

Code No: 157SA**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, February/March - 2022****CAD/CAM****(Mechanical Engineering)****Time: 3 Hours****Max. Marks: 75****Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) Explain the basic structure and configuration of CAD/CAM and describe different software used.
- b) Explain in detail by categorizing evaluation parameters during selection process in computer aided design. [8+7]
- 2.a) What are the requirements of geometric modeling? Explain them step by step.
- b) Write the parametric equation for Hermite cubic spline curve and explain the salient parts. [7+8]
- 3.a) Write a short notes on Ruled surface, Surface of revolution and Bezier surface.
- b) What are the types of solid modeling techniques? Explain them with neat sketches. [7+8]
- 4.a) What are the basic components of NC systems ? Explain them along with their functions.
- b) What are Preparatory and miscellaneous functions? Write main G and M codes used in manual part programming. [7+8]
- 5.a) What is DNC system? Explain its function along with their advantages and disadvantages.
- b) Enumerate the advantages of computer assisted part programming when compared to manual part programming. [7+8]
- 6.a) What is Group Technology? Classify a component using any one type of coding system.
- b) Explain retrieval process planning with suitable examples. [8+7]
- 7.a) What is FMS? Explain in detail the basic component of FMS along with their functions.
- b) Describe the material resource planning technique used in an Industry. [8+7]
8. Write short notes on following:
 - a) Coordinate measuring machine
 - b) Production flow analysis
 - c) Benefits of CMM. [5+5+5]

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