

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1721607

Date: 12/07/2012

Subject Name: Polymer Materials & Testing

Time: 10:30 am – 13:00 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 the Drawbacks of Raw Rubber and List the properties of Vulcanized rubber. (07)
- Q.1(B) Discuss the properties and advantages of Reclaimed Rubber. (07)
- Q.2(A) Define the term “Fibre”. List the important requirements of a Fibre and give the difference between Natural fibres & Artificial Fibres. (07)
- Q.2(B) Explain in detail about different methods of Spinning a Fibre. (07)
- OR
- Q.2(B) List the different types of rayon. Discuss in detail about any one type of rayon. (07)
- Q.3(A) Compare the structure of Polyvinylchloride with that of Polyethylene and explain how structure is related to its properties. What are the important fields of application of PVC? (07)
- Q.3(B) What are different forms of Polypropylene? Discuss the type of catalyst employed for the manufacture of Polypropylene and the properties of the three forms of the polymer. (07)
- OR
- Q.3(A) Short note on Laminates. (07)
- Q.3(B) What are unsaturated Polyester resins? Discuss the characteristics and uses of Polyester resins in general. (07)
- Q.4(A) Discuss the importance of Test Results Variable. (07)
- Q.4(B) ‘Storage & Conditioning affects performance & properties of product’. Justify in detail. (07)
- OR
- Q.4 Discuss the Test Method Value according to Accuracy, Relevance, Significance & Discrimination. (14)
- Q.5(A) Write the importance of Tensile Test for Poymer Products. Discuss in detail about the Test methods, Procedure & Calculation. (07)
- Q.5(B) Write about the classification of most common polymers according to elements present. (07)
- OR
- Q.5(A) Explain in the test for Polyacrylonitrile and Acrylonitrile & Polystyrene and Styrene Copolymers. (07)
- Q.5(B) Discuss in detail about the Impact Resistance Test. (07)

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