Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII EXAMINATION – WINTER 2015

Subject Code: 172604 **Date:16/12/2015**

Subject Name: Rubber Product Manufacturing

Time: 10:30am to 1:00pm **Total Marks: 70**

Instructions:

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

Q.1		**Answer the following**	
	(a)	**Define the term (1) Vibration (2) Shock. Write about the principles of Isolation.**	**(05)**
	(b)	**Write the applications, formulation & properties of Rubber Stoppers.**	**(06)**
	(c)	**Importance of Dock Fenders in Marine applications.**	**(03)**
Q.2	**(a)**	**Answer the following.**	
	(i)	**Which process is suitable for giving shape and manufacturing of Rubber band in bulk? Why?**	**(03)**
	(ii)	**Discuss the application of rubber products in electrical engineering field.**	**(04)**
	(b)	**Answer the following.**	
	(i)	**Give the difference between Microcellular & Macrocellular Rubber.**	**(05)**
	(ii)	**How the Ebonite Rubber is produced? Write in detail.**	**(02)**
		OR	
	(b)	**Write in detail about the manufacturing of Expanded Rubber.**	**(07)**
Q.3	**(a)**	**Discuss in detail about selection of Rubbers for oil seals. Write the properties required for seal materials.**	**(07)**
	(b)	**Describe about core manufacturing for Tennis Ball.**	**(07)**
		OR	
Q.3	**(a)**	**Write in detail about manufacturing process of Simple play ball.**	**(08)**
	(b)	**Describe the manufacturing of Seals by Extrusion Process.**	**(06)**
Q.4	**(a)**	**Describe in detail about manufacturing process for Lining of tank.**	**(07)**
	(c)	**Explain about the manufacturing process of Hot Water Bottle.**	**(07)**
		OR	
Q.4		**Write about applications, properties, formulation and manufacturing process for Printing Blanket with flow chart.**	**(14)**
Q.5	**(a)**	**Short note on Crosslinkable Polyethylene material used for Power Cable.**	**(07)**
	(b)	**Discuss the compounding for manufacturing of Rubber Rollers. Write the formula for any two type of rubber rollers.**	**(07)**
		OR	
Q.5	**(a)**	**List the factors on which primary Cable design depend? Discuss any two in detail.**	**(08)**
	(b)	**Explain the importance of roll balance for rubber roller.**	**(06)**