Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII(NEW) • EXAMINATION – WINTER 2016

Subject Code:2172601 **Date:18/11/2016**

Subject Name:Rubber Euipment Design-II

Time:10.30 AM to 1.00 PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	**Answer the following.**	**(06)**
	(i)	Which are the important aspects while designing the Die?	
	(ii)	Write the difference between Cross Head Die & Off Set Die.	
	(b)	Explain in detail about Die Geometry	**(08)**
Q.2	**(a)**	**Answer the following.**	
	(i)	Explain the importance of Part Design and In part Design for Mold Design.	**(04)**
	(ii)	Explain the importance of Parting Line while designing a Mold.	**(03)**
	(b)	**Answer the following.**	
	(i)	List the properties needed for mold design.	**(03)**
	(ii)	Give the difference between Pressure and Force. Explain with the example.	**(04)**
		OR	
	(b)	Short note on "Cryogenic Deflashing".	**(07)**
Q.3	**(a)**	Define the term "Runner". While designing the runner in transfer molding which Points should be kept in mind? Explain all in detail.	**(07)**
	(b)	**Answer the following.**	
	(i)	Write about "Ejection" Process for Compression Mold.	**(03)**
	(ii)	Discuss about Strength of the Cavity and Guide system design for Compression Mold.	**(04)**
		OR	
Q.3	**(a)**	Write the importance of "Over flows" in Compression Mold. Discuss the advantages & disadvantages of different cross sections of Over Flows.	**(07)**
	(b)	Discuss about the Thermal Consideration related to transfer molding.	**(07)**
Q.4	**(a)**	Discuss in detail about construction of barrel in rubber extruder.	**(07)**
	(b)	Explain the Flow Mechanisms in rubber extruder.	**(07)**
		OR	
Q.4	**(a)**	Explain in detail about Action of the screw in rubber extruder.	**(07)**
	(b)	'Pressure drop due to Screen Pack" Justify the statement in terms of rubber extruder.	**(07)**
Q.5	**(a)**	"The success of the whole injection moulding operation depends on mould design". Justify the statement in terms of Rubber Injection Molding.	**(07)**
	(b)	Discuss the effects of Screw speed, barrel temperature and screw back pressure variable controlling the heating and plasticity of rubber during the first stage of injection.	**(07)**
		OR	
Q.5	**(a)**	List the desired features required for Rubber Injection Molding Machine.	**(06)**
	(b)	Discuss the advantages of injection molding process in rubber field.	**(08)**