Reg. No.												

Question Paper Code	21320

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

First Semester

M.E. - CAD /CAM

20PCDPC101 - COMPETITIVE MANUFACTURING SYSTEMS

(Regulations 2020)

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	What is soft automation? Why are they so called?	*2,K1,CO1*
2.	Explain principle of numerical control of machines.	*2,K2,CO1*
3.	What do you understand concept of part family?	*2,K1,CO2*
4.	What are AGVs? How do they operate?	*2,K1,CO2*
5.	How will you classify FMS?	*2,K1,CO3*
6.	What are the factors should be consider in tool management systems?	*2,K1,CO3*
7.	Differentiate between Preventive maintenance & Breakdown maintenance.	*2,K2,CO4*
8.	Define Quality Function Deployment (QFD).	*2,K1,CO4*
9.	What do you understand flexible work force?	*2,K1,CO5*
10.	What do you understand strategic implications of JIT?	*2,K1,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	List and discuss the factors that should be considered in choosing suitable material- handling systems for a particular manufacturing facility.	*13,K3,CO1*
		OR	
	b)	Explain the difference between direct numerical control and computer numerical control. What are their relative advantages.	*13,K2,CO1*
12.	a)	What is meant by cellular manufacturing? Explain in detail, single-linkage clusteringalgorithm used for cell formation.	*13,K2,CO2*
		OR	
	b)	With suitable sketches, explain the various FMS layout configuration prevalent today.	*13,K2,CO2*
13.	a)	Explain FMS system concepts. How will you classified basic FMS.	*13,K1,CO3*
		OR	

b) Briefly explain extrinsic and intrinsic functions. What are factor should be considerimplement in FMS? *13,K1,CO3*

14. a) State the conditions that need to be fulfilled in order to implement JIT concepteffectively. *13,K2,CO4*

OR

b) Write an engineering brief about lean culture. *13,K2,CO4*

15. a) Discuss the characteristics of Just-In-Time (JIT). *13,K1,CO5*

OR

b) Discuss various implementation issues on kanban and JIT systems. *13,K1,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Explain the functions of the material handling systems. *15,K1,CO*

OR

b) What are the applications of simulation in CAD/CAM? Explain them in detail. *15,K1,CO3*