TED (21) -6021B
(Revision- 2021)

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE – APRIL - 2024

COMPUTER INTEGRATED MANUFACTURING

[Maximum Marks : 75] [Time : 3 hours]

PART–A

I. Answer **all** the following questions in one word or sentence. Each question carries 1 mark.

(9x1=9 marks)

		Module Outcome	Cognitive level
1	Name any two types of sensors used for automation.	M1.02	R
2	Identify the type of control system that uses feedback to adjust the output to maintain a constant set point.	M1.02	U
3	Expansion of the term CAD.	M2.02	R
4	Name any two input devices used for CAD.	M2.02	R
5	Expansion of the term SCARA.	M3.04	R
6	Define Master Production Schedule (MPS).	M3.04	U
7	Expansion of the term CMM.	M4.02	R
8	What is fixed routing?	M4.01	U
9	Name any two contact inspection techniques.	M4.02	R

PART B

II. Answer **any Eight** questions from the following. Each question carries 3 marks.

(8x3=24 marks)

		Module Outcome	Cognitive level
1	Explain the open-loop control system with a diagram.	M1.02	U
2	Name any three types of electrical actuators used for automation.	M1.02	R
3	What are the three main types of automation?	M1.02	U
4	Explain the product development cycle.	M2.01	U
5	Name any three CAD software.	M2.02	R
6	Explain the material requirement planning (MRP).	M3.03	U
7	Explain direct numerical control (DNC).	M3.04	R
8	List the different types of end effectors.	M3.04	R
9	List the three basic types of manufacturing systems.	M4.03	R
10	Explain the Carousel Storage System.	M4.01	U

PART C

Answer **all** questions from the following. Each question carries 7 marks.

(6x7=42marks)

		Module Outcome	Cognitive level
III	List the basic elements of an automated system with a diagram.	M 1.02	R
	OR		
IV	List the levels of automation.	M1.02	R
V	Explain the Automation Migration Strategy.	M1.03	U
	OR		
VI	List the ten strategies for automation and process improvement.	M1.03	U
VII	Comparison of sequential engineering and concurrent engineering.	M2.01	U
	OR		
VIII	Explain the different types of rapid prototyping methods.	M2.02	U
IX	Explain the Variant and Generative techniques in CAPP.	M3.02	U
	OR		
X	Explain group technology and its benefits.	M3.01	U
XI	List the application of robotics.	M3.04	R
	OR		
XII	List the advantages of CNC machines.	M3.04	R
XIII	Comparison of Contact and Non-Contact Inspection.	M4.02	U
	OR		
XIV	Explain the Automated Storage/Retrieval System (AS/RS).	M4.01	U

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