

17550

15116

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) Answer each next main Question on a new page.  
(4) Figures to the right indicate full marks.  
(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Answer any FIVE :**

**(5 × 4) = 20**

- (a) Write merits and demerits of rotational moulding process.
- (b) Enlist the advantages and limitations of compression moulding.
- (c) Elaborate the limitations of transfer moulding.
- (d) Explain various applications of calendered films or sheets.
- (e) Explain labels and decals process.
- (f) Explain laser marking process with the help of a diagram.
- (g) Explain any one technique of solvent cementing.

**2. Answer any TWO :**

**(2 × 8) = 16**

- (a) With a labelled diagram, explain working of carousel type rotational moulding machine.
- (b) Describe any two types of pre-heating in compression moulding.
- (c) (i) With a suitable sketch, explain pot type transfer moulding.  
(ii) Write the advantages of transfer moulding.

**P.T.O.**

**3. Answer any TWO :****(2 × 8) = 16**

- (a) Explain working of two methods of blending along with their comparison.
- (b) Describe various types of finishing process in plastics.
- (c) Explain following techniques of surface treatment :
  - (i) Flame treatment
  - (ii) Corona discharge

**4. Answer any TWO :****(2 × 8) = 16**

- (a) Describe constructional features and working of take off stripper section and Embosser in calendaring along with sketch.
- (b)
  - (i) Describe any four joint design of adhesive bonding of plastics with suitable sketch.
  - (ii) Enlist the general rules to be observed in cementing of plastic materials.
- (c)
  - (i) Name printing processes.
  - (ii) With a suitable sketch, explain working of any one type of printing process.

**5. Answer any TWO :****(2 × 8) = 16**

- (a) With suitable diagram, explain the following processes :
  - (i) Vacuum metallizing
  - (ii) Electrolytic plating
- (b) Explain any two welding techniques along with a diagram.
- (c)
  - (i) With suitable sketches, explain various configurations of calendaring.
  - (ii) Write the comparison between calendaring and extrusion.

**6. Answer any TWO :****(2 × 8) = 16**

- (a) (i) With a labelled diagram, explain steps of straight line rota-moulding process. **(6)**
  - (ii) Write the type of materials used in rota-moulding process. **(2)**
  - (b) (i) Explain upstroke compression moulding with a neat diagram.
  - (ii) Write various materials used in compression moulding.
  - (c) Compare various aspects of compression and transfer moulding.
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