

- Q.31 Write short note on pollution caused by plastics.
- Q.32 What are the sorting and segregation methods of plastic waste?
- Q.33 Write short note on solvent separation.
- Q.34 Write importance of plastic reprocessing.
- Q.35 Write short note on public awareness regarding hazards caused by indiscriminant use of plastic.

#### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Write short note on
- Co-processing in cement kiln
  - Plastic waste in road construction
- Q.37 Write short note on
- Density separation
  - Landfill
- Q.38 Explain in detail ISI standard regarding limits of chemical in effluents.

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#### 5th Sem. / Plastics Technology

#### Subject:- Plastic recycling and waste management

Time : 3Hrs.

M.M. : 100

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Synthetic polymer is
- PTFE
  - Starch
  - Protein
  - Cotton
- Q.2 Additives are
- Flame retardant
  - Filler
  - Plasticizers
  - All
- Q.3 Sorting of thermoset material by sound observation
- Dull sound
  - Metal like sound
  - Both a & b
  - None
- Q.4 Floating test of polypropylene is
- Sink in water
  - Float in water
  - Both a & b
  - None of these
- Q.5 Percentage of Nitrogen in atmosphere
- 78%
  - 21%
  - 20%
  - 48%

- Q.6 Thermoset plastics are recyclable  
a) True                              b) False  
c) can not say                      d) None

- Q.7 Symbol of recycling has  
a) 3R                                  b) 2R  
c) 4R                                  d) 6R

- Q.8 Recycle number of polystyrene is  
a) 1                                    b) 2  
c) 3                                    d) 5

- Q.9 Density of water is  
a)  $\text{gm/cm}^3$                               b)  $1000\text{kg/m}^3$   
c) Both a & b                              d) None

- Q.10 Engineering plastics are  
a) PC                                    b) ABS  
c) PTFE                                    d) All of these

### SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Define plastic.  
Q.12 Define recycling.  
Q.13 Define waste management.  
Q.14 Paper is recyclable. True/False  
Q.15 Define Pollution.

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- Q.16 Define natural polymer with example.  
Q.17 Write two example of synthetic polymers.  
Q.18 Define toxic chemicals.  
Q.19 Define canal lining.  
Q.20 Write heat sensitive plastic material.

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Explain stages in recycling and their types.  
Q.22 How to recover energy from plastics waste?  
Q.23 What are the merits and demerits of recycling?  
Q.24 Explain natural and synthetic polymer with suitable example.  
Q.25 Explain degradation of polymers and their types.  
Q.26 Explain equipment based sorting techniques of plastic waste.  
Q.27 Explain basic mechanical recycling for improving quality of recycled product.  
Q.28 How to convert polyethylene multilayer film waste to molded product?  
Q.29 Explain how to do rain water harvesting.  
Q.30 Explain waste water recovery by membrane separation.

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