

Code: ME7T5B

IV B.Tech - I Semester – Regular Examinations – November 2015

**CAD / CAM
(MECHANICAL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. a) Explain basic structure of a CAD/CAM hardware unit. 7 M

b) Explain about various types of hardcopy devices. 7 M

2. a) Develop the transformation matrix for translating a straight line using homogeneous coordinates. Making use of it translate the line with end points (1, 1), (2, 3) by 3 units in X-direction. 7 M

b) Explain about back face detection and depth buffer algorithms. 7 M

3. a) Compare Wire frame modeling, surface modeling & solid modeling techniques used for geometric modeling. 7 M

b) Explain about any two synthetic surfaces along with their mathematical representation. 7 M

4. a) What are the various commands used for display and editing of geometry? 7 M
- b) Explain various dimensioning techniques and their commands. 7 M
5. a) Compare NC, CNC & DNC. 7 M
- b) Explain various G-codes & M-Codes used in manual part programming of CNC machine. 7 M
6. a) Describe the Optiz classification system in detail. 7 M
- b) Compare generative and retrieval type CAPP systems. 7 M
7. a) Explain applications & benefits of FMS. 7 M
- b) Explain different equipment used in various components of FMS. 7 M
8. a) Explain human labor involved and their functions in CIM. 7 M
- b) Explain various steps involved in implementing CIMS for any Industry with flow chart. 7 M