

B.Sc. FOOTWEAR TECHNOLOGY (BSCFWT)**Term-End Examination****December, 2015****BFWE-044 : POLYMER TECHNOLOGY***Time : 3 hours**Maximum Marks : 70*

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

1. Explain the extraction of Natural Rubber from trees. Write the biological name of Rubber Tree. Mention the International and Indian nomenclature and grading systems used for Natural Rubber. 14

2. (a) What are the advantages and disadvantages of PVC as a soling material ? 7
(b) Write the properties of TPU material. 7

3. What do you understand by vulcanization of rubber ? Discuss the various types of vulcanized rubber used in footwear. 14

4. (a) What do you understand by the following terms ? 7
(i) Isotactic Polymer
(ii) Atactic Polymer
- (b) Explain the macromolecular concept of polymer with suitable examples. 7
5. (a) Define the term polymerization. Why do thermoplastic polymers get softened on heating ? 7
- (b) Write the monomers of PVC and SBR. Which polymeric materials are commonly used in shoe uppers ? Give justification. 7
6. (a) Write the ideal qualities of shoe soling material. 7
- (b) Discuss the uses of different polymeric materials in footwear industry. 7
7. Explain the following terms with suitable examples :
- (a) Crystallinity and Amorphous Polymers 7
- (b) Homopolymer and Copolymer 7
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