IARE

INSTITUTE OF AERONAUTICAL ENGINEERING

(An Autonomous Institute affiliated to JNTUH, Hyderabad)

Dundigal, Hyderabad - 500 043

LABORATORY WORK SHEET

Name of the Student : .....

Class..... B.Tech CSE ..... Semester..... First sem .....

Course Code : AME D03 .....Course Name : Engineering graphics

Roll Number									
-	-		-	1	.	0	3	=	1

Name of the Course Faculty.....Faculty ID :.....

Exercise Number :.....Week Number :.....Date :.....

DAY TO DAY EVALUATION:

Marks	Aim / Preparation	Algorithm / Procedure	Source Code	Program Execution	Viva - Voce	Total
		Performance in the Lab	Calculations and Graphs	Results and Error Analysis		
Max. Marks	4	4	4	4	4	20
Obtained						

Signature of Faculty

START WRITING FROM HERE :

1. Getting Started Exercises

1.1 Introduction to AUTOCAD

AutoCAD is a widely-used computer-aided design (CAD) software application developed by AutoDesk. It has been an industry standard for drafting and designing since its inception in the early 1980s. AutoCAD provides a versatile platform for creating and editing 2D and 3D drawings and models, making it an essential tool in various fields such as architecture, engineering, construction, manufacturing and more.

i) Install AutoCAD

ii) Purpose and application

iii) Interface and tools
iv) Precesion and accuracy
v) 2D and 3D modelling
vi) Collaboration and sharing
vii) Customization
viii) Industry Usage
ix) Versions and Licensing

1.2 Commands

The main purpose of using commands and shortcuts in AutoCAD boils down to increased productivity. They allow you to execute functions more quickly, as you don't need to search through the entire AutoCAD interface for the right tool. You can just type the command, and the function window appears.

i) Basic Drawing Commands
ii) Editing Commands.
iii) Dimensioning Commands.
iv) Advanced and Miscellaneous Commands.

• Basic Drawing Commands

→ Line (LINE) : Draws straight line segments between two points

→ Circle (CIRCLE) : Creates circles by specifying a center point and radius.

→ Rectangle (RECTANGLE) : Construct rectangles by defining two opposing corners.

ROLL NUMBER :

→ Arc (ARC) : Draws arcs based on different methods such as specifying start, end, and radius or center, start, and angle.

• Editing Commands

→ Erase (ERASE) : Deletes selected objects from the drawing.

→ Copy (COPY) : Copies objects to a specified location.

→ Move (MOVE) : Relocates selected objects to a different position.

→ Trim (TRIM) : Cuts selected objects at the cutting edges defined by other objects.

→ Extend (EXTEND) : Extends objects to meet the boundaries of other objects.

• Dimensioning Commands.

→ Line Dimension (DIMLINEAR) : Adds linear dimensions to objs.

→ Aligned Dimension (DIMALIGNED) : Creates dimensions aligned with an angle of the object

→ Radial Dimension (DIMRADIUS) : Add radius dimensions to arcs and circles.

→ Diameter Dimension (DIMDIAMETER) : Creates diameter dimensions for circles.

• Advanced and Miscellaneous Commands

→ Hatch (HATCH) : Fills enclosed area with a pattern or gradient.

→ Offset (OFFSET) : Creates parallel copies of objects at a specified distance.

ROLL NUMBER :

→ Block (BLOCK) : Defines reusable blocks (collection of objects) in the drawing.

→ Insert (INSERT) : Inserts predefined blocks into the drawing.

→ Viewport (VPORTS) : Manages viewports for layouts and plotting in paper space.

→ Layer (LAYER) : Manages layers for organizing and controlling object visibility.