

22388

12425

03 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) State the advantages and limitation of injection molding technique.
  - b) List any four product manufactured by injection molding.
  - c) Define preheating and state purpose of preheating.
  - d) Name any four material used in compression molding.
  - e) List the types of compression molding machines.
  - f) “Breathing is necessary in compression molding process”  
Justify your answer.
  - g) State the principle of compression molding any one product manufactured by it.

P.T.O.

- 2. Attempt any FOUR of the following :** **12**
- a) Draw neat sketch of Injection molding machine and name the different components of its.
  - b) Differentiate between mechanical clamping and hydraulic clamping.
  - c) Describe injection molding cycle with neat sketch.
  - d) Explain following parameter used in injection molding.
    - i) Shot capacity
    - ii) Plasticization capacity
  - e) Draw neat sketch of manufacturing Sheet Molding Compound (SMC) and explain it in brief.
- 3. Attempt any FOUR of the following :** **12**
- a) Explain with neat sketch compression molding process.
  - b) List the different type of pre heater used in compression molding and explain infrared heater with neat sketch.
  - c) Draw neat sketch of pot type transfer molding and explain it in brief.
  - d) State advantages and limitation of transfer molding.
  - e) Describe with neat sketch working of biaxial rotational molding machine.
- 4. Attempt any THREE of the following :** **12**
- a) Differentiate between compression and transfer molding.
  - b) List the material used in rotational molding process. State properties necessary for material to be roto molded.
  - c) Discuss the trouble shooting guide for rotational molding (Any four defect with cause and remedies)
  - d) Define thermoforming process. List the types of thermoforming process and explain drape forming process.
  - e) State the different process parameter used in thermoforming process and explain any two in brief.

- 5. Attempt any THREE of the following :** **12**
- a) Name the molding process by which “Plastic chair” is manufactured and explain process in brief.
  - b) Explain importance of day light opening and clamping force in injection molding.
  - c) Name any four defects, cause and remedies for compression molding product.
  - d) Define post curing. State purpose of post curing in compression molding.
  - e) Name any plastic product in which Dough Molding Compound (DMC) is used and explain preparation of DMC in brief.
- 6. Attempt any TWO of the following :** **12**
- a) Describe the troubleshooting guide for injection molding.
  - b) Suggest suitable process to manufacture overhead water storage tank and explain process with neat sketch.
  - c) Suggest suitable method to manufacture plastic tea cup and explain process with neat sketch.
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