Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER – IV • EXAMINATION – WINTER- 2016

Subject Code: 3342302 Date: 22- 11- 2016

Subject Name: Design for Injection Mold

Time: 02:30 PM 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. **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.	List any four mold materials use for an injection mold.	
	2.	Define limits and tolerances.	
	3.	Define shot capacity and clamping force.	
	4.	State any two advantages of three plate mold.	
	5.	Explain the importance of taper location recess.	
	6.	Define split mold. State importance of it.	
	7.	Sketch any two products which require use of split mold.	
	8.	State any two applications of hot runner molds.	
	9.	Define internal and external undercut.	
	10.	State advantages of hydraulic actuation method.	
Q.2	(a)	Explain importance of chromium steels in mould design.	**03**
		OR	
	(a)	State method of deciding number of impressions for injection mold.	**03**
	(b)	State and explain various mold material selection requirements.	**07**
		OR	
	(b)	List various mould assembling procedure steps and explain any two.	**07**
	(c)	Define shrinkage. With suitable example explain shrinkage calculation.	**04**
		OR	
	(c)	Define venting. State importance of venting in mold design.	**04**
Q.3	(a)	What to do you mean by mold height. Explain minimum and maximum mold height.	**03**
		OR	
	(a)	Write any three mold designer's check list point with respect to product.	**03**
	(b)	Draw sectional elevation of two plate mold and label different parts.	**07**
		OR	
	(b)	List various opening control devices and explain working of telescopic length bolt.	**07**
	(c)	Sketch stripper plate mold and label different parts.	**04**
		OR	
	(c)	Compare two plate and three plate mold.	**04**
Q.4	(a)	Sketch any one split locking and guiding method.	**07**
		OR	
	(a)	Explain any one split safety arrangement with neat sketch.	**07**

	(b)	List various split actuation methods and explain any one.	**07**
Q.5	(a)	Explain stripping method for internally threaded components.	**04**
	(b)	State advantages and disadvantages of hot runner mold.	**04**
	(c)	State importance of insulated hot runner system.	**03**
	(d)	State importance of stack molds.	**03**

****