Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2172601 **Date: 29/04/2017**

Subject Name: Rubber Euipment Design-II

Time: 02.30 PM to 05.00 PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**

Figures to the right indicate full marks.

Q.1		**Answer the following.**	**(14)**
	(i)	**Define the term (1) Projected area (2) Locking force**	
	(ii)	**A press with a 200 tons forces capability. What is the largest square sheet that can be molded in this press while maintaining a pressure of 1000 Psi?**	
	(iii)	**Write the function of Die.**	
	(iv)	**List the disadvantages of Plain feed hopper in Rubber Extruder.**	
	(v)	**How the extruder output can be calculated?**	
	(vi)	**Write the importance of Cavity finish for Mold.**	
	(vii)	**How the internal cavity pressure defined? Write its approximate value for general, thin & thick product.**	
Q.2	**(a)**	**State the general design rules for Die.**	**(07)**
	(b)	**Which Points should be kept in mind while configuring the flow channel in Die?**	**(07)**
		OR	
	(b)	**Discuss in detail about the Classification of Die.**	**(07)**
Q.3	**(a)**	**Write in detail about the construction of extension barrel for extruder used in rubber industry.**	**(07)**
	(b)	**Compare the Pressure Style Extruder & Single roller Die Extruder.**	**(07)**
		OR	
Q.3	**(a)**	**Explain about pressure drop due to screen pack in rubber extruder.**	**(07)**
	(b)	**Write in detail about High Intensity Mixing Screw.**	**(07)**
Q.4	**(a)**	**Explain in detail about Thermal Considerations for Compression Molding.**	**(07)**
	(b)	**Which points should be kept in mind while designing the runner in Transfer Mold? Explain each point in detail.**	**(07)**
		OR	
Q.4	**(a)**	**What do you mean by cross linking factors? Explain the other factors which affect the compression molding.**	**(07)**
	(b)	**Explain the pressure consideration related to Transfer Molding.**	**(07)**
Q.5	**(a)**	**Discuss in detail about different factors for determining the number of cavities for injection mould.**	**(07)**
	(b)	**Give the comparison between FIFO vs. FILO.**	**(07)**
		OR	

…..P.T.O…..

Q.5	**(a)**	**Discuss the machine control & process variables for injection molding machine used in rubber industry.**	**(07)**
	(b)	**"The successes of the whole Injection molding operation may depend on satisfactory mould design". Explain the statement in detail.**	**(07)**

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