

22487

22232

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) 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) Enlist various finishing techniques used for polymer processing. Write importance of finishing.
- (b) Define Adhesive bonding and classify adhesives.
- (c) Enlist four application of melt adhesive.
- (d) Draw and label hot gas welding.
- (e) State significance of induction welding.
- (f) State any four application of pad printing method.
- (g) State the need of powder coating in polymer industry.

2. Attempt any FOUR of the following :

3 × 4 = 12

- (a) Describe the principal consideration for machining tool geometry.



- (b) With neat sketch explain screen printing.
- (c) Discuss the powder coating for PVC and Nylon Material.
- (d) Explain Electrostatic spraying methods in details.
- (e) Explain the importance of labels & decals.

3. Attempt any FOUR of the following :

3 × 4 = 12

- (a) Discuss buffing in details. Write advantages of buffing over polishing process.
- (b) Enlist various adhesive application methods. Explain meter – mix-disperse methods in details.
- (c) For packaging industry, which sealing method is generally used ? Explain.
- (d) Write importance of corona discharge.
- (e) Describe the applications of resin used in adhesive bonding & state type of adhesives.

4. Attempt any THREE of the following :

12

- (a) Explain 'Reaming techniques' in details. Write advantages of it.
- (b) Describe solvent cementing method in details.
- (c) Explain with neat diagram 'Hot knife sealing' method.
- (d) Why surface pretreatment is important ? Explain mechanical abrasion techniques.
- (e) Describe manufacturing method of melt-mix coating in details.

5. Attempt any THREE of the following :

12

- (a) Describe the procedure for preparing the adhesive for following joints :
 - (i) butt joints
 - (ii) v – joints
 - (iii) scarfed

- (b) With neat sketch explain shrink fitting and snap fitting.
- (c) Suggest printing methods used for plastics closure and pvc pipe. Explain the printing methods of closure and pipes in details.
- (d) Apply suitable mechanical fastener for temporary joining of rivets, string clips & nuts.
- (e) Elaborate the following terms :
 - (i) Embossing
 - (ii) Surface texturing

6. Attempt any TWO of the following :

12

- (a) State characteristics and application of :
 - (i) Brush
 - (ii) Knife
 - (iii) Hot press bonding methods
 - (b) Suggest welding techniques for pvc pipe. Explain any one welding techniques in details with sketch.
 - (c) Classify coating techniques used in plastics industry. Write the importance of coating. Explain any two coating techniques in details.
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