

**B.Tech. MECHANICAL ENGINEERING
(COMPUTER INTEGRATED
MANUFACTURING)**

Term-End Examination

00653

December, 2019

BME-002 : COMPUTER AIDED DESIGN

Time : 3 hours

Maximum Marks : 70

Note : Attempt any **seven** questions. All questions carry equal marks. Use of scientific calculator is permitted.

1. What are the different types of locating devices ?
Discuss and list their merits and demerits. 10
2. Describe different types of projections with the help of neat sketches. 10
3. (a) Differentiate between random and raster scan display. What is the aspect ratio of an image ?
(b) What are the important properties of Bézier surface ? 5+5
4. What is half space ? Explain the half space method of representation of solids. 10

5. Why are CAD/CAM data exchange standards required ? Name some of the standards used and explain the salient features, if any. 10
6. Considering parametric and non-parametric representation of curves, which representation is better and why ? Explain. 10
7. Construct a Bézier curve and obtain points at $t = 0.5$ for given by :
 $P_0(1, 3), P_1(3, 5), P_3(4, 2)$ and $P_4(5, 6)$. 10
8. What do you understand by Back Face Detection method ? Write an algorithm for Back Face Detection method. 10
9. Discuss the various transformations of line in computer graphics. 10
10. Describe wire-frame modelling with the help of suitable examples. 10
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