

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION MO/2023)

CLASS: B.TECH.
BRANCH: CHEMICAL ENGINEERING

SEMESTER : V
SESSION : MO/2023

SUBJECT: CL341 POLYMER TECHNOLOGY

TIME: 02 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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Q.1(a)	Compare between bleeding and blooming.	[2]	1 4
Q.1(b)	For manufacturing chair for a football stadium, what type of additives will you choose? Justify your answer.	[3]	3 5
Q.2(a)	How autoxidative degradation (with mechanism) takes place in polymer?	[2]	1 1
Q.2(b)	Classify fillers according to their function and mention examples in each category.	[3]	2 2
Q.3(a)	Identify the raw materials to manufacture Nylon 46.	[1]	5 3
Q.3(b)	Demonstrate the manufacturing process of polystyrene (PS) by bulk polymerization.	[4]	1 2
Q.4(a)	Identify the reasons to mention epoxy resin as universal adhesive.	[2]	1 3
Q.4(b)	Name and discuss the role of ingredients used to manufacture unsaturated polyester resin.	[3]	2 1
Q.5(a)	Compare between novolac and resol resin.	[2]	1 2
Q.5(b)	What happens when PVC is heated under flame? Demonstrate the steps you should take to prevent the phenomenon before PVC processing.	[3]	2 1

:::26/09/2023 M:::