B. Tech.
(SEM. VIII) EXAMINATION, 2006-07
ADHESIVES & SEALANTS

Time : 3 Hours] [Total Marks : 100

Note : (1) Attempt all questions.
(2) All questions carry equal marks.

1 Attempt any two of the following : \(2 \times 10 = 20\)
   (a) Discuss the growth and size of Indian adhesive industry.
   (b) How does joint design affect the quality of adhesive bond ?
   (c) What are main objectives of surface preparation before adhesive bonding ?

2 Attempt any two of the following : \(2 \times 10 = 20\)
   (a) Discuss any three mechanism of adhesive bonding.
   (b) “PVC copolymer is preferred instead of PVC homopolymer” Why? Also give their applications.
   (c) Discuss the important functions of additives used in adhesive formulations.

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3 Attempt any two of the following: 2\times10

(a) Give the classification of polymeric sealants with suitable examples.

(b) Discuss the properties and applications of acrylic sealants.

(c) What are the main characteristics of polysulfide sealants? Give their applications.

4 Attempt any two of the following: 2\times10=20

(a) Differentiate between water based adhesive and solvent based adhesive with suitable examples.

(b) Discuss the potential applications of adhesive in automobile industry.

(c) Give the critical properties of hot melt adhesive. Also discuss their application in packaging industry.

5 Attempt any four of the following: 4\times5=20

(a) Types of adhesive

(b) Surface tension and surface energy

(c) Polyvinyl acetate adhesive

(d) Anaerobic adhesive

(e) Adhesive in Shoes/Foot bear industry

(f) Applications of adhesive in space.

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