

SEMESTER-III
3. Polymer and Environment

Time: 3 Hrs.

M.M. 100 marks

Note: The paper will be divided into two sections.

Section-A M.C.Q.50 (10 from each section)

Total-50 marks

Section-B: Two questions are from each unit will be asked with internal choice and the candidate is required to attempt five questions.

Total-50 marks

Unit I

Plastic waste management :- introduction, recent trends in plastic industry, sources of plastics waste, waste management in the global , legislation, strategy, UNIDO programme on polymer.

Unit II

Equipment for plastics recycling: - introduction, extruder, degassing m meltfiltring , pelletiser.

Application of recycled plastics: - recycled LDPE, recycled PVC, recycled polystyrene (PS) , recycled commingled plastic waste.

Unit III

Recycling of rubber: - introduction, recycling methods, devulcanistion.

Unit IV

Recycling of rubber tyres and polyurethane: process of recycling polyurethane, rubber recycling , novel rese of scrap tyres.

Unit V

Rubber waste disposal: - introduction, physical waste reduction, waste tyre disposal.

Recommended Books:

1. Polymer science: V.R. Goowarika,r,N.V. Viswanathan,Jayadev Sridhar
2. Text book of polymer science: Fred W. Billmeyer
3. Polymer science & Technology: Joel R. Fried
4. Polymer Science and Technology: Premamoy Ghosh