

17550

11920

3 Hours / 100 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 TEN :

20

- (a) State the purpose of using pulverised material in rotomoulding.
- (b) Enlist any four applications of rotomoulding.
- (c) Justify the need of post curing in compression moulding.
- (d) State any four effects of preheating.
- (e) Define transfer moulding process.
- (f) Name the preprocessing operation and the equipment used in calendaring.
- (g) State the reason for generation of trim in calendaring process.
- (h) 'PVC sheet is generally calendared rather than extruded.' – Justify.
- (i) Name any two finishing operations used to remove flash from thermoset products.

- (j) State the purpose of using buffing with plastics.
- (k) Name the types of adhesive used in adhesive bonding.
- (l) Identify the decorating method used with
 - (i) Bathroom fittings
 - (ii) Computer keyboard
- (m) Enlist the components of pre-printed label.
- (n) Name the pretreatment method used before decorating :
 - (i) PE film
 - (ii) Grease stained plastics

2. Attempt any FOUR :

16

- (a) Describe the steps involved in rotomoulding process.
- (b) Write construction and working of corousel type rotomoulding machine.
- (c) State the merits of rotomoulding process.
- (d) Write troubleshooting guide for any four defects in rotomoulding.
- (e) Explain the working of screw type transfer moulding with neat sketch.
- (f) Considering pot type method explain transfer moulding cycle with the help of neat sketch.

3. Attempt any TWO :

16

- (a) Compare compression and transfer moulding with respect to any eight points.
- (b) Describe the compression moulding of PF and unsaturated polyester.
- (c) Write down causes and remedies of any eight defects in compression moulding.

- 4. Attempt any FOUR :** **16**
- (a) Draw a neat labelled sketch of calendar plant layout.
 - (b) Explain construction and working of 'L' type calendar unit.
 - (c) Describe the step of embossing in calendaring line.
 - (d) State the material wise applications of calendared films & sheets. (any two)
 - (e) Write comparison between calendaring and extrusion.
 - (f) State causes and remedies of any four defects in calendaring.
- 5. Attempt any TWO :** **16**
- (a) (i) State general rules to be observed in cementing of plastics.
(ii) Draw any four designs of adhesive joint.
 - (b) Explain in brief the process of hot gas welding.
 - (c) Describe the process of ultrasonic assembly and state its applications.
- 6. Attempt any FOUR :** **16**
- (a) Explain the flame treatment method.
 - (b) Describe with neat sketch any one continuous method of printing on films.
 - (c) Explain laser marking method & state its applications.
 - (d) Name and explain the decorating methods used to impart textile appearance to plastics.
 - (e) Write the process of screen printing on cylindrical objects.
 - (f) Describe hot transfer process used to decorate plastics parts.
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