

17550

**21718**

**3 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.
  - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Attempt any FIVE :**

**20**

- (a) Write any two advantages & any two disadvantages of Jacketed mould machine.
- (b) What is outgasing in compression moulding ? State its causes.
- (c) State any four limitations of transfer moulding.
- (d) Compare calendering with extrusion process.
- (e) What is spin welding ? Write its any two applications.
- (f) Explain Flocking with neat sketch.
- (g) Name materials those can be welded by hot gas welding. Draw various joint designs of hot gas welding process.

**2. Attempt any TWO :****16**

- (a) Explain basic process of rotomolding with sketch. State the purpose of pulverised materials.
- (b) State purpose of preheating in compression moulding.

Explain :

- (i) Automatic screw preheating.
  - (ii) High frequency preheating.
- (c) Compare compression and transfer moulding on the basis of following points :
- (i) Pressure in the cavity
  - (ii) Loading the mould
  - (iii) Cure time
  - (iv) Moulding temperature
  - (v) Breathing the mould
  - (vi) Material temp. before moulding
  - (vii) Tolerances achieved
  - (viii) Shrinkage

**3. Attempt any TWO :****16**

- (a) Explain principle of 'Blending' in calendering. Explain working of high speed blending.
- (b) Explain any one method of solvent cementing of thermoplastics. State its any four advantages.
- (c) Write purpose of surface treatment. Explain flame treatment & corona discharge.

**4. Attempt any TWO :****16**

- (a) Write any four merits & any four demerits of rotational moulding process.
- (b) Draw a sketch of compression moulding machine & write its steps in this process.
- (c) Sketch & explain screw type transfer moulding machine.

**5. Attempt any TWO :****16**

- (a) Explain flexographic printing and state its any four advantages & any four disadvantages.
- (b) Write general rules to be observed in cementing of plastics. Explain monomeric & polymeric cements used in adhesive bonding.
- (c) Explain the construction and working of mills & strainers used in calendering.

**P.T.O.**

**6. Attempt any TWO :****16**

- (a) Explain hot transfer process & state its any two advantages & any two limitations.
  - (b) Explain any two processes :
    - (i) Sanding of thermoplastics
    - (ii) Buffing of thermosetting plastics
    - (iii) Ultrasonic assembly
  - (c) Write constructional features of calender units. Write any four major applications of calendered films / sheets.
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