

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

00132

Term-End Examination

December, 2016

BME-002 : COMPUTER AIDED DESIGN

Time : 3 hours

Maximum Marks : 70

Note : Attempt any five questions. Use of scientific calculator is allowed.

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1. (a) Discuss different types of input devices. 7
 - (b) Explain different types of displays in brief. 7
 2. (a) Convert the following decimal numbers to equivalent binary numbers : 4
 - (i) 13
 - (ii) 125
 - (b) Explain any three methods of solid modelling. 10
 3. (a) List and discuss the properties of B-spline curves in brief. 7
 - (b) Differentiate between raster graphic display and vector graphic display. 7

4. Why are CAD/CAM data exchange standards needed? Explain in detail. 14
5. Discuss the various transformations of line in computer graphics. 14
6. Perform the following transformations on a pentagon (2, 0), (4, 0), (1, 1), (5, 1) and (3, 3) : 14
- (a) Rotation by 60° clockwise
 - (b) Scaling such that the height of the pentagon is doubled
7. Discuss wire-frame modelling with suitable examples. 14
8. Write short notes on any **four** of the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Isometric Projections in Graphics
 - (b) Importance of CAD/CAM
 - (c) Modelling of Curves
 - (d) Visual Realism
 - (e) System Software and Application Software
 - (f) Non-parametric Curves
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