R16

Set No. 1

IV B.Tech I Semester Supplementary Examinations, July/Aug - 2021
CAD/CAM
(Common to Mechanical Engineering and Automobile Engineering)

Time: 3 hours   Max. Marks: 70

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any FOUR questions from Part-B
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PART–A*(14 Marks)*

1.	a)	Write a note on storage devices used in CAD/CAM.	[3]
	b)	Distinguish between Algebraic and Geometric form of a curve?	[3]
	c)	What are the basic components of an NC system?	[2]
	d)	What are the inputs and outputs of FMS?	[2]
	e)	Discuss major non-contact inspection methods.	[2]
	f)	What is the function of material handling system?	[2]

PART–B*(4x14 = 56 Marks)*

2.	a)	Describe Raster scan graphics coordinate system.	[7]
	b)	What is the need for transformation of geometry? Derive the homogeneous transformation matrix for 2D case.	[7]
3.	a)	What is meant by sweep? Discuss in detail the various types of sweep techniques available for 3D geometric construction.	[7]
	b)	Discuss about different surface representation models.	[7]
4.	a)	Explain the NC motion control systems? What are the applications of numerical controls?	[7]
	b)	Explain the difference between CNC and DNC along with neat sketches?	[7]
5.	a)	What is a production Flow Analysis? Discuss various steps involved in PFA?	[7]
	b)	Explain the three parts classification and coding systems?	[7]
6.	a)	Discuss about the integration of CAQC with CAD/CAM.	[7]
	b)	Explain the operation of scanning laser beam system with a sketch?	[7]
7.	a)	What is material requirement planning? Explain.	[7]
	b)	Explain the benefits of CIMS.	[7]

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