

22389

22223

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) 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) List any four components of extrudes.
 - b) Name three zones of extrudes.
 - c) Define co rotating twin screw extrudes.
 - d) Enlist any four applications of blow moulding.
 - e) Define parison.
 - f) State the purpose of finishing the plastic product.
 - g) State the need of surface treatment before decorating the plastic item.

P.T.O.

- 2. Attempt any FOUR of the following:** **12**
- a) Explain pressure sizing equipment in pipe manufacturing with neat diagram.
 - b) Differentiate between intermeshing and non intermeshing twin screw extrudes with at least three points.
 - c) Describe sheet manufacturing process with neat diagram.
 - d) Explain significance of flame treatment with suitable example.
 - e) Write any three properties and three applications of polystyrene foam.
- 3. Attempt any FOUR of the following:** **12**
- a) Explain the need of surface treatment in plastic industry.
 - b) Define close cell foam and open cell foam.
 - c) Describe 0.5" diameter PVC pipe manufacturing process line with neat diagram.
 - d) Describe process line for manufacturing 100 micron LDPE film used for packaging application with neat diagram.
 - e) Differentiate between pressure die and tubing die used in wire and cable coating process
- 4. Attempt any THREE of the following:** **12**
- a) Explain the working of injection blow moulding machine with neat diagram
 - b) Draw and explain ram accumulation type extrusion blow moulding process
 - c) Explain induction welding technique with neat diagram.
 - d) Explain jaw type band sealing process for welding films.
 - e) Discuss the troubleshooting guide for following defects occur in pipe manufacturing
 - i) Silverline on pipe
 - ii) Blister on pipe surface.

- 5. Attempt any THREE of the following:** **12**
- a) Explain manufacturing process of copper wire coated with LDPE. Draw neat labelled diagram.
 - b) Describe parison transfer blow mould process with neat diagram.
 - c) State and describe any four processing parameters used to improve quality of blow moulded product.
 - d) Explain friction welding process with neat diagram.
 - e) Describe the process of metallic coating on plastic bangles with neat diagram.
- 6. Attempt any TWO of the following:** **12**
- a) Describe step by step hot plate welding technique with neat diagram.
 - b) State the three techniques of screen printing. Describe them with neat diagram.
 - c) Describe manufacturing process of thermocol sheet and write its applications.
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