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## GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING - SEMESTER-VII • EXAMINATION - SUMMER 2013 Subject Code: 372302 Date: 13/05/2013 **Subject Name: Extrusion Die Design** Time: 02:30 am 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. English version is considered to be Authentic. Q.1 Give classification of extrusion dies. Draw a neat sketch of film die. 14 Label all the parts of die. Q.2 07 (a) Explain factors affecting die design. Explain types of flow regarding polymer rheology with neat 07 (b) sketches. OR Derive equation for output of Newtonian fluid through tubular cross 07 section. **Q.3** (a) Explain die geometry. 07 List and explain materials for extrusion dies. 07 (b) Q.3 Write short note on, "Melt fracture". 07 (a) (b) Discuss various factors to be considered for correct breaker plate 07 assembly. Q.4 Explain function of screen pack and breaker plate. 07 (a) Explain various factors to be considered for adaptor design. 07 (b) Q. 4 Compare side fed and centre fed tubular dies. 07 (a) (b) Explain difference between pressure die and tubing die for wire 07 coating with neat sketch. **Q.5** 07 (a) Write short note on "crosshead dies". Give types of sizing calibrators for pipe die. Explain any one. (b) 07 **Q.5** 07 (a) Explain advantages of rotating die. Suggest type of sheet die for heat sensitive materials. Draw a neat (b) 07 sketch of that die & label all the parts.

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