

- Q.29 What are UV radiations. How they affect plastics products.
- Q.30 Why impact modifiers are used in plastics. Which materials is used as impact modifier in PS material.
- Q.31 Why the toys made from PVC material were banned by Government.
- Q.32 Name two types of Twin Screw Extruders. Draw a neat sketch of any one.
- Q.33 Define the term Masterbatch. Give only the overview of their manufacturing process.
- Q.34 Why antistatic agents are used in Plastics. Give two examples of antistatic agents.
- Q.35 Give the difference between Plasticizers and extenders.

### **SECTION-D**

**Note :** Long Answer type question. Attempt any two questions.  $(2 \times 10 = 20)$

- Q.36 With a neat and labelled sketch. Explain the working of following.  
 a) Kneaders                  b) Masticators
- Q.37 With examples define any five additives. Also write how each one of them enhances the service life of plastics.
- Q.38 With a neat and labelled sketch write down the working of Two Roll Mill.

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5th Sem, **Branch :** Plastics Technology  
**Subject :** Compounding and formulation of Plastics

**Time : 3 Hrs.**                              **M.M. : 100**

### **SECTION-A**

**Note :** Multiple choice questions. All questions are compulsory.  $(10 \times 1 = 10)$

- Q.1 Which of following is a inert filler  
 a) Carbon Fiber              b) Glass Fiber  
 c) Calcium Carbonate      d) None of above
- Q.2 The base material of plastisol is  
 a) PE                          b) PP  
 c) PS                          d) PVC
- Q.3 The most common impact modifier used with HIPS is  
 a) PVC                        b) BR  
 c) PE                          d) PS
- Q.4 Blending is the term used with  
 a) Melts                      b) Liquids  
 c) Powders                    d) Both melts & powders
- Q.5 Maximum heat stabilizers are used with which of following plastics material  
 a) PVC                        b) PP  
 c) PE                          d) PMMA

- Q.6 Plasticizers are used to make

  - Rigid Products
  - Flexible Products
  - Both rigid & Flexible products
  - None of above

Q.7 Which plastics is highly prone to oxidative degradation

  - PE
  - PVC
  - PS
  - PA

Q.8 DIDP is example of

  - Heat Stabilizer
  - Plasticizers
  - Impact modifier
  - Anti oxidant

Q.9 Master batch is

  - Anti oxidant
  - Colorant
  - IR stabilizer
  - Filler

Q.10 Compounding is used for which of following reasons

  - To induce specific property
  - To improve overall product performance
  - To enhance service life
  - All of above

## **SECTION-B**

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

- Q.11 Define the term additive.  
Q.12 Define the term smoke.  
Q.13 Name two Antioxidents.

- Q.14 Expand the term UV.
  - Q.15 Define the term Flame.
  - Q.16 Expand the term PVC.
  - Q.17 Define thermoset plastics.
  - Q.18 Define the term TSE.
  - Q.19 Define the term Blending.
  - O.20 Write the classification of fillers.

## **SECTION-C**

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

- Q.21 With a neat and labelled sketch. Write down the working of Ribbon Blender,

Q.22 Write different type of lubricants. Write the definition of each.

Q.23 Why blowing agent are used in Plastics. Write the name of two blowing agents.

Q.24 What is oxidative degradation. Which Plastics are mostly prone to oxidative degradation.

Q.25 For which Plastics material maximum additives are used. Give the reason for same.

Q.26 With a neat and labelled sketch. Write the note on Banbury Mixer.

Q.27 Define Plastisols. Give two applications of plastisols.

Q.28 Give the names (only) of the various additives used in the compounding of Unsaturated polyester Resin.