

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering - SEMESTER-VII • EXAMINATION – WINTER 2013

Subject Code: 372302

Date: 29-11-2013

Subject Name: Extrusion Die Design

Time: 02:30 pm - 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. English version is considered to be Authentic.

- Q.1** Classify various types of extrusion dies. Draw neat sketch of any one of following dies. Give nomenclature of all parts. **14**
(1) Wire coating die
(2) Film die
- Q.2**
- (a) Explain various types of flow with respect to rheology with neat sketches. **07**
(b) Describe about various types of materials used for construction of extrusion dies. **07**
- OR**
- (b) Write short note on 'die geometry'. **07**
- Q.3**
- (a) Discuss various factors affecting die design. **07**
(b) Explain general die design rules. **07**
- OR**
- Q.3** (a) Discuss various factors to be considered for correct breaker plate assembly. **07**
(b) Write short note on 'Melt fracture phenomena'. **07**
- Q.4**
- (a) Explain various factors to be considered for good adaptor design. **07**
(b) Differentiate between side fed and centre fed blown film die. **07**
- OR**
- Q. 4** (a) Sketch and explain any one type of sizing calibration used in pipe extrusion. **07**
(b) Explain viscoelasticity and die swell phenomena. **07**
- Q.5**
- (a) Differentiate between pressure die and tubing die of wire coating with neat sketches. **07**
(b) Describe functions of screen pack and breaker plate. **07**
- OR**
- Q.5** (a) Draw neat sketch of fish tail sheet die. **07**
(b) Write in brief about multilayer film die. **07**
