

Guru Nanak Dev Engineering College, Ludhiana		
Department of Applied Sciences		
Sample Paper (CHEMISTRY, BSC-104)		
Note: Attempt all questions.		
Q. No.	Questions	Marks
Q1	What are the mechanical properties of polymers.	2
Q2	Analyze the (i) Number of signals, (ii) Position of signals of ^1H -NMR of ethyl chloride. Also draw the expected ^1H -NMR spectrum.	2
Q3	Discuss various molecular vibrations in IR region.	4
Q4	(a) Why TMS is used as internal standard in NMR spectroscopy? (b) Differentiate between Thermoplastic resins and Thermosetting resins.	1,3
Q5	(a) Define Auxochrome and Bathochromic shift. How presence of an auxochrome leads to bathochromic shift? (b) Write a short note on Addition polymerization.	2, 2
Q6	(a) Explain the various electronic transitions observed in UV-Visible spectroscopy with suitable examples. (b) Discuss Tacticity of polymers.	4,4