

22550

11920

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) 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) State function of register ring in injection mould.
 - b) Define an undercut?
 - c) State need of cooling system used for injection moulding die.
 - d) State any four advantages of transfer mould over compression mould.
 - e) Enlist material used for blow mould.
 - f) State the principle of heating using Thermic fluid.
 - g) Sketch any four typical extruded plastic product shapes.

P.T.O.

- 2. Attempt any THREE of the following: 12**
- a) State various design considerations in construction of injection mould.
 - b) List different cooling methods used for cooling injection mould. Explain any integer core cooling system with neat sketch.
 - c) Describe constructional of positive type compression mould.
 - d) State design consideration to be consider while design pinch off of mould and explain any one factor in brief.
- 3. Attempt any THREE of the following: 12**
- a) Define split mould. Explain split mould in brief.
 - b) Describe construction and working of flash type compression mould with neat sketch.
 - c) Discuss the simple blow mould with neat sketch.
 - d) Describe construction and working of crosshead wire coating die.
- 4. Attempt any THREE of the following: 12**
- a) Draw neat sketch of two plate injection mould and write functions of each parts.
 - b) Describe pin ejection system with suitable sketch.
 - c) Compare compression and transfer mould on the basis of any four of following :
 - (i) Material cost
 - (ii) Shrinkage
 - (iii) Feed system
 - (iv) Product design
 - (v) Pressure
 - d) State the need of venting in blow mould. Describe parting line venting.
 - e) List the different type of electric heater used in extrusion and explain band heater with sketch.

5. Attempt any TWO of the following:**12**

- a) State different types of gates used in injection mould. Explain pin gate and sprue gate of them with sketches.
- b) Explain construction and working of runnerless mould with neat sketch.
- c) Define runner. List the different type of runner and explain any one type of runner with neat sketch.

6. Attempt any TWO of the following:**12**

- a) Describe constructional details of integral pot type of transfer mould with neat sketch.
 - b) Describe construction and working of injection sketch blow mould.
 - c) Describe extrusion blow moulding process with suitable sketch.
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