Roll No. .....

22234

M.Tech. 2nd Semester – Mechanical Engg. (Machine Design) (Elective-I)

Examination–May, 2014

Computer Aided Design

Paper- M-838

Time : 3 hours ***Max. 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 the examination.

Note : Attempt any **five** questions.

1. With help of a neat sketch, discuss the full design process. Also explain the role of CAD System in Product lifestyle. *20*

2. (a) What do you mean by transformation between coordinate system ? *10*

(b) In a text, a point (3,2) is to be scaled by a factor of 2 and rotated by 45°. Determine the transformed position using sequential transformation. *10*

3. (a) Deriving all the coefficients of, explain the cubic spline type of curve. *10*

(b) Find the degree of Bezier curve controlled by three points (4,2), (0, 0) and (2, 8). Also find the equation of the Bezier curve in parametric format with parameter "μ" ? *10*

4. (a) What is B-rep ? Explain in detail its basics elements. *10*

(b) Explain the Boolean operation. What do you mean by constructive solid geometry ? *10*

5. What is the importance of CAD standards? Explain initial Graphics Exchange specification CAD standard. *20*

6. Discuss the parametric representation of B-spline curves. Also describe its engineering application. *20*

7. (a) Explain the various representation schemes in assembly analysis. *10*

(b) Discuss the Liaison sequencing analysis with suitable example. *10*

8. Write short notes on any **three** : *7,7,6*

(a) Warnock algorithm

(b) ACIS.

(c) Half spaces

(d) Homogeneity test
