

Code.No: 37260

R05

SET-3

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD  
IV.B.TECH - I SEMESTER REGULAR EXAMINATIONS NOV/DEC, 2009**

**CAD/CAM**

**(Common to ME, MMT, MEP, AE)**

**Time: 3hours**

**Max.Marks:80**

**Answer any FIVE questions  
All questions carry equal marks**

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- 1.a] What is meant by Data base in CAD? Explain Different types of Data Base structures used in CAD-Software.  
b] Write short notes on i) Stroke writing ii) Raster Scan [8+8]
2. Explain how Bezier curves are used for fitting a curve through a number of Data points. Explain its characteristics. [16]
3. Differentiate between Bezier and B-Spline surface with reference to number of control points, order of continuity and surface Normal. [16]
- 4.a] Describe various commonly used Primitives for solid modeling and explain the Boolean operations.  
b] Create the boundary model of the solid fillet. [10+6]
- 5.a] Discuss the special features of Numerical control machine tool when compared to the conventional machine tools.  
b] Discuss the basic feed back control systems used in CNC machines. [8+8]
- 6.a] Explain the key machine concept in group Technology.  
b] The four machines used to produce a certain family of parts are to be arranged in group technology cell. The from to data for the parts processed by the machines are as follows.

	To →			
From ↓	1	2	3	4
1	0	5	0	45
2	0	0	0	0
3	50	0	0	0
4	0	45	0	0

- Determine the most logical sequences of machines for these data according to the TO/From ratio. Construct the flow Diagram for the data .Develop a feasible layout plan for the cell. Where do parts enter the cell and exit the cell? How many parts in each place. [8+8]
- 7.a] Discuss various FMS layout configurations.  
b] What are the functions performed by FMS Computer Control System. [8+8]
- 8.a] Explain the method of part inspection using co-ordinate measuring machine.  
b] What are the fundamental concepts in MRP? Explain them. [8+8]

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