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BFWE-018

00176

B.Sc. FOOTWEAR TECHNOLOGY (BSCFWT)

Term-End Examination

June, 2013

BFWE-018 : POLYMER TECHNOLOGY - I

Time : 3 hours *Maximum Marks : 70*

Note : Answer all the questions.

1. (a) Which type of PVC used for shoe soles ?
   (b) Define fibers. **1x10=10**
   (c) What do you mean by TPR ?
   (d) What is polymerization ?
   (e) The monomer of PVC is _____.
   (Fill up the blank)
   (f) What is a copolymer ?
   (g) Define glass transition temperature ?
   (h) Which polymeric materials can be used for shoe insoles ?
   (i) Define blends.
   (j) Polyurethanes are processed by _____.
   (Fill up the blank)

2. (a) Write the various ingredients used for PVC compound for shoe sole. **3x5=15**
   (b) Write the main properties of cellular PU solings.
   (c) Discuss the advantages of TPR over rubbers.

(d) What are the various properties of Thermo Plastic Polyurethanes (TPU) ?

(e) Why EVA is used as shoe midsole material ? Comment.

3. Attempt ***any four*** of the following. **4x7=28**

(a) What are the various advantages and disadvantages of Polyurethanes as a soling material ?

(b) Discuss the various properties of EVA as soling materials. Also discuss the various advantages and disadvantages of EVA.

(c) Discuss TPR compounding in detail.

(d) Define polymer, monomer, polymerization, vulcanization, composites.

(e) Define midsole. What are the various properties required in midsole ? Also write down same polymeric materials used as mid soles.

4. Explain the production of PVC sole unit with the help of flow chart. **17**

OR

Discuss the various compounding ingredients used for EVA compound. What is the purpose of adding individual ingredient in EVA compound ?