Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV (OLD) - EXAMINATION - SUMMER 2017

Subject Code: 142801 Date: 12/06/2017
Subject Name: Manufacturing & Applications Of Polymeric Materials
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.

Q.1	(a) (b)	Describe in detail the manufacturing processes of DMEU. Discuss the application of polyacrylates as SAP.	07 07
Q.2	(a) (b)	Give a brief account on the chemistry and properties of silicone. Describe the method for preparation of polyethoxylate nonionic surfactant.	07 07
	(b)	OR Describe the manufacturing process of PVC with a complete flow chart.	07
Q.3	(a)	Describe in brief the chemistry, manufacturing process and various applications of melamine formaldehyde resin.	
	(b)	Discuss with proper justification the applicability of polyacrylates as blanket adhesive and soil releasing agent.	
Q.3	(a)	OR What is a printing binder? Describe the process for preparation of acrylate binder by emulsion polymerization.	07
	(b)	Describe various manufacturing processes of U.F. precondensate.	07
Q.4	(a)	Discuss the textile applications of polyethoxylates and polyethylene glycols.	07
	(b)	Enlist various applications of polyvinyl alcohol. Discuss the application of PVA in preparation of printing screens.	07
0.4	(.)	OR	05
Q.4	(a) (b)	Write short notes on: silicone softeners and silicone antifoaming agents. Describe in detail the gelling and non-gelling type water repellant silicone finishes.	07 07
Q.5	(a)	Describe any one manufacturing process of polyethylene while mentioning various textile and non-textile applications.	07
	(b)	Discuss the applications of PVC and PE in textile lamination and coating.	07
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Q.5	(a) (b)	Describe the manufacturing and various applications of DMDHEU. Write in brief the techno-chemical aspects of silicone emulsions.	10 04
