

**GUJARAT TECHNOLOGICAL UNIVERSITY****DIPLOMA ENGINEERING – SEMESTER – 4(NEW) • EXAMINATION – SUMMER 2018****Subject Code: 3342304****Date: 07-May-2018****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.

- Q.1** Answer any seven out of ten. **14**
1. List various products produced by extrusion process.
  2. Give classification of extruder machine.
  3. Write function of thrust bearing.
  4. Define : Helix angle, Pitch
  5. List various parts of an extruder.
  6. List various process variables of extrusion process.
  7. List various auxiliary equipments used in extrusion.
  8. Why hopper cooling is necessary?
  9. Give function of screen pack.
  10. List various cooling systems for barrel.
- Q.2** (a) List various heating systems of barrel. Explain any one of them. **07**
- OR
- (a) Explain various process variables in extrusion process. **07**
- (b) Explain wire coating process with line diagram. **07**
- OR
- (b) Give trouble shooting for any three defects in extruded products. **07**
- Q.3** (a) Write short note on “automatic screen”. **07**
- OR
- (a) Write short note on “automatic feeding”. **07**
- (b) Give function of each zone of screw. **03**
- OR
- (b) What is the purpose of oscillating haul off? **03**
- (c) Draw a neat sketch of standard screw used in an extruder **04**
- OR
- (c) Give differences: Dry extrusion process and Wet extrusion process. **04**
- Q.4** (a) Give functions of breaker plate. **03**
- OR
- (a) Write material selection criteria for extrusion process. **03**
- (b) Draw line diagram of sheet extrusion plant. **04**
- OR
- (b) Write machine specifications of an extruder. **04**
- (c) Explain manufacturing process of blown film with line diagram. **07**
- Q.5** (a) Explain start-up and shut down procedure of an extruder. **07**
- (b) Draw a neat sketch of single screw extruder. Label all the parts. **07**