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BFWE-018

B.Sc. FOOTWEAR TECHNOLOGY (BSCFWT)

Term-End Examination

December, 2015

BFWE-018 : POLYMER TECHNOLOGY – I

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt **five** questions in all. Question no. **1** is **compulsory**. Each question carries equal marks.*

1. (a) What do you understand by Elastomers ?

(b) Write the common polymeric materials used for shoe uppers.

(c) Define polymerization.

(d) Define glass transition temperature.

(e) Describe thermoplastic rubber (TPR).

(f) Describe the role of blowing agents in polymer compounding.

(g) Define midsole in sports shoe. *7×2=14*

2. (a) Enumerate the ideal qualities of polymeric soling materials.

(b) Discuss the practical significance of glass transition temperature. *2×7=14*

3. Describe the vulcanization process in autoclaves during manufacturing of canvas shoes. *14*

4. Explain the PVC compounding process with the help of a flow chart for manufacturing shoe soles. *14*

5. Describe the manufacturing, properties and applications of polyurethane materials in the footwear industry. *14*

6. What do you understand by compounding of rubber ? Discuss various raw materials of a rubber compound. *14*

7. Define the following : $4 \times 3\frac{1}{2} = 14$

   (a) Polymer Blends

   (b) Composite Materials

   (c) Poly Dispersity Index (PDI)

   (d) Average Molecular Weight
