

B.Sc. FOOTWEAR TECHNOLOGY (BSCFWT)

Term-End Examination

December, 2014

00289

BFWE-044 : POLYMER TECHNOLOGY

Time : 3 hours

Maximum Marks : 70

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

1. (i) Classify polymers based on thermal behaviour.
(ii) What is the monomer of EVA ?
(iii) What do you understand by compounding of polymers ?
(iv) Which polymeric materials can be used for shoe soles ?
(v) List the different types of rubbers.
(vi) List the various polymer processing techniques.
(vii) What are the polymeric materials used for shoe heels ? 7×2=14

2. Describe in brief the various properties of rubber and also discuss about the various ingredients added into rubber to make rubber compounds usable for shoe sole. 14

3. Define the following :

7×2=14

- (i) Monomer
- (ii) Polymer
- (iii) Polymerisation
- (iv) Blends
- (v) Composites
- (vi) Copolymer
- (vii) Elastomer

4. Explain the production process of rubber sole with the help of a flow chart. Write the sequence-wise operation details for the production process.

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5. List the various types of polyurethanes. What are the properties of polyurethanes ? Discuss the various applications of polyurethanes in footwear industry.

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6. Differentiate between thermosetting and thermoplastic polymers. Also discuss the thermosetting and thermoplastic polymers used in shoe sole manufacturing.

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7. Why is midsole an important component in sports shoes ? Which materials are used for making midsole in sports shoes ? Describe the properties required in midsole materials.

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