

Roll No.

22234

**M. E./M. Tech. 2nd Semester (ME-MD)
Examination – June, 2013**

COMPUTER AIDED DESIGN (Electives - I)

Paper : M-838

Time : Three hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions out of *eight* questions.
All questions have equal marks.

1. (a) Define arbitrary rotation about the origin. 10
(b) Explain 3D rotation about an arbitrary axis. 10
2. (a) Explain B-Spline Curve. 10
(b) Explain parametric spline surfaces. 10
3. Explain in detail B-Rep and CSG modelling techniques used in solid modelling. 20

4. Explain in detail data exchange formats on shape based formats and product based formats. 20
 5. Define assembly modelling, parts modelling and their representation. 20
 6. Define visibility techniques-mini-max test for hidden line and hidden surface removal algorithms. 20
 7. (a) Define parabolic cubic splines. 10
(b) Describe non-parametric cubic spline. 10
 8. (a) Define Watkinson scan line algorithm. 10
(b) Define 3D scaling. 10
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