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.....

Course Code : AME003 ..... Course Name : Engineering Graphics

Roll Number									

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

Exercise Number : 03 ..... Week Number : 03 ..... 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 :

Ellipse

Aim : To construct an ellipse when the distance of the focus from the directix is equal to 50mm and eccentricity is 2/3.

Apparatus : Laptop, mouse, Autocad.

Procedure :

i) Draw any vertical line AB as directrix.

ii) At any point C on it, draw the axis perpendicular to the AB (directrix),

iii) Mark a focus F on the axis such that CF = 50mm.

iv) Divide CF into 5 equal divisions (sum of numerator

and denominator of the eccentricity.)

v) Mark the vertex V on the third division point from C thus, eccentricity, $e = \frac{VF}{VC} = \frac{2}{3}$.

vi) A scale may now be constructed on the axis (as explained below), which will directly give the distances in the required ratio.

vii) At V, draw a perpendicular VE equal to VF. Draw a line joining C and E. Then, in triangle CVE.

$$\frac{VE}{VC} = \frac{VF}{VC} = \frac{2}{3}$$

viii) Mark any point 1 on the axis and through it, draw a perpendicular to meet CE - produced at 1.

ix) With center F and radius equal to 1-1', draw arcs to intersect the perpendicular through 1 at points P_1 and P_1'. These are the points on the ellipse, because the distance of P_1 from AB is equal to C_1,

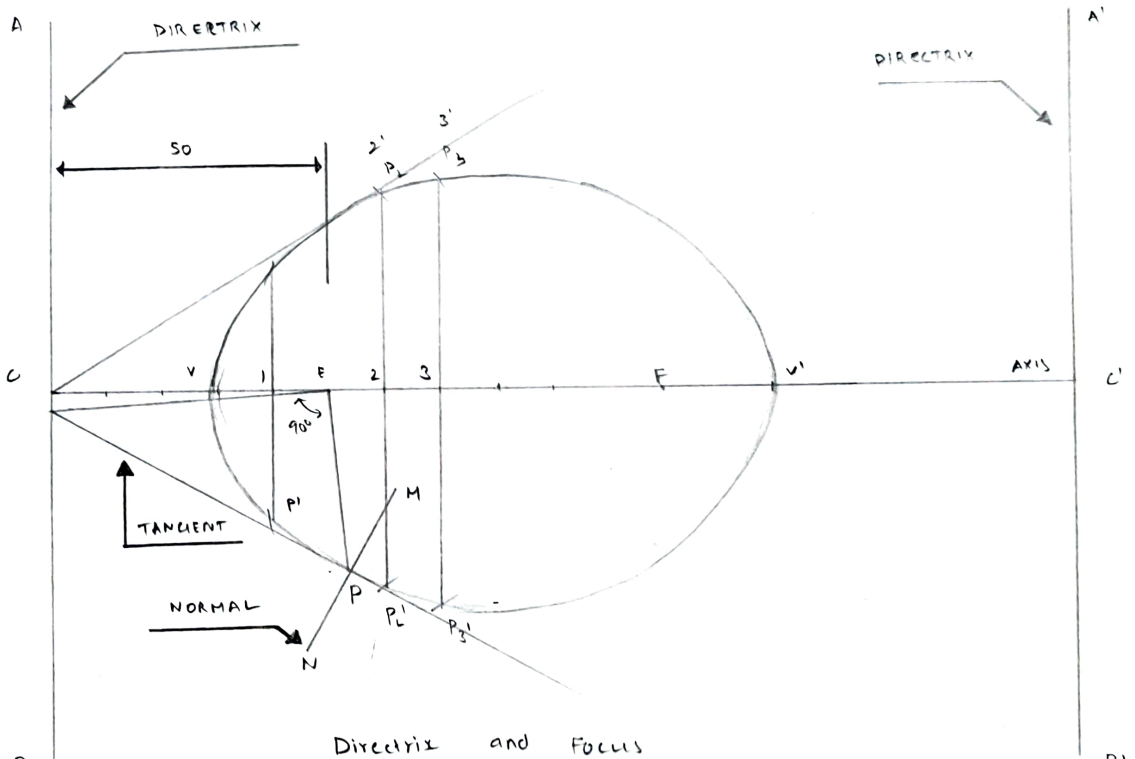
$$P_1F = 1-1'$$

and $$\frac{1-1'}{C_1} = \frac{VF}{VC} = \frac{2}{3}$$

Similarly, mark points 2, 3 etc. on the axis and obtain points P_2 and P_2', P_3 and P_3' etc.

x) Draw the ellipse through these points. It is a closed curve having two foci and two directrixes.

ROLL NUMBER :



Directrix and Focus