Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2142306 **Date: 03/06/2017**

Subject Name: Manufacturing of plastics Material-2

Time: 10:30 AM to 01:00 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		**Short Questions**	**14**
	1	Define Initiator. Give any two examples of initiators.	
	2	What is condensation Polymerization? Name the two thermoplastics material that are formed by condensation polymerization.	
	3	Polycondensation is brought about by monomers containing two or more reactive functional condensing with each other. [True/False]	
	4	Define inhibitor. Give two examples of inhibitor used in preservation of monomer.	
	5	What is density of PVC?	
	6	Define distillation.	
	7	In Bulk polymerization the monomer is taken in the _____ state and the initiator is dissolved in the _____ .	
	8	Write the structure of PP.	
	9	Define Homo polymer and co-polymer.	
	10	Define Engineering Thermoplastics.	
	11	Choose the toughest plastics from the following: (a) PS (b) ABS (c) PMMA (d) HDPE	
	12	Good impact properties of HIPS are due to presence of _____ in its molecular structure.	
	13	Out of following select the commodity plastics (a) ABS (b) Polyacetal (c) Nylon (d) PP	
	14	Which of the following is having lowest density? (a) LLDPE (b) LDPE (c) PP (d) PS	
Q.2	**(a)**	What is the full form of PEEK? Write the structure of PEEK.	**03**
	(b)	Give properties of PEEK.	**04**
	(c)	Explain the high pressure process for manufacturing PE.	**07**
		OR	
	(c)	Write short note on tacticity in PP.	**07**
Q.3	**(a)**	Discuss applications of PTFE.	**03**
	(b)	Discuss properties of PTFE.	**04**
	(c)	Discuss about Mass Polymerization of PS in detail.	**07**
		OR	

Q.3	**(a)**	Define and Explain about Gas absorption in brief.	**03**
	(b)	Define Distillation. List the types of Distillation.	**04**
	(c)	Explain about Differential or Simple Distillation in detail.	**07**
Q.4	**(a)**	List the properties of PVC.	**03**
	(b)	List the application of PVC.	**04**
	(c)	Discuss manufacture of PVC resin in detail.	**07**
		OR	
Q.4	**(a)**	Discuss properties of PPS.	**03**
	(b)	Discuss applications of PPS.	**04**
	(c)	Draw any one Plant Layout for Polymer Manufacturing Industry.	**07**
Q.5	**(a)**	List the properties of Polyacetal.	**03**
	(b)	List the application of Polyacetal.	**04**
	(c)	Explain Bulk polymerization process in detail.	**07**
		OR	
Q.5	**(a)**	Give structure of Nylon-6 and Nylon-66.	**03**
	(b)	Compare the properties of Nylon-6 and Nylon-66.	**04**
	(c)	Discuss properties and applications of LDPE	**07**

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