

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

**Term-End Examination**

00040 **December, 2014**

**BFWE-018 : POLYMER TECHNOLOGY – I**

*Time : 3 hours*

*Maximum Marks : 70*

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

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1. (a) Discuss the properties that make polymers useful materials. 7
- (b) Explain the molecular concept of manufacturing polymers with suitable examples. 7
2. (a) Give a diagrammatic description of Reaction Injection Moulding (RIM) machine for manufacturing polyurethane. 7
- (b) Discuss the advantages and disadvantages of PU as soling material. 7
3. (a) Describe the various properties of Thermoplastic Polyurethanes (TPU). 7
- (b) Discuss the advantages of TPR over rubbers. 7

4. (a) What are the various advantages and disadvantages of polyurethanes as soling materials? 7
- (b) Discuss the various properties of EVA as soling materials. What are the various advantages and disadvantages of EVA? 7
5. (a) Describe the procedure for the production of PVC sole unit with the help of a flow chart. 7
- (b) What is the purpose of adding individual ingredients in EVA compound? Discuss the various compounding ingredients used for EVA compound. 7
6. (a) What is polymerization? Classify polymerization on the basis of synthesis. 7
- (b) Discuss the polymeric materials that can be used for shoe sole. 7
7. Write short notes on any **two** of the following : 2×7=14
- (a) Physical properties of PVC
- (b) Difference between thermosetting and thermoplastic materials
- (c) Properties required for midsole
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