

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER – IV-EXAMINATION – WINTER 2015**

**Subject Code: 3342304**

**Date: 09/12/2015**

**Subject Name: PLASTICS EXTRUSION TECHNOLOGY**

**Time: 02:30 PM TO 5:00 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. What is the unit of screen size? What does it indicate?
  2. What is L/D ratio of screw? State its effect on output.
  3. State basic difference between dry and wet extrusion.
  4. State any four applications of extruded products in agriculture field.
  5. State functions of oscillating haul-off.
  6. What is the purpose of using vented barrel?
  7. State various drive systems use for an extruder.
  8. Give any four specifications for an extruder.
  9. State the basic difference between film and sheet.
  10. List any four specifications of extruder screw.
- Q.2** (a) State functions of breaker plate and screen pack. **03**
- OR
- (a) Give classification of extrusion machines. **03**
- (b) Draw standard extruder screw with various terminology. **07**
- OR
- (b) Explain various heating techniques of barrel. **07**
- (c) Explain any one type of hopper. **04**
- OR
- (c) Explain significance of hopper cooling. **04**
- Q.3** (a) State and explain any three material selection criteria for an extruder. **03**
- OR
- (a) Sketch any one type of breaker plate. **03**
- (b) Explain the melting procedure in extruder. **07**
- OR
- (b) State and explain effect of various process variables. **07**
- (c) Explain start-up process of an extruder. **04**
- OR
- (c) Explain any one post extrusion process. **04**
- Q.4** (a) Sketch any three types of profiles. **03**
- OR

- (a) State any three plastic materials which can be used for sheet manufacturing. **03**
- (b) State any four parts of film plant and give its functions. **04**

OR

- (b) Which precautions are required for processing PVC material? **04**
- (c) Draw and explain line diagram of pipe plant. **07**

**Q.5**

- (a) Sketch any one type of hopper feeder. **04**
- (b) State various types of cables and give their applications. **04**
- (c) What are the advantages of automatic screen changers? **03**
- (d) State the advantages of rotating die. **03**

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