

# College of Engineering, Pune

Mech

## END Semester Exam – April 2013

T. Y. B. Tech. Polymer Technology (ILOE)

Day & Date- Wednesday , 24/04/2013

Time: - 2 to 5 PM

Maximum Marks: 50

Duration – 3 hrs.

### Instructions:

- 1 Solve all the questions
- 2 Figures to right indicates full marks.
- 3 Do not keep mobile phones with you; the handsets will be retained permanently by exam cell.
- 4 Draw figures where ever necessary

Q.1		Write down the use of following treatment chemicals for some class of plastic. Give one example of each treatment chemical	10
		a)Fiber lubricant, b)sizing agent, c)vulcanizing agent, d) finishing agent for fiber, e)wrinkle proofing reagent	
Q.2		Write down the most suitable polymer which exhibits outstanding property for the application area	10
		a) Tensile strength, b)stiffness, c)impact strength, d)hardness, e)thermal stability, f)chemical stability, g)weather resistance, h) water repellent, i)flame retardant, j) Bio compatibility	
Q.3	A	Give relation between $T_m$ and $T_g$ and relation between the two.	3
	B	Give detail account of various methods of polymer molding <b>OR</b> Give detail account of various methods of polymer extrusion	7
Q.4	A	Write a note on crystallinity in polymers	4
	B	A pack of polyethylene was opened on observation fibers of various molecular wts. were present they were classified as below 200 fibers – of degree of polymerization 200, 1000 fibers d.p. 300, 500 of d.p. 400 find number average molecular wt of the pack. <b>OR</b> Compare between addition and condensation polymerization techniques with suitable example on the following points mechanism, properties of the resultant polymer, application areas	6
Q.5		Polymers have changed human life and in a big way explain with 5 examples	10