

17549

11819

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) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Abbreviations used convey usual meaning.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Answer any FIVE of the following: **20****
- a) Explain with a labelled diagram the construction of a tunnel gate.
 - b) What is a split mould? Explain finger cam actuation method with a diagram.
 - c) Draw a labelled diagram of injection mould for an external threaded component.
 - d) Differentiate two plate and three plate-mould.
 - e) Explain the working of semi-positive type compression mould with a labelled diagram.
 - f) Explain classification of mould materials.
 - g) State the selection criteria of split moulds.

P.T.O.

- 2. Answer any FOUR of the following:** **16**
- a) Explain position of gate with an example.
 - b) Explain the purpose of a split mould.
 - c) Explain the pitch circle layout system with a diagram.
 - d) Differentiate single and multicavity mould.
 - e) Explain with a diagram the working of integral pot type transfer mould.
 - f) Describe nickel plating method of a mould.
- 3. Answer any FOUR of the following:** **16**
- a) What is a locating ring? List its types and purpose.
 - b) Explain with a labelled diagram construction and working of side core.
 - c) Describe inline layout of impression with a diagram.
 - d) Draw a labelled diagram of three plate mould, stating function of each part.
 - e) Differentiate between compression and transfer mould.
 - f) Explain heat treatment method of steel. Why is it needed?
- 4. Answer any FOUR of the following:** **16**
- a) Define a 'runner'. State its different types.
 - b) Explain dog-leg-cam actuation method with diagram.
 - c) List the factors to be considered for designing of threaded articles.
 - d) Explain multicavity mould with different gating system.
 - e) Explain auxiliary RAM type transfer mould with a labelled diagram.
 - f) Explain polishing method of mould.

5. Answer any FOUR of the following:**16**

- a) Define gate. Draw a labelled figure of a sprue gate.
- b) Explain hydraulic actuation method for a split mould with a diagram.
- c) Draw a labelled diagram of injection mould for an internally threaded component.
- d) Describe the feeding method used for three plate mould.
- e) Describe with a diagram, the positive type compression mould.
- f) Why nitration of mould is necessary? How is it done?

6. Answer any FOUR of the following:**16**

- a) Define cavity and core in an injection mould with a diagram.
 - b) Compare two plate conventional mould and two plate split mould.
 - c) Explain runner plate design in three plate mould.
 - d) Explain spring actuation method in split type of injection mould.
 - e) Explain different design aspects of three plate mould.
 - f) Describe with a figure the construction of a flash type compression mould.
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