

TED (15) – 5094

Reg. No.....

(REVISION – 2015)

Signature

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

INJECTION MOULD DESIGN

[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 boring operation of a lathe machine.
2. State the purpose of register ring in a mould.
3. List main elements of ejector plate assembly.
4. What do you mean by parting surface ?
5. Define gate of an injection mould.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Draw neat sketch of a horizontal milling machine and show its main parts.
2. State the difference between planer and shaper.
3. Write the principle of pressure casting process.
4. Explain flanged method for fitting insert into a mould.
5. What are the advantages of air injection system ?
6. Illustrate In-line ejector grid system.
7. Explain balancing of mould surface in a mould.

(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) With a neat sketch explain the parts of lathe. 8
 (b) Describe the sequence of operation for making a guide pillar of a mould in lathe. 7

OR

- IV (a) Illustrate the working of a tracer controlled milling machine. 8
 (b) Draw a neat sketch of shaping machine and explain functions of each parts. 7

UNIT — II

- V (a) Explain electro deposition technique for making cavity inserts. 8
 (b) List seven stages involved in bench fitting. 7

OR

- VI (a) Illustrate cold hobbing process for making cavity insert. 8
 (b) With help of neat sketch explain sprue and sprue bush. 7

UNIT — III

- VII (a) Describe the principle of stripper plate ejection. 8
 (b) Explain frame type ejector grid. 7

OR

- VIII (a) Explain the air ejection techniques. 8
 (b) Describe ejector plate return system by spring return method. 7

UNIT — IV

- IX (a) Draw and explain angled parting surface. 8
 (b) Describe the cooling system for integer type core plate of a mould. 7

OR

- X (a) Draw and explain profiled parting surface. 8
 (b) List any four types of gates used in the mould. Write the empirical relationship for gate. 7