Q.27 Discuss smoke suppressants?

Q.28 Discuss UV stabilizers.

Q.29 Explain construction and working of intensive dry mixer.

Q.30 state advantages of Twin-screw extruder.

Q.31 Discuss working of two roll mill.

Q.32 Explain impact modifiers.

Q.33 Explain any two functions of anti static agents.

Q.34 Explain "Auto oxidation" reaction.

Q.35 Explain solvents used in polymer compounding with example.

## SECTION-D

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

Q.36 Explain construction, working and principle of mixer extruder with labelled diagram.

Q.37 Explain working and construction of

a) Ribbon blender

b) Kneaders

Q.38 Write short note:

a) Difference between mixing and compounding

b) Effect of compounding on processing application and service life of plastics.





Roll No. .....

**5th Sem / Branch : Plastic**

**Sub.: Compounding & Formulation of Plastics/ Compound of Poly.**

Time : 3Hrs. M.M. : 100

## SECTION-A

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

Q.1 _____ prevents the sticking of moulded article from mould.

a) Fillers b) Mould release agent

c) Plasticizers d) None of them

Q.2 _____ is used to improve the thermal stability during polymerisation.

a) Accelerators b) Colouring materials

c) Heat Stabilizers d) Lubricants

Q.3 HALS stands for _____.

a) Hindered amine lead sulphate

b) Hindered amine lead stabilizer

c) Hindered amine light stabilizer

d) Hindered amine low sulphates

Q.4 Which is an example of Plasticizer?

a) DOP b) Zn-stearate

c) $CaCo_3$ d) None of these

Q.5 Cellular structure in polymers in produced by _____.

a) Fungicide b) Antistatic agents

c) Blowing agents d) Mould release agents

Q.6 Which of the following is a temporary colourant in plastic industry?

a) Dyes b) Pigments

c) Master batch d) None of the above

Q.7 Which additives prevent the sticking of Plastic film layers together?

a) Antistatic agent b) Lubricants

c) Anti block agents d) Mold release agents

Q.8 _____is an example of filler.

a) $CaCo_3$ b) Talc

c) Mica d) All of them

Q.9 Molybdic oxide is an example of _____.

a) Lubricant

b) Flame retardant

c) Smoke Suppressants

d) None of them

Q.10 In compounding the polymers are mixed with _____ in a fixed ratio to improve overall properties

a) Resins b) Binders

c) Fibers d) Additives



## SECTION-B

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

Q.11 _____ is an example of blowing agent.

Q.12 Name two solvents used in plastic compounding.

Q.13 Name different types of Kneaders blades.

Q.14 Give an example of lubricant.

Q.15 Give the name of any two antistatic agents.

Q.16 Expand DIOP.

Q.17 Expand DMC.

Q.18 State an application where high speed mixer is used.

Q.19 Name defoamers used in plastic industry.

Q.20 Give an example of heat stabilizers.

## SECTION-C

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

Q.21 Draw neat sketch of high speed mixer.

Q.22 How does talc and mica dust affect the properties of plastic?

Q.23 What are lubricants? Explain giving examples.

Q.24 Describe the compounding of PVC for semi rigid application.

Q.25 Discuss various fillers used the polymer compounding.

Q.26 Discuss additives used in preparation of PVC conduit/ electrical pipes.