

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2172303/2172312****Date:14/05/2019****Subject Name:Additives and Compounding of Plastics****Time:02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Define Additives. List the additives used for plastics.	03
	(b) Compare: Additives and Compounding	04
	(c) Give detailed classification of Additives.	07
Q.2	(a) Define compounding. Which are the reasons for compounding?	03
	(b) Define flame retardants? Explain the mechanism of functioning of flame retardants.	04
	(c) Discuss in detail the construction and working of ribbon blender with a neat diagram.	07
	OR	
	(c) Define fillers. Give classification and function of fillers in detail.	07
Q.3	(a) Define Chemical and Physical Blowing agents	03
	(b) Define plasticizers. List the function of plasticizers.	04
	(c) List the technological requirements of additives	07
	OR	
Q.3	(a) Define Impact modifiers. State the function and examples of impact modifiers.	03
	(b) Explain anti-slip additives with examples.	04
	(c) Explain the construction and working of a high speed mixer with a neat diagram.	07
Q.4	(a) Define nucleating agent? Give examples of it.	03
	(b) Compare: Dyes and Pigments	04
	(c) Define Anti-oxidants. Explain about it in detail	07
	OR	
Q.4	(a) Write note on conductive fillers	03
	(b) Write a short note on theory of mixing	04
	(c) Define Heat stabilizer. Explain role of stabilizer in plastic in detail.	07
Q.5	(a) List the limitations of mixing theory	03
	(b) Short note on Anti blocking agent.	04
	(c) Explain the construction and working of Banbury mixer with a neat sketch.	07
	OR	
Q.5	(a) Explain continuous and batch type mixing process	03
	(b) Explain the purpose of a mold release agent	04
	(c) Explain the construction and working of a two roll mill.	07
