

M.Sc. FOOTWEAR TECHNOLOGY**(MSCFWT)****Term-End Examination****December, 2015****MFW-034 : POLYMER AND DMS SPORTS SHOE
TECHNOLOGY***Time : 3 hours**Maximum Marks : 70*

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

1. Write various applications of PVC polymer. What are the advantages and disadvantages of PVC as a soling material ? 10

2. Explain the following terms by giving suitable examples : 2×5=10
 - (a) Biodegradable polymers
 - (b) Non-biodegradable polymers

3. Explain how the application of polyethylene is widespread in various industrial and commodity applications. Compare the properties of HDPE and LDPE with suitable examples. 10

4. (a) How do you distinguish a polymer from its monomer ?
- (b) Explain any **two** of the following :
- (i) Degree of Polymerisation (DP)
 - (ii) Physical properties of polymers
 - (iii) Thermal response of polymers
 - (iv) Mode of formation of polymers 2×5=10
5. How is Natural Rubber extracted from plants ? Describe the complete process of extraction, solification till final manufacturing. Also mention the nomenclature and grading system of Natural Rubber. 10
6. Explain the manufacturing process of polyurethane. What are the various applications of polyurethane in footwear industry ? Discuss various advantages of polyurethane. 10
7. Explain the importance of addition of different chemical ingredients during the processing of rubbers. Write the functions of these ingredients for the same. 10
8. Write short notes on any **two** of the following : 2×5=10
- (a) Homopolymer
 - (b) Compression Moulding
 - (c) Extruder
 - (d) Outsole
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