

## All The best For Exams - Rejinpaul Team

Anna University Exams Nov. /Dec. 2014 – Regulation 2013  
Rejinpaul.com Important Questions – 1st Semester BE/BTECH  
CY6151 Engineering Chemistry

### UNIT - I

1. Explain the various Classification of the polymers with examples
2. Differentiate between thermosets and thermoplastics with suitable example
3. Explain condensation, addition polymerization with suitable example
4. Explain the free radical mechanism, ionic mechanism (or) Cationic and Anionic of additional polymerization in detail
5. Explain the bulk, emulsion and suspension polymerization in detail

### UNIT - II

1. Derive Gibb's Helmholtz equation and discuss its applications
2. Derive the Clausius - Clapeyron equation and discuss its applications
3. Derive Maxwell relations with necessary equations
4. Derive the clausius-claperyron equation and discuss its applications
5. What is meant by Van't Hoff isotherm? Derive expression ( May Ask any One)  
Problems Like This May Asked: (1) Calculate the enthalpy, entropy of the reaction, calculate the equilibrium constant

### UNIT - III

1. Derive the expression for the Beer-lambert's law ( Study Everything related Like limitation, application, equation, description, advantages, disadvantages)
2. Explain the working of IR spectroscopy and discuss its application
3. Explain the working of UV spectroscopy and discuss its application
4. Explain radiative and non-radiative pathways for electronic transition using Jablonski diagram

### UNIT - IV

1. Explain the phase diagram of water system with neat sketch
2. Explain about the various heat treatment processes
3. Explain Lead- Silver and Zn-Mg alloy system with neat diagram
4. Explain in detail about phase rule and give its limitation

### UNIT - V

1. Write about nano particles. Discuss various methods of preparation of nanoparticles.
2. Discuss the hydrothermal and electrodeposition techniques for synthesis of nanoparticles
3. What are carbon nanotubes and how carbon nano tubes synthesised? Explain their types, properties and applications
4. What are nano materials? Discuss the types of carbon nano tubes and applications
5. Discuss the CVD and laser ablation techniques for the synthesis of nanoparticles

All the Best for Exams

Questions Are Expected for University Exams This May or may Not Be Asked for Exams

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