Roll No. | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (2011 Onwards) (Sem.–5)

COMPUTER AIDED DESIGN & 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 has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. **Write briefly :**

(a) Enumerate the functions of graphics package.

(b) State any two applications of geometric transformations.

(c) Define simulation.

(d) What do you understand by interpolation and approximation of the curves?

(e) Define CNC.

(f) What do you mean by mesh generation in FEM?

(g) State the benefits of CAPP.

(h) Define CIM.

(i) What is the role of design attributes of the part in preparation of part family?

(j) Enlist different types of surfaces.

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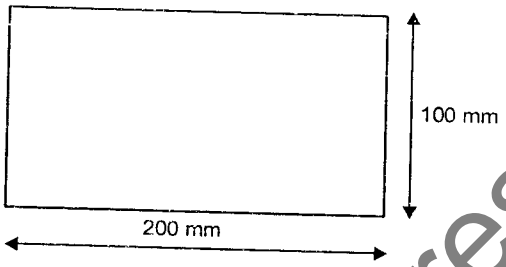
SECTION - B

2. Describe the techniques used for image generation in display devices.
3. Discuss the NC motion control systems.
4. Explain the part classification & coding systems used for preparation of part families.
5. What criteria you will follow for the selection of FEM module?
6. Write the program for end milling of the plate shown in fig. below. The thickness of the plate is 10 mm. (Take f = 10 mm/min)



SECTION-C

7. Describe the use of computer control in CIM.
8. A triangle ABC having the vertices A (1, 1), B (1, 7) and C (5, 4) is scaled by 3 units in X - direction and then rotated by 30° in anticlockwise direction. Keeping point (1,1) fixed. Find the final transformation matrix.
9. Discuss the different aspects of retrieval and generative types of CAPP. Also state their benefits.

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