

**B.Tech. MECHANICAL ENGINEERING
(BTMEVI)**

Term-End Examination

June, 2013

BIME-018 : COMPUTING AIDED DESIGN

Time : 3 hours

Maximum Marks : 70

Note: (i) *Solve any five questions.*
(ii) *All questions carry equal marks.*

1. (a) Give an industrial look of modern CAD/CAM environment. 7
(b) How would you create the bill of materials from a CAD file ? Discuss. 7

2. The corners of wedge shaped block are A (0, 0, 2) B (0, 0, 3), C (0, 2, 3), D (0, 2, 2), E (-1, 2, 2) and F (-1, 2, 3) and the reflection plane passes the y axis at 45° between (-x) and (z) axis. Determine the reflection of wedge. 14

3. What do you understand by Bezier curve ? Given B₀ (1, 1), B₁ (2, 3), B₂ (4, 3), B₃ (3, 1) the vertices of Bezier polygon determine seven points on Bezier curve. 14

4. (a) What are the advantages of parametric programming in designing curves and surfaces ? 7
- (b) What common modeling methods are available for surface design in a surface modeling software ? 7
5. What do you mean by solid modelling and wire frame modelling in CAD system ? Discuss and compare the both. 14
6. With your own example derive a solution of an equation using Newton - raphson method. 14
7. (a) Distinguish between iso parametric and non linear elements. 7
- (b) Describe the step by step procedure of solving a design problem using an FEA package. 7
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