SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR
(AUTONOMOUS)

Siddharth Nagar, Narayavanam Road, PUTTUR-517 583

QUESTION BANK

Subject with Code: CAD/CAM (20ME0307) **Course & Branch: B. Tech – ME**
Year/ Sem : II-B. Tech & II-Sem **Regulation: R20**

UNIT –I

INRODUCTIO OF AUTOMATION AND COMPUTER GRAPHICS

1	a)	Draw the product cycle and CAD/CAM product cycle with neat sketch	[L2]	[CO1]	[6M]
	b)	Explain the product cycle and CAD/CAM product cycle?	[L2]	[CO1]	[6M]
2		Discuss clearly the functions of a graphics package.	[L2]	[CO1]	[12M]
3		With neat sketch explain the main elements of CIM systems.	[L2]	[CO1]	[12M]
4	a)	Explain the CAD Tools?	[L2]	[CO1]	[6M]
	b)	List the Evaluation criteria CAD standards	[L1]	[CO1]	[6M]
5		Briefly explain the term scaling, translation and rotation used in Graphics.	[L2]	[CO1]	[12M]
6	a)	Explain briefly about the Components of CAD system.	[L2]	[CO1]	[6M]
	b)	Illustrate the Utilization of CAD in an Industrial Environment	[L3]	[CO1]	[6M]
7		Explain briefly about 2D and 3D transformations.	[L2]	[CO1]	[12M]
8		Briefly explain the computer graphics and Graphics package functions	[L2]	[CO1]	[12M]
9		Discuss in brief about the Co-ordinate systems	[L6]	[CO1]	[12M]
10	a)	Explain about homogeneous transformations.	[L1]	[CO1]	[6M]
	b)	Write short notes on Rotation about a Fixed Point, Reflections and Shears	[L2]	[CO1]	[5M)

UNIT – II

GEOMETRIC MODELING & SOLID MODELING

1		Discuss various types of geometric modeling with neat sketches.	[L6]	[CO2]	[12M]
2		Explain the Constructive Solid Geometry (CSG) method to create models.	[L2]	[CO2]	[12M]
3		Write a short notes on Methods of Creating Solid Models	[L2]	[CO2]	[12M]
4		Explain about Parametric and non Parametric representations.	[L2]	[CO2]	[12M]
5		Elucidate about detail surface modeling and their representation.	[L2]	[CO2]	[12M]
6	a)	Explain in detail about analytic representations.	[L2]	[CO2]	[6M]
	b)	Write short notes on synthetic representations.	[L2]	[CO2]	[6M]
7	a)	Define the solid modeling and Explain any one type of solid modeling	[L1]	[CO2]	[6M]
	b)	Compare 2-D and 3-D wire frame models.	[L2]	[CO2]	[6M]
8		Describe briefly the following methods of surface modeling with a few application examples: (a) B-spline surface. (b) Bezier surface.	[L1]	[CO2]	[6M] [6M]
9	a)	Explain about boundary representation approach.	[L2]	[CO2]	[6M]
	b)	What are the Fundamentals of solid modeling	[L1]	[CO2]	[6M]
10		Describe solid modeling and their representation.	[L2]	[CO2]	[12M]

UNIT – III

NUMERICAL CONTROL & CNC PART PROGRAMMING

1	(a)	List out and Explain about basic components of an NC system and CNC system.	[L2]	[CO4]	[6M]
	(b)	Explain in detail about motion statement.	[L2]	[CO3]	[6M]
2		Illustrate about NC motion control systems.	[L2]	[CO3]	[12M]
3	(a)	Differentiate Manual part programming and Computer assisted part programming	[L4]	[CO3]	[6M]
	(b)	What are the advantages and disadvantages of Numerical control system?	[L1]	[CO3]	[6M]
4	(a)	Briefly explain about NC Coordinate systems.	[L2]	[CO3]	[6M]
	(b)	Explain various applications of NC and CNC system	[L3]	[CO4]	[6M]
5	(a)	Illuminate the procedure adopted in NC systems.	[L2]	[CO3]	[6M]
	(b)	Classify various types of Numerical Control systems and explain them.	[L2]	[CO3]	[6M]
6		Explain briefly about Computer Assisted Part Programming with an example.	[L5]	[CO4]	[12M]
7	(a)	Explain in detail about cutter radius compensation	[L2]	[CO4]	[6M]

	(b)	Write a short notes on Manual part programming	[L2]	[CO4]	[6M]
8		Differentiate between NC and CNC Machine	[L4]	[CO4]	[12M]
9		With a neat sketch describe the canned cycles	[L2]	[CO3]	[12M]
10		List out the merits and demerits of CNC machines	[L1]	[CO3]	[12M]

UNIT – IV

GROUP TECHNOLOGY , FMS & COMPUTER AIDED QUALITY CONTROL

1		Define FMS. Explain about material handling system with a neat sketch.	[L2]	[CO5]	[12M]
2	(a)	Explain about production flow analysis (PFA)	[L2]	[CO5]	[6M]
	(b)	Write brief notes on Group Technology	[L1]	[CO5]	[6M]
3	(a)	List the benefits of Group Technology	[L2]	[CO5]	[6M]
	(b)	Write short notes on Part families	[L1]	[CO5]	[6M]
4		Describe the integration of CAQC with CAD/CAM	[L2]	[CO5]	[12M]
5		Illustrate various types of contact inspection methods with a neat sketch	[L2]	[CO5]	[12M]
6	(a)	Explain in detail about Machine cell design	[L3]	[CO5]	[6M]
	(b)	Elucidate briefly optical non-contact inspection methods	[L2]	[CO5]	[6M]
7		Explain the components of FMS with a neat sketch	[L2]	[CO5]	[12M]
8	(a)	Discuss the terminology used in quality control.	[L2]	[CO5]	[6M]
	(b)	Define the term CAQC and explain how it is implemented in production systems	[L2]	[CO5]	[6M]
9	(a)	Write a short notes on manufacturing system	[L2]	[CO5]	[6M]
	(b)	Write short notes on Parts classification and coding	[L2]	[CO5]	[6M]
10		Draw the FMS layout and explain it in detail	[L2]	[CO5]	[12M]

UNIT – V

COMPUTER AIDED PROCESSES PLANNING & COMPUTER INTEGRATED PRODUCTION PLANNING

1		With the help of neat sketch explain the Retrieval type system and list its benefits.	[L2]	[CO6]	[12M]
2		Explain the Generative CAPP type system with a neat sketch .	[L2]	[CO6]	[12M]
3		Classify the CAPP system and explain the any one type in detail	[L2]	[CO6]	[12M]
4		Elucidate Capacity planning and MRP-I in detail.	[L5]	[CO6]	[12M]
5		Illuminate MRP-II with neat sketch and also write its benefits.	[L2]	[CO6]	[12M]

6	(a)	Describe different types of material handling systems used in CIM briefly.	[L2]	[CO6]	[6M]
	(b)	State the advantages of CIM in manufacturing industry in detail.	[L2]	[CO6]	[6M]
7	(a)	Differentiate MRP-I and MRP-II.	[L2]	[CO6]	[6M]
	(b)	Explain the features of MRP-I with a neat block diagram. State its applications.	[L2]	[CO6]	[6M]
8	(a)	Brief about the shop floor control	[L1]	[CO6]	[6M]
	(b)	Explain the function of shop floor control	[L2]	[CO6]	[6M]
9	(a)	Write advantage and dis advantage of computer aided processes planning	[L3]	[CO6]	[6M]
	(b)	Explain about Machinability data systems.	[L2]	[CO6]	[6M]
10		Explain detail about computer integrated production planning and Capacity planning	[L2]	[CO6]	[12M]

PREPARED BY Dr. P RAMESH & A ASHA