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

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QUESTION BANK

Subject with Code: CAD/CAM (18ME0312)   **Course & Branch: B. Tech – ME**

Year/ Sem : III-B. Tech & I-Sem   **Regulation: R18**

UNIT –I

INRODUCTIO OF AUTOMATION AND COMPUTER GRAPHICS

1	(a)	Define homogeneous transformations?	L1	CO1	2M
	(b)	Write short notes on Rotation about a Fixed Point .	L1	CO1	2M
	(c)	Why should we go for CAD?	L1	CO1	2M
	(d)	List the types of 2D geometric transformation?	L1	CO1	2M
	(e)	What is Translation?	L1	CO1	2M
2		Discuss clearly the functions of a graphics package.	L6	CO1	10M
3		With neat sketch explain the main elements of CIM systems.	L2	CO1	10M
4	(a)	Explain the CAD Tools?	L2	CO1	5M
	(b)	List the Evaluation criteria CAD standards	L6	CO1	5M
5		Briefly explain the term scaling, translation and rotation used in Graphics.	L2	CO1	10M
6	(a)	Explain briefly about the Component of CAD system.	L5	CO1	5M
	(b)	Describe the Utilization in an Industrial Environment of CAD	L1	CO1	5M
7		Explain briefly about 2D and 3D transformations .	L2	CO1	10M
8		Briefly explain the computer graphics and Graphics package functions	L2	CO1	10M
9		Discuss Brief about the Co-ordinate systems	L6	CO1	10M
10	(a)	Draw the product cycle and CAD/CAM product cycle with neat sketch	L1	CO1	5M
	(b)	Explain the product cycle and CAD/CAM product cycle?	L2	CO1	5M

UNIT – II

GEOMETRIC MODELING & SOLID MODELING

1	(a)	Explain about boundary representation approach.	L2	CO2	2M
	(b)	What are the Fundamentals of solid modeling	L1	CO2	2M
	(c)	What is the main drawback of wire frame modeling?	L1	CO2	2M
	(d)	Draw the flow diagram of Sequential Engineering	L1	CO2	2M
	(e)	What are the disadvantages of Beizer Curve ?	L1	CO2	2M
2		Explain the Constructive Solid Geometry (CSG) method to create models.	L5	CO2	10M
3		Write a short notes Methods of Creating Solid Models	L1	CO2	10M
4		Explain about Parametric and non Parametric representations.	L2	CO2	10M
5		Explain detail surface modeling and their representation.	L5	CO2	10M
6	(a)	Explain detail about analytic representations.	L2	CO2	5M
	(b)	Short notes about synthetic representations.	L1	CO2	5M
7	(a)	Define the solid modeling and Explain any one type of solid modeling	L1	CO2	5M
	(b)	Compare 2-D and 3-D wire frame models.	L2	CO2	5M
8		Describe briefly the following methods of surface modeling with a few application examples: (a) B-spline surface. (b) Bezier surface.	L1	CO2	 5M 5M
9		Explain detail solid modeling and their representation.	L5	CO2	10M
10		Discuss various types of geometric modeling with neat sketches.	L6	CO2	10M

UNIT – III
NUMERICAL CONTROL & CNC PART PROGRAMMING

1	(a)	Define NC system?	L1	CO3	2M
	(b)	Define CNC?	L1	CO3	2M
	(c)	Write the main functions of CNC?	L1	CO3	2M
	(d)	What are all the problems encountered with NC system	L1	CO3	2M
	(e)	List out any four advantage of using NC?	L1	CO3	2M
2		Illustrate Brief about NC motion control systems.	L2	CO3	10M
3	(a)	Differentiate Manual part programming and Computer assisted part programming	L4	CO3	5M
	(b)	What are the advantages and disadvantages of Numerical control?	L1	CO3	5M
4	(a)	Briefly explain about NC Coordinate systems.	L2	CO3	5M
	(b)	Explain various applications of NC and CNC system	L3	CO3	5M
5		Explain about various NC procedure and Explain types of Numerical Control	L2	CO3	10M
6		Explain briefly about Computer Assisted Part Programming with example.	L5	CO3	10M
7	(a)	Explain detail about cutter radius compensation	L5	CO3	5M
	(b)	Write a short notes on Manual part programming	L1	CO3	5M
8		Explain detail about Differentiate NC and CNC and Basic CNC input data	L4	CO3	10M
9		Explain cutter radius compensation , length compensation and canned cycles With neat sketch	L2	CO3	10M
10	(a)	List out and Explain about basic components of an NC system and CNC system.	L2	CO3	5M
	(b)	Explain detail about motion statement.	L5	CO3	5M

UNIT – IV

GROUP TECHNOLOGY , FMS & COMPUTER AIDED QUALITY CONTROL

1	(a)	Define Group Technology (GT).	L1	CO4	2M
	(b)	Define Part families.	L1	CO4	2M
	(c)	List out the stages in Group Technology	L1	CO4	2M
	(d)	What are the methods available for solving problems in GT?	L1	CO4	2M
	(e)	What is FMS?	L1	CO4	2M
2		Explain production flow analysis (PFA) and Benefits of Group Technology	L2	CO4	10M
3	(a)	Short notes on Part families and manufacturing system	L2	CO4	5M
	(b)	Write the advantage of Group Technology.	L1	CO4	5M
4		Explain the integration of CAQC with CAD/CAM	L2	CO4	10M
5		Explain the various contact inspection method	L2	CO4	10M
6	(a)	Explain detail about Machine cell design	L5	CO4	5M
	(b)	Explain briefly optical non-contact inspection methods	L2	CO4	5M
7		Explain detail about contact inspection and non-contact inspection methods	L2	CO4	10M
8		Explain detail about terminology in quality control.	L5	CO4	10M
9		Write brief notes on Group Technology and Parts classification and coding	L1	CO4	10M
10		Explain FMS and explain about material handling systems with neat sketch.	L5	CO4	10M

UNIT – V
COMPUTER AIDED PROCESSES PLANNING & COMPUTER INTEGRATED PRODUCTION PLANNING

1	(a)	What is Process planning?	L1	CO5	2M
	(b)	Explain the function of shop floor control	L2	CO5	2M
	(c)	What is the role of process planning in CIM architecture?	L1	CO5	2M
	(d)	What about shop-floor information?	L1	CO5	2M
	(e)	Define the MRP-I and MRP-II.	L1	CO5	2M
2		Explain the Generative CAPP type system with neat sketch .	L5	CO5	10M
3		What is CAPP? Explain the any one type of Capp with neat sketches.	L1	CO5	10M
4		Explain Capacity planning and MRP-I.	L5	CO5	10M
5		Explain briefly MRP-II With neat sketch and explain CIM Benefits.	L2	CO5	10M
6		Explain briefly about Retrieval type system and Generative type.	L2	CO5	10M
7	(a)	Differentiate MRP-I and MRP-II.	L4	CO5	5M
	(b)	Write Short notes on MRP-II and advantage and dis advantage	L1	CO5	5M
8		Explain detail about computer integrated production planning and Capacity planning	L2	CO5	10M
9	(a)	Write advantage and dis advantage of computer aided processes planning	L1	CO5	5M
	(b)	Explain about Machinability data systems.	L5	CO5	5M
10		Explain the Retrieval type system with neat sketch and explain the Benefits of CAPP?	L2	CO5	10M

PREPARED BY Mr. J.MANI