

1. Exercise : 1

2. Date:

3. Title : Essentials of engineering graphics Introduction and basics

4. Aim : To know the importance of Engineering Graphics, standards, lettering, and to draw simple 2D objects in CAD software.

5. Software used: AutoCAD - 2020

6. Introduction:

i. About Engineering Graphics:

An engineering drawing is a type of technical drawing that is used to convey information about an object. A common use is that to use the geometry needed for the construction of component and its called a detailed drawing.

- It gives ideas to construct a building or automobile parts before starting the actual work in real life.
- The process of producing engineering drawing is often referred to as technical drawing or drafting.
- It gives more detailed vision on the work, key information such as dimensions that are usually specified in one place of drawing avoiding redundancy and possibility of inconsistencies.

ii. About Drafting tools and its advantages over conventional drafting:

- Drafting tools are instruments that are used for measurements and layout of drawings or to improve consistency and the speed for creating standard drawing elements.

- AutoCAD is a drawing drafting tool which was

introduced by AutoDesk Inc. It is a command based software.

• It is widely used by civil engineers. Drafting tools has many advantages over conventional drawing tools. It gives correct measurement over precision.

7. Procedure (for solving question #): Draw a table.

7.1 Question outline

7.2 Object

7.3 Conditions (if any)


170			60
ORTHOGRAPHIC MULTIVIEW PROJECT			
REG. NO	RA2011026010022	Ex. NO -	
NAME:	DEBARGHYA BARIK	DATE:	
DEPT:	ENGINEERING GRAPHICS	SCALE:	
MARKS:			
FACULTY	SARAVANAKUMAR-R		
40			50

Fig. Free hand sketch of the solution to question #

7.4 Drawing Procedure:

Step 1.

First we have to set units, limits, and text style. Units : mm, precision is '0'. Limits: Upper Right corners $\langle 0, 0 \rangle$, Lower Right Corner $\langle 297, 410 \rangle$. Text size height '7' and width factor '0.7'.

Step 2: We have to draw a box of size 170×60 and we have to use offset tool and draw lines in regular interval of 10 mm.

STEP 3:

We have to use the trim command and erase the lines wherever required.

STEP 4:

Use the text command and write everything inside the box.

STEP 5:

Type polygon and draw the number of sides required in the command box.

STEP 6:

Draw the types of circles by using circle commands.

STEP 7:

Type Annotate in command box and measure the lengths of all shapes.

8. Commands used:

S.N.	Command	Use
1	Units	To set reference units and precision
2	Limits	To set working area
3	Text	To type text
4	Ortho	To draw straight lines
5	Lines	To draw lines.
6	Polygon	To draw shapes.
7	Trim	To cut unwanted lines
8	move and rotate	To move texts and rotate.

9. Result:

Experiment completed successfully using AutoCAD - 2020

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