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MFW-034

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M.Sc. FOOTWEAR TECHNOLOGY (MSCFWT)

Term-End Examination

June, 2013

MFW-034 : POLYMER AND DMS SPORTS SHOE TECHNOLOGY

Time : 3 hours *Maximum Marks : 70*

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

1. 2x7=14

(a) Define copolymer.

(b) What do you understand by "outsole" ?

(c) Name the various polymer processing techniques used in footwear manufacturing.

(d) What are the various polymeric materials used for shoe uppers ?

(e) What are the various polymeric materials used as adhesives in footwear manufacturing ?

(f) Explain in brief the mid sole.

(g) Define polymerization.

2. Explain rubber compounding. Discuss the various ingredients used for a rubber compound of outsole of a sports shoe. **14**

3. (a) What do you understand by D.V.P. technology ? Write the major advantages and disadvantages of D.V.P. technology. **7**

   (b) Give advantages and disadvantages of injection molding process. **7**

4. Explain use of polyurethane as a good material for sports shoes. Mention various applications of polyurethane in sports shoe manufacturing. What are the various properties of polyurethane ? **14**

5. What do you understand by Reaction injection moulding ? Discuss the R.I.M. technique in detail. What are the various advantages of R.I.M. for P.U. sole manufacturing. **14**

6. (a) Give reasons for use of P.V.C. and P.U. materials for D.I.P. technique. **7**

   (b) Write the various polymer processes used in footwear manufacturing. Discuss in detail the compression moulding technique. **7**
