

17549

15116

3 Hours / 100 Marks

Seat No.

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Instructions : (1) All Questions are *compulsory*.

(2) Answer each next main Question on a new page.

(3) Figures to the right indicate full marks.

Marks

1. Attempt any FIVE :

5 × 4 = 20

- (a) Define an injection mould. Name any four components for injection mould and name any two articles produced by an injection mould.
- (b) Explain purpose of split mould.
- (c) Draw a neat labelled diagram of a split-mould.
- (d) Define a three-plate mould. Explain its necessity.
- (e) Write important features of runner plate design.
- (f) Compare positive and semi-positive moulds. (Any four points of comparison)
- (g) Explain necessity of heat treatment.

2. Answer any TWO :

2 × 8 = 16

- (a) With the help of a labelled diagram, describe dog leg cam mechanism.
- (b)
 - (i) Give any four points of comparison between compression and transfer moulds.
 - (ii) Draw a labelled diagram of integral pot type transfer mould system with two cavities.
- (c)
 - (i) Explain with examples, 'classification' of mould materials and
 - (ii) Describe method of polishing.

P.T.O.

3. Answer any TWO : 2 × 8 = 16

- (a) Explain four selection criteria of split mould.
- (b) Describe mould for internally threaded component with a neat labelled diagram.
- (c) (i) What are multicavity moulds ? (2)
(ii) Describe multicavity mould with different gating system. (6)

4. Answer any TWO : 2 × 8 = 16

- (a) (i) Explain function of a runner.
(ii) Name types of runners. Describe any one.
- (b) Draw a neat labelled diagram of externally threaded component. Describe the layout of impression.
- (c) Describe and write constructional details of auxiliary ram type transfer mould.

5. Answer any TWO : 2 × 8 = 16

- (a) (i) Describe finger cam mechanism to operate split mould with a neat diagram.
(ii) Explain principle of hydraulic actuation in short.
- (b) Describe design aspects of three-plate mould.
- (c) Describe the process of chrome plating **OR** nickel plating.

6. Answer any FOUR : 4 × 4 = 16

- (a) Draw a neat labelled diagram of a simple injection mould.
 - (b) (i) Define : (1) Core (2) gate
(ii) Explain function of locating ring.
 - (c) Explain mechanism of unscrewing mould.
 - (d) Differentiate : two plate mould and a three plate mould.
 - (e) Describe flash mould, with a good sketch.
 - (f) Describe a method of heat treatment of steel.
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