Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION - SUMMER • 2014

Subje	ect Co	ode: 142801 Date: 16-06-20)14
Subje	ect Na	ame: Manufacturing and Applications of Polymeric Materia	ls
Time	: 10:3	30 am - 01:00 pm Total Marks:	70
Instru			
	2. M	ttempt all questions. Iake suitable assumptions wherever necessary. igures to the right indicate full marks.	
Q.1	(a) (b)	What is polysol? Describe its manufacturing process. Describe the chemistry and applications of melamine formaldehyde pre condensate.	07 07
Q.2	(a)(b)	Name the starting material of PVA. Describe elaborately the manufacturing of PVA. With flow chart and recipe, describe the manufacturing of polyvinyl chloride by suspension polymerization.	07 07
	(b)	OR Describe various techno-chemical aspects of superabsorbent polymer.	07
Q.3	(a) (b)	State various textile and allied applications of polyvinyl chloride. Justify the position of polyacrylates as print table adhesives and soil releasing agents.	07 07
		OR	
Q.3	(a) (b)	Describe the manufacturing and applications of DMDHEU. Describe in detail the manufacturing processes of DMEU.	07 07
Q.4	(a)	Discuss about the suitability of polyacrylate polymers as printing binders and sizing agent.	07
	(b)	Describe in detail the gelling and non-gelling type water repellant silicone finishes.	07
Q.4	(a) (b)	OR Describe various techno-chemical aspects of silicone emulsions Throw light on chemistry of ethylene oxide condensation products. Discuss their properties and textile applications.	
Q.5	(a) (b)	Describe various manufacturing processes of U.F. precondensate. Elaborately discuss about the chemistry, properties and textile applications of PEG.	07 07
Q.5	(a)	OR Name two grades PVA.	08
•	(b)	Discuss the applications of PVA in textile printing and finishing. Give a brief account on the chemistry and properties of silicone.	07
