

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER – IV • EXAMINATION – SUMMER- 2017**

**Subject Code: 3342304****Date: 05-05-2017****Subject Name: Plastics Extrusion Technology****Time: 10:30 AM TO 01:00 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. Define L/D ratio & Compression ratio.
  2. Define Ram extruder. Which type of polymer is suited for ram extruder?
  3. Define: a) Monofilaments b) Dry extrusion process.
  4. Write any two material selection criteria for extrusion process.
  5. Write any two process variables for extrusion process.
  6. Define Screen pack & Breaker plate.
  7. Define: Extruder & Extrusion.
  8. Write any two differences between SSE & TSE.
  9. Write any two materials used for wire & cable coating.
  10. Write any two applications of coating & lamination.
- Q.2** (a) Write classification of extruder machine. **03**
- OR
- (a) Write any six specifications of extruder machine. **03**
- (b) Write a short note on drive system in extrusion process. **03**
- OR
- (b) Draw a neat sketch of any three types of screw. **03**
- (c) Write a short note on Thrust bearing. **04**
- OR
- (c) Compare mica heaters & ceramic heaters. **04**
- (d) Write a short note on screw cooling. **04**
- OR
- (d) Draw any two type of barrel cooling technique. **04**
- Q.3** (a) Write any three types of barrels. **03**
- OR
- (a) Write any three terms for screw terminology & define it. **03**
- (b) Write a short note on fluid heating. **03**
- OR
- (b) Write advantages & disadvantages of ram extruder. **03**
- (c) Explain different types of extrusion process. **04**
- OR
- (c) Write applications of extrusion process. **04**
- (d) Explain automatic screen with neat sketch. **04**
- OR
- (d) Explain working of automatic feeding device. **04**
- Q.4** (a) Write a short note on rotating die. **03**

OR

- (a) Write a short note on oscillating haul-off. **03**
- (b) Explain start up procedure for extruder machine. **04**

OR

- (b) Explain shut down procedure for extruder machine. **04**
- (c) Explain pipe extrusion line with neat sketch. **07**

**Q.5**

- (a) Draw neat sketch of blown film extrusion line. **04**
- (b) Write a short note on post extrusion techniques. **04**
- (c) Write any three trouble shooting in extrusion process. **03**
- (d) Draw neat sketch of sheet extrusion line. **03**

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