



17327

16117

4 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) *All questions are compulsory.*
 - (2) *Illustrate your answers with neat sketches wherever necessary.*
 - (3) *Figures to the right indicate full marks.*
 - (4) *Assume suitable data, if necessary.*

Marks

1. Attempt any ten of the following :

20

- a) State function of loading chamber in compression mould.
- b) Why in injection mould one part is moving and other stationary ?
- c) Draw neat sketch of Tab gate.
- d) Name suitable ejection system for thin wall product.
- e) Define cord hobbing.
- f) List types of cooling circuits used in injection mould.
- g) Explain the term-electroplating.
- h) State the need of cord sludge well in the mould.
- i) What is venting ? State its need.
- j) State significance of sprue in mould.
- k) Enlist any four operations performed on Lathe Machine.
- l) Define – Impression.

2. Attempt any four of following :

16

- a) Write down construction details of flash type compression mould.
- b) Compare Manual clamping with Automatic clamping.
- c) What is locating ring ? State its function.
- d) Elaborate :
 - 1) Fan gate
 - 2) Sprue gate.
- e) State importance of Balancing of runner and draw 16 cavities balanced runner layout of Injection mould.
- f) Explain operation of air ejection technique.

3. Attempt any four of following :

16

- a) State function of any four components of Injection mould excluding ejector.
- b) Enlist different types of Bolstar plate. Explain any one of them.

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- c) Define gate, draw labelled diagram of pin point gate.
- d) State function of :
 - i) Retaining plate
 - ii) Ejector plate.
- e) Define parting line. Name types of parting line.
- f) Explain balanced gating system.

4. Attempt any four of following :

16

- a) Compare integer core and cavity with insert Bolstar method.
- b) Draw labelled diagram of Diaphragm gate and state its use.
- c) Explain constructional details of pin ejection system with neat sketch.
- d) Describe any one cooling circuit for cavity of an Injection mould.
- e) Write down function of :
 - 1) Guide pin
 - 2) Guide Bush
 - 3) Cavity plate
 - 4) Local inserts.
- f) How is positioning of gate decided in Injection mould ?

5. Attempt any four of following :

16

- a) Describe construction of Lathe.
- b) Explain cooling of shallow core inserts in injection mould.
- c) With neat sketch explain z type sprue puller.
- d) Compare different types of runner in terms of their efficiency.
- e) What are the types of sprue Bush ? Explain design of sprue bush.
- f) Explain working of ejection mechanism.

6. Attempt any four of following :

16

- a) What is casting ? How it is useful in making mould ?
 - b) Draw cooling circuits for :
 - 1) Large Solid Rectangular Disc.
 - 2) Large Rectangular Box.
 - c) Explain working of ejector rod and function of ejector rod bush in an injection mould.
 - d) Explain the steps involved in bench fitting.
 - e) Explain construction and working of ejector plate assembly.
 - f) Explain principle and construction of cylindrical grinding machine.
 - g) Write down the selection criteria for runner.
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