

**D.K.M. COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1**  
**SEMESTER EXAMINATIONS**  
**APRIL – 2016**

RPCH4A

**POLYMER CHEMISTRY**

---

---

Time : 3 Hours

Max. Marks : 75

**SECTION – A (5 x 6 = 30)**

Answer ALL the questions.

1. (a) Explain in detail about the suspension polymerisation.  
(Or)  
(b) How are polymers classified? Explain with suitable example.
2. (a) What are the factors affecting Glass transition temperature? Explain.  
(Or)  
(b) What is the dye interaction technique? Explain.
3. (a) Write short note on vulcanisation.  
(Or)  
(b) Explain the photodegradation.
4. (a) What is extrusion? Explain.  
(Or)  
(b) Write a short note on casting of films.
5. (a) Nafion is a conducting polymer. Justify.  
(Or)  
(b) Write a short note on Ion exchange resins.

**SECTION – B (3 x 15 = 45)**

Answer any THREE of the following questions.

6. a) Explain the branched and cross linked polymers. (8)  
b) Explain the mechanism of cationic and anionic polymerisation. (7)
7. a) Explain the gel permeation chromatography. (8)  
b) Explain the thermogravimetric analysis of polymers. (7)
8. a) What are graft and block copolymers? How will you synthesise it? (5)  
b) Give a brief account on oxidative degradation. (10)
9. a) What is moulding? Explain. (7)  
b) Write a short note on Stress Vs Strain measurements. (8)
10. Write a short note on  
1. Teflon  
2. Polyacetylene  
3. Polyaniline. (15)

\*\*\*\*\*