

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2023****Subject Code:3172616****Date:01-12-2023****Subject Name: Silicone Rubber Technology****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.

- Q.1** (a) Write the abbreviation of Silicone rubber and draw its structure. **03**
 (b) “Silicone rubber is partially Organic and Inorganic in Nature”. Explain it. **04**
 (c) Describe basic grades of Silicone rubber according to functional group. **07**
- Q.2** (a) Write about any two properties of Silicone Emulsions. **03**
 (b) Write about limitations of Silicone rubber. **04**
 (c) Explain in detail about advantageous characteristics of Silicone rubber. **07**
- OR
- (c) Explain about production of Silicone rubber with reaction mechanisms. **07**
- Q.3** (a) Mention major applications of Silicone rubber. **03**
 (b) Write about significance of fillers for compounding of Silicone rubber. **04**
 (c) Write in detail about basic features of Liquid Silicone rubbers. **07**
- OR
- Q.3** (a) Mention basic burning characteristics of Silicone rubber. **03**
 (b) Write about processing of Silicone rubber. **04**
 (c) Describe the curing system of Liquid Silicone rubbers in detail. **07**
- Q.4** (a) Mention basic types of RTV Silicone rubber. **03**
 (b) Write about important applications of RTV Silicone rubber. **04**
 (c) Draw the schematic diagram showing compounding of Solid Silicone rubber on Two-roll mill. **07**
- OR
- Q.4** (a) Write in brief about technology of RTV Silicone rubber. **03**
 (b) Write about causes and remedies for poor compound preparation on two roll mill for Silicone rubber. **04**
 (c) Describe the cross-linking for Heat curable solid silicone rubber with reaction mechanism. **07**
- Q.5** (a) Write about “Freeze Tumbling” method for defleshing of Silicone rubber. **03**
 (b) Write about injection molding of Silicone rubber. **04**
 (c) Write in detail about curing of water based Silicone Elastomers. **07**
- OR
- Q.5** (a) Write about “Buffing” method for finishing of Silicone rubber. **03**
 (b) Write about problems and remedies during Extrusion of Silicone rubber. **04**
 (c) Describe about preparation of water based Silicone Elastomers. **07**
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