

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER-6 EXAMINATION –WINTER- 2019

Subject Code:3362305**Date: 20-11-2019****Subject Name: Secondary Processing Techniques****Time:02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** Answer any seven out of ten. **14**
1. List out types of Calender Roll arrangement.
 2. List out material used for Casting process.
 3. Write down application of Encapsulation.
 4. Write down function of Release agent and Gel coat.
 5. Write down full form of DMC, BMC, SMC and TMC.
 6. Write down application of FRP.
 7. List out any four resin used for FRP process.
 8. Define 1) Foam 2) K-factor
 9. Write down application of Vinyl dispersion.
 10. Define 1) Syntactic foam 2) Compression set
- Q.2** (a) Write down application of Flexible, Semi-rigid and Rigid foam **03**
OR
(a) Explain Rotational Molding process of vinyl dispersion. **03**
(b) Write down Mold material used for Casting. **03**
OR
(b) Explain Roll Coating process of vinyl dispersion. **03**
(c) Explain Ribbon Mixer with neat sketch. **04**
OR
(c) Write a short note on Post Calendering process. **04**
(d) Explain High Speed Mixer with neat sketch. **04**
OR
(d) Explain filament Winding process with neat sketch. **04**
- Q.3** (a) Write down Basic process step of Casting. **03**
OR
(a) Write down Advantages and Disadvantages of Casting. **03**
(b) Explain any three General Production method of Foam. **03**
OR
(b) Write down Advantages and Disadvantages of Foam **03**
(c) Explain Superimposed and 'Z' type Calender Roll arrangement. **04**
OR
(c) Explain Hand Lay-up process with neat sketch. **04**
(d) Explain Open Cell Foam and Closed Cell Foam. **04**
OR

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| | (d) | Write down Advantages and Disadvantages of Calendering process. | 04 |
| Q.4 | (a) | Explain Pultrusion Process with neat sketch. | 03 |
| | | OR | |
| | (a) | Write a short note on Blowing agent. | 03 |
| | (b) | Write down Comparison between Calendering process and Extrusion process. | 04 |
| | | OR | |
| | (b) | Explain Encapsulation process with neat sketch. | 04 |
| | (c) | Draw line diagram of Calendering Plant. | 07 |
| Q.5 | (a) | Explain Sheet Molding Compound (SMC) with neat sketch. | 04 |
| | (b) | Write down Classification of Fiber. | 04 |
| | (c) | Explain Reaction Injection Molding (RIM) process for Rigid PU foam. | 03 |
| | (d) | Write down Advantages and Disadvantages of FRP process. | 03 |
