

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER – 4 • EXAMINATION – WINTER- 2017**

**Subject Code: 3342304****Date: 15-11-2017****Subject Name: PLASTIC EXTRUION TECHNOLOGY****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. Define breaker plate.
  2. List types of barrel cooling systems.
  3. State various drive systems use for an extruder
  4. Write function of thrust bearing.
  5. List various auxiliary equipments used in extrusion.
  6. List out parts of extruder machine.
  7. Function of hopper feeder.
  8. Define rotating die.
  9. List out post extrusion techniques.
  10. What is the unit of screen size? What does it indicate?
- Q.2** (a) Give classification of extrusion machines. **03**
- OR
- (a) Explain cooling system of screw. **03**
- (b) Write short note on types of extruder machines. **03**
- OR
- (b) Explain heating and cooling of extruder barrel **03**
- (c) State functions of breaker plate. **04**
- OR
- (c) Give causes and remedies for any three defects in extruded products. **04**
- (d) Explain constructional features of standard screw with neat sketch. **04**
- OR
- (d) Explain various functions of screen pack **04**
- Q.3** (a) Explain constructional features of standard screw **03**
- OR
- (a) State various applications of extrusion process. **03**
- (b) Write down start-up and Shut-down of extruder machine **03**
- OR
- (b) Explain various post extrusion operations. **03**
- (c) Compare Dry and Wet extrusion process. **04**
- OR
- (c) State and explain any three material selection criteria for an extruder. **04**
- (d) List various process variables in extrusion and explain any three of them. **04**
- OR

	(d) Explain the melting procedure in extruder	<b>04</b>
<b>Q.4</b>	(a) Explain working of wire coating plant	<b>03</b>
	OR	
	(a) Explain working of monofilament plant.	<b>03</b>
	(b)	<b>04</b>
	OR	
	(b) Draw line diagram of pipe plant and label different parts.	<b>04</b>
	(c) Explain manufacturing of blown film with line diagram.	<b>07</b>
<b>Q.5</b>	(a) Give functions: (i) Barrel (ii) Thermocouple	<b>04</b>
	(b) State advantages of rotating die.	<b>04</b>
	(c) Explain automatic screen changer.	<b>03</b>
	(d) Write short note on hopper feeder.	<b>03</b>

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