

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE , APRIL – 2023**

ADVANCED PRODUCTION PROCESSES

(Maximum Marks : 100)

(Time : 3 hours)

PART – A
(Maximum Marks : 10)

Marks

I. Answer **all** questions in one or two sentences. Each question carries 2 marks.

1. Define automation.
2. Define piercing operation.
3. Name any two artificial abrasives.
4. Define Robotics.
5. List the Non Conventional method Machining.

(5x2=10)

PART – B
(Maximum Marks : 30)

II. Answer any **five** of the following questions. Each question carries 6 marks.

1. Explain with neat sketch, Indexing mechanism of turret lathe.
2. List tool holding devices of capstan and turret lathe and explain multiple cutter holder with neat sketch.
3. Illustrate Broaching tool details.
4. Explain principle of gear hobbing with sketch.
5. Explain cylindrical grinding with line sketch.
6. List different surface finishing operation and explain electroplating with sketch.
7. List application of CADD and CAM.

(5x6=30)

PART – C

(Maximum Marks : 60)

(Answer **one full** question from each unit. Each full question carries 15 marks)

UNIT – I

- III.** (a) Sketch tool layout and sequence of operation of making hexagonal headed bolt. (8)
(b) Sketch Capstan lathe and identify the parts. (7)

OR

- IV.** (a) Illustrate the working of swiss type automatic screw machine. (8)
(b) Distinguish between single spindle and multi spindle automatic lathe. (7)

UNIT – II

- V.** (a) List the method of gear manufacturing and explain casting of gears. (8)
(b) List different gear finishing operations and explain Gear lapping with line sketch. (7)

OR

- VI.** (a) Explain with neat sketch working of progressive die. (8)
(b) State advantages and disadvantages of jigs and fixture. (7)

UNIT –III

- VII.** (a) Illustrate the working principle of centreless grinder. (8)
(b) List different bond materials and explain vitrified bond. (7)

OR

- VIII.** (a) Explain USM with neat sketch. (8)
(b) State advantages and disadvantages of EDM. (7)

UNIT – IV

- IX.** (a) Illustrate Block diagram of NC machine and mark all components. (8)
(b) State advantages and disadvantages of CNC system. (7)

OR

- X.** (a) Illustrate FMC. (8)
(b) List the components of FMS. (7)
