

315357

12526

3 Hours / 70 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) Use of Non-programmable Electronic Pocket Calculator is permissible.
- (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following : 10
- a) Define parting surface and parting line.
- b) Define mould shrinkage and draft angle.
- c) Define balance gating.
- d) State the use of a sprue bush in transfer mould.
- e) Define parison die.
- f) State the purpose of pinch-off design in blow moulding.
- g) State the function of a fishtail die.

P.T.O.

- 2. Attempt any THREE of the following : 12**
- a) Describe hot runner and runnerless moulds with sketches.
 - b) Explain 'U' and 'Z' type cooling circuits for integer cavity.
 - c) Differentiate between flash type and positive type compression mould.
 - d) Describe the construction and working of a coat hanger die.
- 3. Attempt any THREE of the following : 12**
- a) Describe any two ejection techniques with sketches.
 - b) Explain the construction and working of cartridge heaters.
 - c) Describe venting and its types with diagrams used in blow mould.
 - d) Explain the working of bottom fed blown film die with neat figure.
- 4. Attempt any THREE of the following : 12**
- a) Explain the method to determine the number of cavities in a mould. (with formula)
 - b) Describe any two types of gates and their selection criteria based on the product.
 - c) Describe integral pot and auxillary ram type transfer mould.
 - d) Describe the construction of a parison die with labelled diagram.
 - e) Explain the working principle of wire and cable coating die.

- 5. Attempt any TWO of the following :** **12**
- a) Describe with neat sketches the construction of a two-plate and three-plate mould.
 - b) Describe any two cooling systems used for insert type core and cavity with neat diagrams.
 - c) Describe the construction and working of extrusion, blow mould with neat sketches.
- 6. Attempt any TWO of the following :** **12**
- a) Explain with neat figure the band and cartridge heaters.
 - b) Explain programmable parison die and its role in product quality.
 - c) With neat diagrams, explain the types of extrusion dies based on flow: inline, offset, and crosshead.
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