SRM Institute of Science and Technology
College of Engineering and Technology
Department of Mechanical Engineering

18MES101L - Engineering Graphics and Design

Reg. No		Ex. No	2
Name of the student		**Title of the exercise**	**Conic sections and special curves**
Department/Branch		**Semester**	2
Section		**Date of Exercise**	

Regular class problems

- **Compulsory questions: Q.No – 1, 2, 4 and 6**
- **Optional questions: 3 and 5.**

For the examinations, questions will be from all conic sections and special curves (Students should practice all the questions).

1. Draw a parabola using 1. Rectangle method 2. Tangent method with base X+60 mm (Where X is the last two digits of register number) and height or length along the axis is 70 mm.

(CO-1/ level 2/ 2 marks)

2. Draw an ellipse of major diameter/axis X+120 mm (Where X is the last two digits of register number) and minor diameter/axis 70 mm using 1. Oblong method, 2.Concentric circle method

(CO-1/ level 2/ 2 marks)

3. Draw a hyperbola by eccentricity method with eccentricity, e = 3/2 whose distance of focus is at 30 mm from its directrix.

(CO-1/ level 2/ 2 marks).

4. Construct a cycloid with rolling circle diameter of X+30 mm (Where X is the last two digits of register number) that rolls for one complete revolution, with a trace point A, initially at the bottom.

(CO-1/ level 2/ 2 marks)

5. Draw the involute of a regular pentagon (or any polygon) of side 30 mm wound/unwound for one complete turn. *(CO-1/ level 2/ 2 marks)*

6. Draw an Archimedean spiral for one and half convolution. The greatest radius is X+60 mm and least radius is 10 mm respectively. *(CO-1/ level 2/ 2 marks)*

Rubrics: Exercise 2

Name of the faculty grading:	Date of submission:	Date of grading:
Signature of the faculty grading:	Grade (out of 10):	

Criteria	No errors	Minor errors (1-2 errors)	Major errors (3-4 errors)	Incomplete (5-6 errors)	Resubmission required (more than 7 errors)
Orientation (Proper scaling to fit the drawing and maintain the required views)	4	3	2	1	0
Dimensions/Legibility (proper dimensioning, show all the required dimensions with legibility)	4	3	2	1	0
Record writing	2	1.5	1	0.5	0
Total marks	**10**				

Note: Students must show the dimension which has a register number without fail; otherwise marks of that question will be awarded as zero.