

B.Sc. FOOTWEAR TECHNOLOGY (BSCFWT)

Term-End Examination

December, 2017

00441

BFWE-018 : POLYMER TECHNOLOGY – I

Time : 3 hours

Maximum Marks : 70

Note : Attempt any **five** questions. All questions carry equal marks.

1. (a) What are the different types of polymers ?
Explain the processing of polyurethane for shoe sole manufacturing. 7
- (b) Differentiate between Thermosetting and Thermoplastic materials. 7
2. (a) Discuss the properties that make polymers useful materials. 7
- (b) Discuss the advantages of TPR over rubber. 7
3. (a) Discuss the practical significance of glass transition temperature. 7
- (b) Enumerate the ideal qualities of polymeric soling materials. 7

4. Define Midsole. What are the various properties required in a midsole ? Name some polymeric materials used as midsoles. 14
5. (a) Describe the procedure for the production of a PVC sole unit with the help of a flow chart. 7
- (b) What is Polymerization ? Classify polymerization on the basis of synthesis. 7
6. (a) Discuss the various properties of EVA as soling materials. What are the various advantages and disadvantages of EVA ? 7
- (b) Discuss the polymeric materials that can be used for shoe soles. 7
7. What do you understand by compounding of rubber ? Discuss the various raw materials of a rubber compound. Mention its applications. 14
8. Write short notes on the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Polymer Blends
- (b) Composite Materials
- (c) Thermal Behaviour of Polymers
- (d) Thermosetting Elastomer
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