



N19-00332

TED (15) – 6021

Reg. No.

(REVISION – 2015)

Signature

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2019

ADVANCED PRODUCTION PROCESSES

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Define automation.
2. List any four types of machining centers.
3. List any four different methods of gear finishing.
4. Briefly describe the dressing of grinding wheel.
5. Define industrial robot. List out the basic elements of robots. (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Draw a line diagram of turret lathe and label the parts.
2. Describe RMS principles.
3. List out the desirable properties of cutting fluids.
4. Explain the following press operations. (i) Blanking (ii) Piercing
5. State the advantages and limitations of lapping process.
6. State the advantages and disadvantages of EDM.
7. List out the field of applications of robots. (5×6 = 30)

PART — C
(Maximum marks : 60)

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

UNIT — I

- III (a) Explain the bar feeding mechanism of Capstan Lathe with a neat sketch. 8
(b) Describe Hydraulic servo copying system with the help of necessary sketch. 7

OR

- IV (a) Explain with figure the various work holding devices in lathe. 9
(b) Explain in detail the characteristics and capabilities of three & four Axis Machining Center. 6

UNIT — II

- V (a) Draw a neat sketch of horizontal broaching machine and explain its working. 8
(b) Describe with a neat sketch gear shaping process using pinion cutter. 7

OR

- VI (a) Explain the working of Compound die with suitable figure. 9
(b) Briefly describe (i) Induction hardening (ii) Flame hardening. 6

UNIT — III

- VII (a) Explain infeed, through-feed and end feed operations in centreless grinding. 9
(b) List any three advantages and disadvantage of Laser beam machining process. 6

OR

- VIII (a) Explain Ultrasonic machining with the help of neat sketch. 9
(b) Discuss about Galvanising and Parkerising process. 6

UNIT — IV

- IX (a) Explain Open loop and Closed loop NC machine feedback systems with neat sketch. 10
(b) Explain automated guided vehicle system. 5

OR

- X (a) Describe the classifications of robots. 9
(b) List any three advantages and disadvantage of NC machines. 6