

- Q.28 How plastic wastes can be used in construction of roads?
- Q.29 Discuss photo-degradation of plastics.
- Q.30 What is equipment-based sorting techniques
- Q.31 Explain various techniques for collection of plastic wastes.
- Q.32 Discuss the utilization of woven sacks wastes of plastics into various other form.
- Q.33 Explain waste water recovery by membrane separation.
- Q.34 Discuss forth floatation technique for plastic waste separation.
- Q.35 Explain Co-processing in Cement Klin

#### **SECTION-D**

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

- Q.36 Explain various techniques for " public awarenes " regarding hazards caused by indiscriminate use of plastics.
- Q.37 Write short note on :
- Loading of toxic chemicals form plastic to soil and water
  - Thermal - dergradation of plastic wastes.
- Q.38 Discuss advantages and disadvantages of recycling.

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#### **5th Sem ./ Branch : Plastic Engineering**

#### **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 Full form of MSW is \_\_\_\_\_.
- Multy Sewage Waste
  - Multi Screw Working
  - Multiple Solid Waste
  - Municipal Solid Waste
- Q.2 The plastic which soft when heat is apply. but requires cooling to set them to shape are.
- Thermosofting
  - Thermosetting
  - Thermoplastic
  - Thermostatting
- Q.3 Which of the following methods is better for the solid waste problem.
- Recycling
  - Reprocessing
  - Reuse
  - All of them
- Q.4 Which of the following statements is incorrect for plastic wastes ?
- It is used to make compost
  - It lasts for a longer period of time
  - Toxic fumes are produced when burnt
  - All of the above
- Q.5 Under which rule of Government, guidelines for solid waste management are followed ?

- a) Municipal solid waste rules 2000
- b) Municipal solid waste rules 2016
- c) Solid waste rules 2000
- d) Solid waste rules 2005

Q.6 \_\_\_\_\_ is the process of recycling raw materials to carry new product.

- a) Reducing b) Re-processing
- c) Re-cycling d) Composting.

Q.7 Which of the following gas is produced from landfill wastes ?

- a) Bio-gas
- b) Natural gas
- c) Liquified petroleum gas
- d) All of the above

Q.8 Polyethylene tere-phthalate plastic is commonly found in

- a) Soft drinks and water bottles
- b) Laundry detergent bottle
- c) Pipes
- d) Shopping bags

Q.9 Why is it difficult to recycle plastics ?

- a) It is very hard
- b) It comes in different sizes
- c) It is adhesive
- d) It contains different types of polymer resins

Q.10 The international recycling logo ( Resin identification code ) consist of \_\_\_\_\_ chasing arrows.

- a) Two b) Three
- c) Four d) Six

## SECTION-B

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

Q.11 Name two bio degradable plastics

Q.12 ISI stands for \_\_\_\_\_

Q.13 Name different stages of recycling

Q.14 Name two agents used in plastics for increasing their service life.

Q.15 Name two plasticizers used in plastic industry.

Q.16 Define co-processing.

Q.17 B.O.D stands for \_\_\_\_\_

Q.18 Give examples of two natural polymers.

Q.19 Density of HDPE is \_\_\_\_\_.

Q.20 Resin identification code for PET is \_\_\_\_\_

## SECTION-C

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

Q.21 Write short note on "proper disposal of plastics "

Q.22 Explain waste water recovery by membrane separation process.

Q.23 Discuss various stages of recycling of plastic wastes.

Q.24 Explain solvent separation process for plastic wastes.

Q.25 State various sources of plastic wastes.

Q.26 Discuss need and importance of plastic reprocessing.

Q.27 Define life expectancy of various polymers in environment