

**SEMESTER-III**  
**3. Polymer and Environment**

Time: 3 Hrs.

M.M. 75 marks

Note: The paper will be divided into two sections.

**Section-A** M.C.Q.45 (9 from each section)

**Total-45 marks**

**Section-B** Five question are from each unit with internal choice will be asked and the candidate is required to attempt Three question

**Total-30 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, devulcanisation.

**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

