

[M19CAD1102]

**I M. Tech I Semester (R19) Regular Examinations  
 COMPUTER AIDED MANUFACTURING  
 Department of Mechanical Engineering  
 MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks: 75 M**

Answer **ONE Question** from **EACH UNIT**.  
 All questions carry equal marks.

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			CO	KL	M
		<b>UNIT-I</b>			
1.	a).	Discuss briefly abt the typical utilization of CAD/CAM systems in an Industrial environment?	1	2	8
	b).	Write the manual part programming for profile milling of figure shown below. <div data-bbox="414 909 1091 1379" data-label="Figure"> </div>	1	3	7
		<b>OR</b>			
2.	a).	Briefly explain any 3 types of geometry commands used in APT.	1	2	8
	b).	Write the APT program for the geometry shown in Figure below. <div data-bbox="513 1509 999 2029" data-label="Figure"> </div>	1	3	7

		UNIT-II			
3.	a).	Discuss abt preset and Qualified Tooling systems used in CNC machines. Also describe abt Automatic Pallet Changer (APC).	2	2	8
	b).	Explain with the help of neat sketches the working of Automatic Tool Changer (ATC).	2	2	7
		OR			
4.	a).	Describe Adaptive Control with Optimization for a milling machine with a neat sketch.	2	2	8
	b).	Compare CNC with DNC and mention the advantages and disadvantages of DNC.	2	2	7
		UNIT-III			
5.		What is PLC? Draw the basic structure of PLC and discuss the variis hardware components of PLC.	3	2	15
		OR			
6.	a).	Discuss the advantages of microcontrollers over microprocessors.	3	2	8
	b).	Write the applications of PLC's in CNC Machines.	3	2	7
		UNIT-IV			
7.	a).	Explain the concept of composite part with an example.	4	2	8
	b).	Briefly explain abt OPITZ coding system generally used in grp technology.	4	2	7
		OR			
8.	a).	Write the applications of grp technology for manufacturing process.	4	2	8
	b).	Explain briefly abt product flow analysis with an example.	4	2	7
		UNIT-V			
9.	a).	Explain in detail abt MRP -I with the help of a neat sketch.	5	2	8
	b).	Write short notes on production planning and capacity planning.	5	2	7
		OR			
10.	a).	How do y Classify Inspection methods? Explain the principle of operation of Non Contact type Optical Inspection methods.	5	2	8
	b).	With help of a neat sketch explain the functioning of a CMM. Also mention the advantages and limitations of it.	5	2	7

**CO-CRSE TCOME**
**KL-KNOWLEDGE LEVEL**
**M-MARKS**