

00985

**BACHELOR OF TECHNOLOGY IN
MECHANICAL ENGINEERING
(COMPUTER INTEGRATED
MANUFACTURING)**

Term-End Examination

June, 2012

BME-002 : COMPUTER AIDED DESIGN

Time : 3 hours

Maximum Marks : 70

Note : Attempt any seven questions. Assume any data if missing/required.

1. Describe various display devices used for computer graphics applications. 10
2. With suitable examples describe following transformation. 10
 - (a) 2 - D Translation
 - (b) 2 - D Rotation
 - (c) 2 - D ScalingAlso explain Homogeneous coordinates.
3. What is the purpose of projections in CAD? Give a brief classification of projections. Explain perspective projection. 10
4. What are objectives of colouring in CAD/CAM. List various colour models used in CAD? With the help of RGB colour cube discuss RGB model. 10

5. (a) Compare parametric and non-parametric representation of circle. 5
(b) What is a spline function ? Discuss its characteristics. 5
6. What do you understand by synthetic curves ? Discuss its importance in CAD. Briefly explain Beziler and B-Spline curves alongside their properties. 10
7. Distinguish 3D-CAD model with 2D and 2½ D models. Why is the rational form of polynomial functions used in geometrical modeling ? 10
8. With suitable examples and sketch distinguish between surfaces of revolution and sweep surfaces. 10
9. Show that if the boundary curves of a bilinear icons patch are coplanar the resulting patch is also planar. 10
10. What is half space ? Explain the half space method of representation of solids. 10
-