

MMMD - 105
M.E./M.Tech. I Semester
Examination, December 2012
ComputerAided Design and Drafting
Time: Three Hours
Maximum Marks :

Note : 1. Attempt any five questions out of eight.

2. All questions carry equal marks.

1. a) What do you understand by computer aided design?
Discuss the reasons for implementing CAD in industries.
- b) Give specific advantages of using CAD M product development cycle.
2. a) What do you mean by computer hardware and software?
What are the input and output devices used for CAD?
- b) Describe some important CAD software popular in design and development industry
3. a) Describe the importance of curve and surface modelling in computer aided designed drafting.

b) Given

i	0	1	2	3
x_i	1	2	5	9
f_i	1	3	6	10

Interpolate $f(6)$ by Lagrangian polynomial.

4. a) Discuss important properties for curve designing.
- b) Write short notes on:
 - i) B-spline curve
 - ii) NURBS
5. a) Define the objective functions and constraints in an optimization problem.
- b) Discuss single variable and multivariable optimization / technique.
6. Explain the Algorithms for generating following drawing entity
 - i) Line
 - ii) Circle
 - iii) Arc
 - iv) Polygon
7. a) Briefly describe the different techniques used for scan conversion to Computer Graphics.
- b) Describe an algorithm for removal of hidden lines.
8. Write short notes on any four:
 - i) CPU and secondary storage.
 - ii) Linear Regression.
 - iii) Elimination Method.
 - iv) Laplace Transform.
 - v) Advanced feature of Auto CAD.