

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, APRIL - 2025**

MODERN PRODUCTION PROCESS

[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	Name any two drill jigs.	M1.01	R
2	The process in which metallic powders are heated below their melting temperature to achieve bonding is called	M1.02	R
3	Name the non-conventional machining processes, which need a dielectric fluid for machining.	M2.02	R
4	Expansion of the term ECM.	M2.02	U
5	 is a device for the storage and tool change required in the automated machining process of CNC machining centre.	M3.01	R
6	The miscellaneous functions in a CNC program are identified by the letter	M3.02	R
7	Expansion of the term FMC.	M4.02	R
8	 fixtures are used for machining parts which must have machined details evenly spaced.	M1.02	R
9	Expansion of the term SCARA.	M4.02	U

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	State the advantages of Jigs and fixtures.	M1.01	U
2	Name any three types of organic coating.	M1.02	R
3	State the disadvantages of electric discharge machining.	M2.03	R
4	State the advantages of Non-traditional machining.	M2.03	R
5	List any three types of machining centers.	M3.01	R
6	State the advantages of CNC machines.	M3.01	R
7	List the type of joints used in robots.	M4.03	R

8	List the classification of CNC machines based on axis.	M3.01	U
9	List the applications of AGV.	M4.02	R
10	List the function of following preparatory functions; (i) G00 (ii) G81 (iii) G90	M3.02	U

PART C

Answer all questions. Each question carries seven marks.

(6 x 7 = 42 Marks)

		Module outcome	Cognitive level
III	Compare the functions of Jig and Fixtures. OR	M1.01	U
IV	Explain the Physical Vapour Deposition technique with a neat sketch.	M1.03	U
V	Illustrate the working of an Ultrasonic Machining process with the help of a neat sketch. OR	M2.02	A
VI	Illustrate the working of a Laser beam machining with the help of a neat sketch.	M2.02	A
VII	Explain the various components of NC machine with the block diagram. OR	M3.01	U
VIII	Explain 3D printing and its application.	M3.03	U
IX	List the components of FMS. OR	M4.02	U
X	List the applications of industrial robots.	M4.03	U
XI	Explain the significance of non-conventional machining process and their classification. OR	M2.01	U
XII	Illustrate the working of a ECM process with the help of a neat sketch and describe its applications.	M2.02	A
XIII	Explain the role of the elements of CIM. OR	M4.01	U
XIV	Explain the robotic parts and its working.	M4.03	U
