

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER-VII • EXAMINATION – WINTER • 2014****Subject Code: 372302****Date: 02-12-2014****Subject Name: Extrusion Die Design****Time: 10:30 am - 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. English version is considered to be Authentic.

- Q.1** (a) Draw a neat sketch of Pipe die. **14**
Label all the parts of die.
- Q.2** (a) List types of flow regarding rheology. Explain them with diagrams. **07**
(b) Explain about materials for extrusion dies. **07**
- OR**
- (b) Define any four.: (1)Shear stress (2)Shear rate (3)Viscosity (4)Die-swell (5)Melt fracture **07**
- Q.3** (a) Explain factors affecting die design. **07**
(b) Explain die geometry. **07**
- OR**
- Q.3** (a) Explain streamlining of extrusion dies.. **07**
(b) Explain function of screen pack and breaker plate. **07**
- Q.4** (a) Classify extrusion dies with respect to melt flow direction. Explain them in brief with neat sketch. **07**
(b) List types of sizing calibrators for pipe extrusion. Explain any one with neat sketch. **07**
- OR**
- Q. 4** (a) Explain various factors to be considered for die adaptor design. **07**
(b) Describe general die design rules. **07**
- Q.5** (a) Draw neat sketch of flat film die. **07**
(b) Explain difference between pressure die and tubing die for wire coating with neat sketch. **07**
- OR**
- Q.5** (a) Draw a neat sketch of wire and cable coating die. **07**
(b) Explain fish tail sheet die for heat sensitive materials with neat sketch. **07**
