

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, NOVEMBER - 2024
COMPUTER INTEGRATED MANUFACTURING**

[Maximum marks: 75]

[Time: 3 Hours]

PART A

**I. Answer all the following questions in one word or one sentence. Each question carries 1 mark.
(9 x 1 = 9 Marks)**

		Module outcome	Cognitive level
1	Define an Actuator.	M1.02	R
2	Name the two levels of a production system.	M1.01	R
3	High drift of a measuring device necessitates frequent.....	M1.02	R
4	What is FEA?	M2.02	R
5	Name any 2 Rapid Prototyping techniques.	M2.02	R
6	What is MPS?	M3.03	R
7	What is a Route Sheet?	M3.01	U
8	Define Unit load in material handling systems.	M4.01	R
9	What is CMM?	M4.02	R

PART B

**II. Answer any eight questions from the following. Each question carries 3 marks.
(8 x 3 = 24 Marks)**

		Module outcome	Cognitive level
1	Name any 3 types of sensors used in automation and their use.	M1.02	R
2	Explain USA principle of automation.	M1.03	U
3	Enumerate any 3 reasons for automating an enterprise.	M1.02	U
4	What are the different types of Engineering analysis?	M2.02	U
5	Define Geometric modelling.	M2.02	U
6	What are the benefits offered by GT?	M3.01	U
7	Give any 3 applications of robots.	M3.04	U
8	List any 3 long term adjustments of capacity planning.	M3.03	R
9	What is an AGV?	M4.01	R
10	What is machine vision?	M4.02	U

PART C

Answer all questions. Each question carries seven marks.

(6 x 7 = 42 Marks)

		Module outcome	Cognitive level
III	Describe the basic elements of automation. OR	M1.02	U
IV	Describe the different types of automation.	M1.02	U
V	List the desirable features for selecting measuring instruments in automated systems. OR	M1.02	R
VI	Explain the five levels of automation in a production plant.	M1.02	U
VII	Explain product development cycle with a neat figure. OR	M2.01	U
VIII	Explain concurrent engineering and its elements.	M2.01	U
IX	Explain the types of end effectors used in robots. OR	M3.04	R
X	Explain the advantages of CNC system.	M3.04	U
XI	What are the applications of GT? OR	M3.01	R
XII	Explain retrieval CAPP system with figure.	M3.02	U
XIII	Explain different types of material transport systems. OR	M4.01	R
XIV	Explain Multistation automated manufacturing systems with fixed and variable routing with sketches.	M4.03	R
