



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.

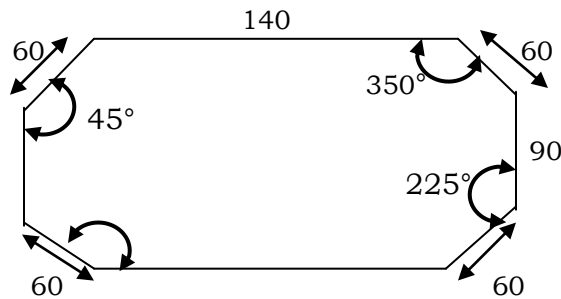
Answer question **ONE** and any other **TWO** questions.

Maximum marks for part of question are as shown.

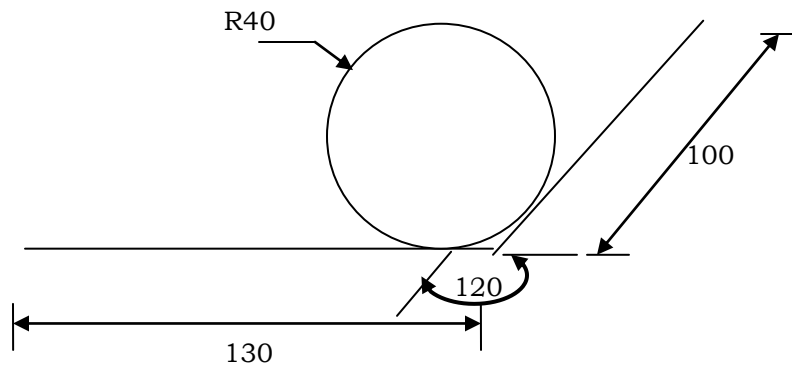
Create a folder in My Documents and name it DCC09. Save ALL your answers in word and Auto CAD files using your FULL names followed by your student number.

QUESTION ONE (Compulsory)

- (a) State **THREE** advantages of using Computer Aided Design, in creating drawings over manual drafting. (3 marks)
- (b) List down **FIVE** standard working drawings. (5 marks)
- (c) 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
- (d) Using the line tool, construct the outline of the figure below. (8 marks)



- (e) Using the line tool construct the two lines at the length and angle as given below. Then with the Ttr prompt of the circle tool, add the circle as shown.



QUESTION TWO

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

QUESTION THREE

The figure below shows a simply shaped object in isometric. Using computer aided design software draw in 1st A.P the following orthographic views.

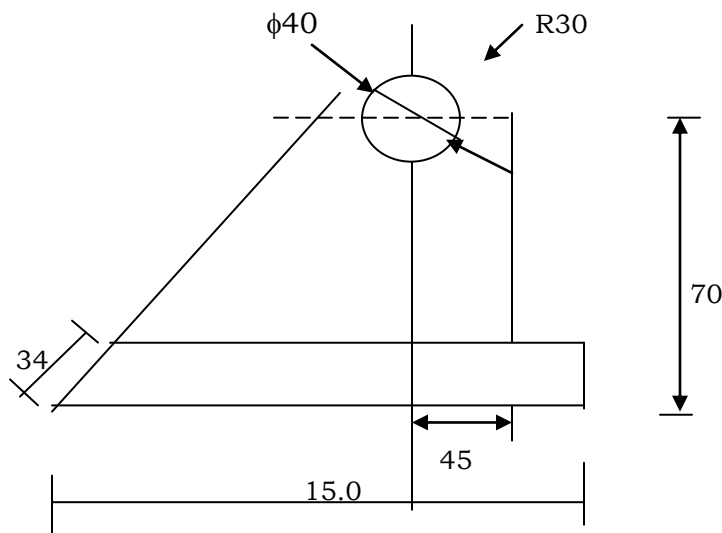
- (a) The front elevation as seen in the direction of the arrow F.
- (b) The plan as seen in the direction of arrow P.
- (c) The end elevation as seen in the direction of arrow E.

(20 marks)

QUESTION FOUR

The figure below shows a dimensioned elevation of a bracket. Using a CAD software reproduce the elevation showing all the provided dimensions.

(20 marks)



QUESTION FIVE

Using a CAD software draw a detailed concrete strip foundation. On it, show and annotate the following:

- (i) 250mm deep x 600mm wide plain concrete strip foundation.
- (ii) 200mm thick stone block wall.
- (iii) 300mm deep hardcore fill.
- (iv) 50mm thick blinding.
- (v) 100mm thick plain concrete ground floor slab.

(20 marks)