DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018

ADVANCED PRODUCTION PROCESSES

[*Time* : 3 hours

(Maximum marks : 100)

Marks

PART — A

(Maximum marks : 10)

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

1.   Define automation.

2.   List any four methods of gear manufacture.

3.   Define Jigs and Fixtures.

4.   List the types of artificial abrasives used in grinding wheel.

5.   List the applications of CAD and CAM.   (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1.   Indicate the mode of specification of lathe for the purpose of procurement.

2.   Sketch and explain a pantograph copying system.

3.   Explain the types of broaching tool.

4.   Illustrate gear hobbing.

5.   List the factors affecting the selection of grinding wheel.

6.   List the various methods of manufacturing metal powder.

7.   Classify N C machines.   (5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

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

UNIT — I

III (a) Sketch and explain the indexing mechanism in a Turret lathe.   9

    (b) Explain Hexapod machines.   6

OR

IV (a) Sketch and explain the bar feeding mechanism in a Turret lathe.   9

    (b) List the advantages of multispindle automatics.   6

UNIT — II

V (a) Sketch and label a pull broach.   9

   (b) State the advantages of Jigs and Fixtures.   6

OR

VI (a) Illustrate a Cross-rail jig boring machine.   9

    (b) List various press working operations.   6

UNIT — III

VII (a) With a line diagram explain internal centreless grinding.   9

    (b) Describe electrolytic process for manufacturing metal powder.   6

OR

VIII (a) Illustrate Ultrasonic Machining process.   9

    (b) Explain truing and dressing in a grinding wheel.   6

UNIT — IV

IX (a) Sketch the block diagram of N C machine and explain.   9

   (b) Give a classification to Robot.   6

OR

X (a) List and explain the basic elements of Robots.   9

  (b) Describe the basic components of FMS.   6

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