

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGG.- IV<sup>th</sup> SEMESTER-EXAMINATION – JUNE- 2012**

Subject code: 342305

Date: 22/06/2012

Subject Name: Injection Mould 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** (a) Compare two-plate mould and three-plate mould. Also use simple diagrams to explain. **07**
- (b) Describe various properties requirements in mould material to be used for injection mould making. **07**
- Q.2** (a) List various stages of mould assembling (Bench fitting) and explain any two. **07**
- (b) What do you mean by shrinkage in injection moulding? Explain shrinkage calculation used for injection mould design. **07**
- OR**
- (b) Write short note on 'venting' in injection mould design. **07**
- Q.3** (a) What are the various capacities of an injection moulding machine to be considered for injection mould design. Describe any two in brief. **07**
- (b) Describe design and opening sequence of basic underfeed mould with neat sketch and nomenclature of each component. **07**
- OR**
- Q.3** (a) Write short note of 'runner balancing and gate balancing'. **07**
- (b) In a three-plate mould, reverse tapered secondary sprues are retained within the floating cavity plate and hence feed system is not free to fall. Explain any one method to overcome this drawback with neat sketch. **07**
- Q.4** (a) Explain any one taper location recess method with neat sketch. **07**
- (b) Draw various opening control devices used in three plate mould design. **07**
- OR**
- Q. 4** List various methods of splits actuation. Explain any one with neat sketch and calculations involved in detail. **14**
- Q.5** (a) Describe various types of mould plate designs for use in conjunction with sliding splits with neat sketches. **07**
- (b) Explain general split safety arrangements and any one method of split safety for nominal retention of splits on mould plate with neat sketch. **07**
- OR**
- Q.5** (a) List various types of injection mould designs used for internally threaded components. Explain any one in brief with neat sketch. **07**
- (b) Describe splits locking method used for open channel chase bolster with neat sketch. **07**

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