

**22234**

**M. Tech. 2nd Semester (Mechanical Engg)  
(Machine Design) Elective-I Examination,  
May-2015**

**COMPUTER AIDED DESIGN**

**Paper-M-838**

*Time allowed : 3 hours ]*

*[Maximum marks : 100*

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*Note : All questions carry equal marks. Attempt any five questions.*

1. Explain with the help of neat diagram and a suitable example the full design process and role of design process in product designing. 20
  
2. Discuss the concept of Transformation between co-ordinate system and in a point text (3,2) is to be scaled by a factor of 2 and rotate by  $45^\circ$ . Determine the transformed position using sequential transformation. 20
  
3. (a) Discuss the use of various display commands available in a drafting package. 10  
(b) Compare the splines created by B-spline and Bezier spline techniques for the same control points. 10
  
4. (a) Write down the various techniques used for the construction and editing of solid objects. Explain any two of them in detail. 10  
(b) How can you use a cylinder primitive to generate

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5. What is the importance of CAD standards ?  
Explain initial graphics exchange specification CAD standard. 20
6. Explain the various representation schemes in assembly analysis. Also discuss the liaison sequencing analysis. 20
7. Explain the Warnock algorithm and z-Buffer algorithm and suitable example. 20
8. Write short note on any *three* : 20
  - (a) Ray tracing algorithm
  - (b) ACIS
  - (c) Homogeneity test.