SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: | | | | | | | | | | | | | Total number of pages:[4]
Total number of questions:06

B.Tech. || ME || 5th Sem

Computer Aided Design and Manufacturing

(RP)

Subject Code: BTME-502

Paper ID: M118 (for office use)

(2011-2014)

Time allowed: 3 Hrs **Max Marks: 60**

Important Instructions:

- **All questions are compulsory.**
- **Attempt all the parts of a question together.**

PART A (2×10)

Q. 1. Short-Answer Questions: All COs

(a) Define CAM.

(b) What is the main difference between a Printer and a Plotter.

(c) What do you mean by transformations in Computer Graphics?

(d) What is the difference between parametric and non-parametric representation of a curve?

(e) Define FEM.

(f) Write three major drawbacks of Surface Modeling.

(g) Define CNC.

(h) Where does a part program require?

(i) Define 'Group Technology'.

(j) Name CIMS componemts.

PART B (8×5)

Q. 2. What is IGES? How does IGES data exchange format works? COa

OR

Compare different input devices used in a design workstation. Give their relative applications, advantages and disadvantages in a tabular form. COa

Q. 3. Explain the approach of "Constructive Solid Geometry (CSG)" for the creation of solid models. COb

OR

Explain the parametric equation of the Bezier curve. Summarize the characteristics of the Bezier curve. Also draw supporting diagrams. COb

Q. 4. Explain the basic principles of FEM. What are its advantages. COc

OR

Explain the various steps in FEM. What are the errors that occur during FEM analysis? COc

Q. 5. Explain the basic components of NC system. Draw a diagram showing their interrelationship. COd

OR

How does a DNC system function? Enlist its major features, advantages and drawbacks. COd

Q. 6. How CAPP is advantageous when compared to manual experience based process planning? What are the two major categories of CAPP software? What is the difference in their basic principles? COe

OR

What are the advantages and disadvantages of FMS when compared to conventional manufacturing systems? Recognize the application areas of FMS. COe