

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E SEM-VII Examination-Nov/Dec.-2011

Subject code: 172306

Date: 29/11/2011

Subject Name: Adhesives and Sealants

Time: 10.30 am-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.

- Q.1** (a) Discuss in detail about the advantages of Adhesive Bonding **07**
(b) List the various types, applications and settings of Adhesives. Explain the cooling of thermoplastics adhesive in detail. **07**

- Q.2** (a) Give complete classification of Organic and Semi-organic Adhesives, according to its origin. **07**
(b) Explain about the various Hybrids and Coupling Agents used in Adhesives **07**

OR

- (b) Write in detail about various remedies that will lessen the danger of failure of matching adhesive to adherent. **07**

- Q.3** (a) Give a list of Polymer Back-bone, its functional end use groups and its uses **07**
(b) List the various Acrylic Adhesives and its functional end uses **07**

OR

- Q.3** (a) Discuss the general conditions in Adhesive selection. Give the basic steps in Adhesive selection process. **07**
(b) Explain the general precautions in preparing and testing the Adhesive bonded joints. **07**

- Q.4** (a) Write short notes on 1. Adhesives for wood bonding. 2. Adhesives for Plastics and Glass bonding and 3. Adhesives for Paper bonding. **07**
(b) Discuss Animal glue as Adhesive. Give its testing methods and applications **07**

OR

- Q.4** (a) Explain about the Casein and Protein based glues and wood adhesives. **07**
(b) How the modification of starch and other additives can change the properties of Dispersion? Explain it by help of figures. **07**

- Q.5** (a) Discuss various Starch Adhesives and its applications. **07**
(b) For the adhesives in Packaging application, give details of its use, type of adhesives, major requirement and accepting adhesive base. **07**

- Q.5** (a) Discuss the raw materials and types of natural rubbers for Rubber Adhesives. **07**
(b) Discuss Butyl Rubber and Poly isobutylene as synthetics rubber Adhesives **07**
