

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – SUMMER 2024****Subject Code: 3152312****Date:16-05-2024****Subject Name: Adhesives and Sealants in Plastics****Time:02:30 PM TO 05:00 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.

MARKS

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|------------|---|-----------|
| Q.1 | (a) Classify about Adhesive Forms. | 03 |
| | (b) Enlist common Characteristics of Adhesive and Sealants. | 04 |
| | (c) Describe naturally available adhesive materials with examples. | 07 |
| Q.2 | (a) What is the difference between adhesive and sealant? | 03 |
| | (b) Give selection criteria for Adhesive and Sealant. | 04 |
| | (c) Describe Hot Melt Adhesives. Give examples. | 07 |
| | OR | |
| | (c) Enlist properties and applications of Silicone Adhesives. | 07 |
| Q.3 | (a) Discuss importance of the Surface treatment for Adhesion. | 03 |
| | (b) Give applications of Polyvinyl Alcohol used for adhesives. | 04 |
| | (c) Write short note on Wood Adhesives. | 07 |
| | OR | |
| Q.3 | (a) Give types of Cements used in Bonding of plastics. | 03 |
| | (b) Short note on Book Binding Adhesives. | 04 |
| | (c) Discuss Pressure Sensitive Adhesives and its applications. | 07 |
| Q.4 | (a) Describe in detail- Thermoset adhesives. | 03 |
| | (b) Give applications of Anaerobic Adhesives | 04 |
| | (c) How Cyanoacrylate adhesives work? Give its applications. | 07 |
| | OR | |
| Q.4 | (a) Write short note on adhesives used by shoe industry. | 03 |
| | (b) Classify types of sealants. | 04 |
| | (c) Discuss adhesives used in Aerospace Industry in detail. | 07 |
| Q.5 | (a) What do you meant by Animal Glue ? | 03 |
| | (b) Give advantages and limitations of Polyurethane adhesives | 04 |
| | (c) Discuss about maximizing Joint Efficiency. | 07 |
| | OR | |
| Q.5 | (a) Discuss use of SBR in construction industry | 03 |
| | (b) Discuss various plastics used as High performance sealants. | 04 |
| | (c) Explain Adhesive joint design for plastics. | 07 |
