

**B.Sc. FOOTWEAR TECHNOLOGY (BSCFWT)**

**Term-End Examination**

00004

**June, 2014**

**BFWE-044 : POLYMER TECHNOLOGY**

*Time : 3 hours*

*Maximum Marks : 70*

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**Note :** Attempt **five** questions in all. Question no. 1 is **compulsory**. All questions carry equal marks.

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1. (a) Why do thermoplastic polymers get softened on heating ?  
(b) Define the term polymerization.  
(c) Write the monomers of PVC and SBR.  
(d) Why does raw rubber need vulcanization ?  
(e) Which polymeric materials are commonly used in shoe uppers ?  
(f) Define elastomers.  
(g) Define average molecular weight. 7×2=14
  
2. What are the different types of classes of the polymers ? Explain the cross linked polymers with suitable examples. 14
  
3. (i) What are the advantages and disadvantages of PVC as soling material ? 7  
(ii) Write the properties of TPU material. 7

4. (i) Write the ideal qualities of shoe soling material. 7
  - (ii) Discuss the uses of different polymeric materials in footwear industry. 7
  5. Explain the production of PVC unit sole with the help of a flow chart. 14
  6. What are the ingredients used for EVA midsole compound ? Describe each ingredient. Also discuss the applications of EVA in footwear industry. 14
  7. What do you understand by vulcanization of rubber ? Discuss the various types of vulcanized rubber used in footwears. 14
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