

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF INDUSTRIAL TECHNOLOGY

DEPARTMENT OF INDUSTRIAL AND MANUFACTURING
ENGINEERING

ENGINEERING DRAWING II – TIE 1201

SECOND SEMESTER EXAMINATIONS – AUGUST 2009

Time: 3 hours

INSTRUCTIONS

1. Answer Q1 and Q2, and any other 3 questions.
 2. All optional questions carry 20 marks
 3. All dimensions are given in millimeters
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QUESTION 1.

- a) From your Windows Screen, there are two ways of starting AutoCAD. Name the two. Choose one, and give the commands, limits, prompts, and other details one would use in setting up and positioning a standard A4 drawing paper on the computer screen? The paper must be in landscape position. [14]
- b) Give three ways in which a line can be drawn in AutoCAD? [3]
- c) Name four Coordinate Systems used in AutoCAD? [3]
- d) What are the three icons that appear on “Startup Dialog Box”? [4]

QUESTION 2.

Fig Q2 shows a drawing of a Template. Using the (i) Relative and (ii) Cartesian Coordinate Systems, show entries and coordinates you would use to draw the Template. First point is corner A, moving horizontally to corner B. The coordinates for corner A are (50,50), to be used for both i) and ii). [16]

QUESTION 3.

- a) What are the functions/uses of the following AutoCAD Drawing Aids? State the Keyboard Function keys used to switch them ON / OFF?
 - i) GRID ii) ORTH and iii) SNAP [6]

b) i) What are the functions/uses of OSNAP? What Keyboard Function key is used to switch it ON/OFF? [2]

ii) How do you get to the “Drafting Settings” Dialog Box in order to activate the following drawing tools? How do they assist you in drawing.?

INTERSECTION, CENTRE and ENDPOINT [12]

QUESTION 4.

a) i) What are the three major types of lines used in AutoCAD besides Dimension lines? [3]

ii) Briefly describe each of the three, giving examples of their thicknesses? [3]

iii) Explain the steps followed in loading these linetypes? [4]

b) When dimensioning your drawings, the necessary dimension settings are done on the “Dimension Style Manager” dialog Box. Briefly explain using short statements how you get to this dialog box and setting up the following. Give examples of two aspects to be set for each area.

i) LINES ii) SYMBOLS AND ARROWS ii) TEXT [10]

QUESTION 5.

A Machine Part is shown in Fig Q5. Explain in brief statements the procedure followed in drawing the part in 3D, on a screen already set for 3D SW Isometric. [20]

QUESTION 6

Fig Q6 shows details of a Locating Bracket. On an already prepared A3 drawing Sheet, give the entries and commands to be followed in drawing the bracket to include the hatching process. Leave out the dimensioning process. Be as brief as possible. [20]

END OF EXAM