

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (2011 Onwards) (Sem.-5)  
**COMPUTER AIDED DESIGN AND MANUFACTURING**

Subject Code : BTME-502

Paper ID : [A2129]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

**Q.1 Write briefly :**

- (a) Differentiate between Translation and Panning.
- (b) Write Euler-Poincare formula used in solid modeling.
- (c) Define Fixed and Floating Zero.
- (d) What is the role of mesh generation in FEM?
- (e) Define "Flexibility" in Flexible Manufacturing System.
- (f) Differentiate between Rotation Transformation and Rotate View.
- (g) What do you understand by "Distributed NC"?
- (h) What is the difference between Numerical Control and Adaptive Control?
- (i) Illustrate STEP.
- (j) Write parametric equation of Hermite Cubic curve.

## SECTION-B

- Q.2 a) Explain Adaptive Control. Derive Performance Index for ACC.  
b) Draw ACC Lathe.
- Q.3 With neat diagrams, explain different FMS Layouts.
- Q.4 Describe application of computer in various stages of product and manufacturing engineering.
- Q.5 Describe in detail General procedure of FEM. Also write its applications.
- Q.6 Explain in detail CAPP and its types.

## SECTION-C

- Q.7 a) Write a note on need, evolution and elements of CIM.  
b) What is GT concept in manufacturing? Explain GT coding system with example.
- Q.8 a) Make a comparative analysis of the wire frame, surface and Solid modeling.  
b) Describe how the data base is organized when building a solid model from the graphic primitives.
- Q.9 a) Discuss three production situations in which FMS technology can be applied.  
b) With neat diagram, describe different coding systems in Group Technology.