

00579

**M.Sc. FOOTWEAR TECHNOLOGY
(MSCFWT)**

Term-End Examination

June, 2012

**MFW-034 : POLYMER AND DMS SPORTS SHOE
TECHNOLOGY**

Time : 3 Hours

Maximum Marks : 70

Note : Attempt ten questions in all. Question No. 1 is compulsory.

1. Answer the following questions : 1x7=7
- (a) What are elastomers ?
 - (b) Write different types of rubbers used in footwear industry.
 - (c) What do you understand by Direct Vulcanization Process (DVP) ?
 - (d) Define polymerization.
 - (e) What do you understand by RIM technique ?
 - (f) Which polymeric materials can be used for shoe heels ?
 - (g) Natural rubber is the polymer of _____ .

2. Write the advantages and disadvantages of compression molding process. 7
3. What do you understand by RIM technique ? Discuss the RIM technology used for sport shoe manufacturing. 7
4. What are the basic ingredients used in EVA compound ? Discuss in detail. 7
5. Discuss various properties of TPR material as shoe sole material. 7
6. Discuss along with diagram the sequence of operation of injection molding techniques. 7
7. What do you understand by Direct Injection Process (DIP) ? Discuss. 7
8. Describe the properties of TPU as soling material. 7
9. Explain the production process of PVC sole unit with the help of flow chart. 7
10. Discuss various properties of polyurethanes. 7

11. What do you understand by vulcanized rubber ? 7
Discuss various ingredients used in vulcanized rubber sole.
12. Define following terms : 7
- (a) Homopolymer
 - (b) Vulcanization
 - (c) Outsole
 - (d) Fibre
 - (e) Poromerics
 - (f) Radoma
 - (g) Midsole
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