

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2022****Subject Code:3162611****Date:10/06/2022****Subject Name:Engineering Rubber Products****Time:10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		<b>MARKS</b>
<b>Q.1</b>	(a) List the rubber products in sports goods application with suitable example.	<b>03</b>
	(b) Identify the problems which generate during manufacturing of rubber Printing Blankets.	<b>04</b>
	(c) Explain the rubber applications in defence field.	<b>07</b>
<b>Q.2</b>	(a) List the engineering applications of rubber in medical field.	<b>03</b>
	(b) Give the difference between ebonite & semi ebonite rubber.	<b>04</b>
	(c) Discuss in detail about principles of damping for the Vibration Isolators and Mounts.	<b>07</b>
<b>OR</b>		
	(c) Explain about the manufacturing process of Ebonite rubber in detail.	<b>07</b>
<b>Q.3</b>	(a) How the seals and gasket are differing?	<b>03</b>
	(b) List out the types of rubber seals.	<b>04</b>
	(c) Name the components of conventional wound golf balls. Explain all in details.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Give the outline of simple play ball formulation.	<b>03</b>
	(b) Which are the methods is used for pressurization of the pressurized type of core in tennis ball?	<b>04</b>
	(c) Name the methods of manufacturing the rubber seals. Explain any one in detail.	<b>07</b>
<b>Q.4</b>	(a) Give the applications of Rubber Roller.	<b>03</b>
	(b) Draw the schematic flow chart for the Rubber tank lining manufacturing process.	<b>04</b>
	(c) Short note on: "Pot Bearing".	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Write the merits of elastomeric bearings.	<b>03</b>
	(b) Develop the recipe of the rubber brake lining in automobile industry.	<b>04</b>
	(c) Explain in detail about the manufacturing of Rubber Roller.	<b>07</b>
<b>Q.5</b>	(a) List the advantages of Dock Fenders.	<b>03</b>
	(b) Write down the characteristics and applications of Cylindrical fenders.	<b>04</b>
	(c) Name the process steps for the Printing Blankets. Explain any three in details.	<b>07</b>

**OR**

- Q.5** (a) Which is the significance of Rubber water-stop? **03**  
(b) Define the term: Vibration and Shock. **04**  
(c) Develop the formulation as per below specifications and calculate the compound specific gravity for Hot water bag. **07**  
Specifications: Hardness: 55-60 shore A, temperature resistance up to 70-80 °C, color: Blue.

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