

22351

11819

3 Hours / 70 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.

**Marks**

1. **Attempt any FIVE of the following :** **10**
  - (a) State the principle of injection moulding process.
  - (b) State any four applications of compression moulding process.
  - (c) List out any four moulding compounds used in transfer moulding.
  - (d) Define rotomoulding process.
  - (e) State any four applications of rotomoulding process.
  - (f) State any two advantages of thermoforming.
  - (g) Draw a labelled diagram of vacuum forming process.
  
2. **Attempt any THREE of the following :** **12**
  - (a) Describe the construction of hand operated injection moulding machine with sketch.
  - (b) Describe the working of infrared preheating machine with sketch.
  - (c) State any two defects of transfer moulded product with their causes and remedies.
  - (d) Describe the plug assist forming with sketch.

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P.T.O.

- 3. Attempt any THREE of the following :** **12**
- (a) Describe the working of automatic injection moulding machine with sketch.
  - (b) Select the process for manufacturing a kitchen bowl with polystyrene. Justify your answer.
  - (c) State any two advantages of outgassing and postcuring of a compression moulded product.
  - (d) Describe the construction of plunger type transfer moulding machine with sketch.
- 4. Attempt any THREE of the following :** **12**
- (a) Explain any two defects with their causes and remedies found in a polypropylene chair.
  - (b) Select the plastic moulding compound with their essential properties for the production of a dish.
  - (c) Select the material and process for manufacture of a goggle with labelled sketch and justify your answer.
  - (d) State any one application of transfer moulded product manufactured by SMC. Justify your answer with sketch.
  - (e) Explain the plastic moulding compound selection procedure and required material properties for the production of an electrical switch.
- 5. Attempt any TWO of the following :** **12**
- (a) Explain the straight line and carousel type of rotomoulding process with sketch.
  - (b) Explain the plastic moulding compound selection procedure and required material properties for the production of a dust bin with sketch.
  - (c) Select the process for the production of a polystyrene box having uniform thickness. Justify your answer with the sketch.
- 6. Attempt any TWO of the following :** **12**
- (a) Explain any three defects with their causes and remedies found in a production of a telephone booth.
  - (b) Suggest any three compounds used for injection moulding process with their three applications each.
  - (c) Describe the postcuring operation for injection moulding product. State any four advantages of postcuring.
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