

Code :R7320302

1

III B.Tech II Semester(R07) Regular & Supplementary Examinations, April/May 2011  
CAD/CAM

(Mechanical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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1. Write a note on the output devices used in CAD system.
2. Explain the method of back face removal. Give its advantages and limitations with reference to hidden line removal.
3. (a) Distinguish between 2-D and 3-D wire frame models.  
(b) Explain the coons and Bezier surfaces. What are the differences and applications for which these are Used.
4. (a) Write short notes on Basic editing commands.  
(b) Explain different types of dimensioning styles.
5. (a) Describe the numerical control elements with neat block diagram.  
(b) Write any two NC modes and describe them
6. Describe the importance of process planning in product development.
7. Explain in detail computer aided testing.
8. Compare three types of manufacturing systems and explain it with a sketches.

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1. Briefly explain the conventional process of the product cycle in the conventional manufacturing environment.
2. Explain how 2-D and 3-D transformations are done on a graphics element.
3. (a) Define geometric model. Explain how a 3-D object is represented by a wire frame model.  
(b) Explain how a Bezier curve is defined.
4. What do you mean by geometric modeling? Enumerate various solid modeling techniques and compare them.
5. (a) Explain the advantages of using CNC as compared to NC.  
(b) What are applications where NC is more suitable.
6. Explain about the retrieval type CAPP system.
7. Explain in detail the integration of CAQC with CAD/CAM.
8. What are the factors that are to define the processing requirements. Explain each of them briefly.

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1. What are the types of printers that would be useful for printing graphics information?
2. What is meant by a geometric entity? Explain the common entities used in geometric Modeling.
3. Explain the different approaches used for constructing and representation of geometric model in CAD data base.
4. (a) What are the properties and rules are to be followed while using layers?  
(b) Write short notes on Text handling display command.
5. (a) Give a brief description of the CNC machining centre.  
(b) What are the advantages gained by the use high speed machining.
6. Explain part family concept in Group Technology.
7. Explain the method of Post inspection using CMM.
8. Explain the material handling system in detail.

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1. Define CAD. Explain the applications of computers in design process.
2. Explain different data base structures for graphics modeling.
3. Discuss the modeling guidelines to be followed by the user while constructing a surface model as a CAD/CAM system.
4. (a) Describe the properties that a solid model should capture mathematically.  
(b) Write short notes on basic geometric commands.
5. What are the differences between horizontal and vertical axes CNC Turning centre ? Give their applications.
6. Explain various types of GT machine cells.
7. Explain the working principle of computer vision system with a neat sketch.
8. What are the advantages of CIM and explain the reasons in detail.

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