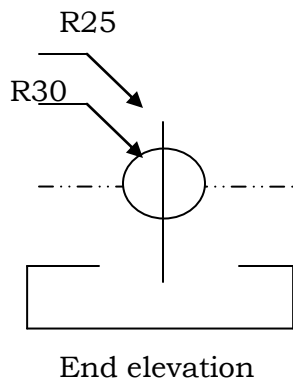
(20 marks)

QUESTION THREE

Draw a detailed plan of a two bedroomed house showing all the dimensions. (20 marks)

QUESTION FOUR

Construct an isometric drawing of the part shown below.



QUESTION FIVE

- (a) Explain the **THREE** methods of entering distances in a CAD program. (6 marks)
- (b) Briefly explain the use of the following co-ordinate systems as used in CAD.
- (i) Absolute co-ordinates
 - (ii) Relative co-ordinates
 - (iii) Polar co-ordinates. (6 marks)
- (c) Give the uses of the following buttons in the status bar.
- (i) ORTHO
 - (ii) GRID
 - (iii) POLAR
 - (iv) SNAP. (8 marks)