

- Q.26 Discuss flame retardant additives with examples.
- Q.27 Discuss blowing agent additives and their types.
- Q.28 Draw label diagram of Banbury Mixer.
- Q.29 Explain construction and working of two roll mill.
- Q.30 Discuss construction and working Disperser
- Q.31 Discuss compounding of any two plastics for rigid application.
- Q.32 Write short note on mould release agent.
- Q.33 Explain High speed mixer.
- Q.34 Explain Principle of compounding.
- Q.35 Discuss role of various ingredients in any thermosets formulation.

SECTION-D

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

- Q.36 Explain construction and working:
- Ribbon blender.
 - Mixer extruder
- Q.37 Discuss
- Anti-ageing additives
 - Anti oxidants with example
- Q.38 Write short note:
- Difference between mixing and compounding
 - Mixing of solid and pastes

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Roll No.

Plastic Engineering

Subject:- Polymer Compounding and Formulation

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Which of the following is a heat stabilizer?
- White lead
 - PbO
 - ZnO
 - Metallic oxides
- Q.2 In liquid-liquid operations, centrifugal force is employed in_____.
- Settling
 - Filtration
 - Sedimentation
 - Both setting and filtration
- Q.3 _____ is an example of filler.
- CaCO₃
 - Talc
 - Mica
 - All of them
- Q.4 Carbon black is used in polymer compounding_____.
- as a filler
 - as a colorant
 - as a stabilizer
 - All of them
- Q.5 Anti oxidants are used in polymer as_____.

- a) To extend chains of polymer
 - b) to protect plastics from oxidation
 - c) to improve surface finish
 - d) None of these
- Q.6 _____ is used in mastication of rubber.
- a) Ribbon blender b) Disperser
 - c) two roll mill d) Banbury Mixer
- Q.7 Which among the following is a UV light absorber.
- a) Phosphate esters
 - b) Quaternary ammonium compounds
 - c) Glycol ester
 - d) Benzophenones
- Q.8 DOP stands for
- a) Di-octyl phthalates b) Di-octyl plastic
 - c) Di-octane phthalates d) None of the above
- Q.9 _____ prevent moulded article from sticking to the mold surface.
- a) Catalyst b) Fillers
 - c) Mold release agent d) Anti static agents
- Q.10 HALS stands for _____.
- a) Hindered Amine light stabilisers
 - b) Hindered Aluminium Stabilisers
 - c) Hindered Ammonia last stabilisers
 - d) None of these

SECTION-B

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

- Q.11 _____ is an example of blowing agent.
- Q.12 Name two impact modifiers used in plastic industry.
- Q.13 Give an example of lubricant used in plastic compounding.
- Q.14 Name any one anti slip agent.
- Q.15 _____ is an example of mould release agent.
- Q.16 Name any one application of ribbon blender.
- Q.17 Plasticizers are also referred to as chain extenders. (T/F)
- Q.18 Name any one rigid application of PVC
- Q.19 _____ is an example of flame retardant.
- Q.20 Give an example of solvent and diluents used in plastic compounding.

SECTION-C

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

- Q.21 How will compounding affect the properties of polymers.
- Q.22 Explain fillers and their types with examples.
- Q.23 Write short note on Solvents and diluents.
- Q.24 Explain dye and pigments with suitable example.
- Q.25 Discuss anti block and anti slip agents with example.