

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

**Term-End Examination**

**June, 2015**

**00184**

**BFWE-018 : POLYMER TECHNOLOGY - I**

*Time : 3 hours*

*Maximum Marks : 70*

---

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

---

1. (a) What are the different types of polymers ?  
Explain the processing of polyurethane for shoe sole manufacturing. 7
- (b) Discuss the various properties of rubber (natural) and also discuss the addition of the various compounding ingredients to rubber to make rubber compound for shoe sole. 7
2. (a) Differentiate between thermosetting and thermoplastic polymeric materials. 7
- (b) Write the ideal qualities of soling materials. 7
3. (a) Explain midsole. What are the various properties required in midsole ? Enlist some polymeric materials used as midsoles. 7
- (b) Discuss TPR compounding in detail. 7

4. (a) Write the various ingredients used for PVC compound for shoe sole. Discuss the advantages of TPR over rubbers. 7
- (b) Why is EVA used as shoe midsole material? Comment. 7
5. (a) What are the various chemical raw materials of a rubber compound? 7
- (b) Discuss the comparative characteristics of rubber, plastics and fibres on the basis of their physical properties and applications. 7
6. (a) Discuss the physical properties of PVC and PV as soling materials. 7
- (b) Describe the classification of polymers on the basis of structure and thermal behaviour. 7
7. Write short notes on the following :  $4 \times 3 \frac{1}{2} = 14$
- (a) Sources of Polymers
- (b) Tacticity
- (c) Thermal Response
- (d) Line Structure
-