## Topics Covered till 15.02.2015

<table>
<thead>
<tr>
<th>S.No</th>
<th>Date</th>
<th>Resource Person</th>
<th>Venue</th>
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| 1.   | 27.10.2014   | Dr. SivaSamy, ANJACollege | Lady Doak College         | • Periodic Table  
• VSEPR Theory                                                             |
| 2.   | 06.12.2014 & | Muthukumar., Ph.D (IITM)  | Lady Doak College &       | • Reaction Intermediates  
  o Carbocation  
  o Carbanion  
  o Free Radicals  
  o Carbene  
• Acidity, Basicity  
• Aromaticity  
  o Antiaromaticity  
  o Homoa aromaticity  
  o Dipolemomemt  
• Stereochemistry  
  o Nomenclature  
  o Enantiomers,  
  Diastereomers  
  o Enantiotopic,  
  Diastereotopic, &  
  Homotopic Ligands  
  o Allenes, Biphenyls,  
  Spiranes  
  o Nitrogen Compounds,  
  Phosphorous Compounds  
  o Ansa Compounds  
  o Cyclophanes  
  o Helicity  
  o Kinetic Resolution  
• Reactions & Reagents  
  o Oxidation - Cr Based  
  Oxidizing agents  
  ▪ K₂Cr₂O₇  
  ▪ Jones’ Reagent  
  ▪ Collin’s Reagent  
  ▪ PCC  
  ▪ PDC  
  o Mn Based Oxidizing  
  Agents  
  ▪ MnO₂ | 07.12.2014   | Madura college            | Lady Doak College & Madura college | |
| 3. | 14.12.2014 | Dr. SivaSamy, ANJA College | - Periodic Table (Recall)
- Metal Clusters
  - Types of Structure
  - TEC/VEC
  - Skeletal electrons
  - No. of M-M bonds
  - Capping atoms
  - Encapsulation
  - Zintl ions |
  - Chemoselectivity
  - Regioselectivity
  - Protecting Groups
- Organic Reaction Mechanisms
- Enantiomeric Excess
- Organic Transformation and Reagents
  - Gilman’s Reagent |
| 5. | 28.12.2014 | Dr. Saravanan (ANJAC), ANJA College | - Reagents
  - LDA
  - LiAlH₄
  - NaN₃/liq.NH₃
- Benzyne Mechanism
- Shapiro Reaction
- Wittig and Wittig-Horner reaction
- Arbuzov reaction
- CSIR and GATE questions discussion |
| 6. | 28.12.2014 | Dr. SivaSamy, ANJA College | - Dinuclear Complexes
- Metal-Ligand ratio
- Term Symbol
- Total Degeneracy of a Term
- Atomic Spectra
- Molecular Term Symbols |
| 7. | 04.01.2015 | Dr. ShunmugaSundaram, VHNSN College | - Nuclear Magnetic Spectroscopy
  - No. of Signals
  - Position of Signals
  - Type of Protons |
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<td>04.01.15</td>
<td>Dr.P.Sami</td>
<td>VHNSN College</td>
<td>- Fundamentals of Quantum Mechanics</td>
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<td>Mr.Ramachandra n</td>
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<td>Electrochemistry – Introduction</td>
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<td>Dr.Mothilal</td>
<td>S.N.College</td>
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<td>CSIR – NET Questions Discussion on Organic Synthesis &amp; Photochemistry &amp; Pericyclic Reactions</td>
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<td>Ms.Shanthi</td>
<td>SFRC</td>
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<td>13</td>
<td>01.02.15</td>
<td>Dr.Shanmuga Sundaram</td>
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| 14  | 14.02.2015 | Dr. Sivasamy   | ANJAC       | - EAN rule for square planar complexes  
- Magnetic Moment  
- Applications of Magnetic Moment  
- John-Teller Distortion  
- Electronic Spectroscopy  
- Orgel Diagram  
- Color of the complexes |
| 15  | 15.02.2015 | Dr. Sami       | VHNSN       | - Group Theory  
- Modes of Vibration  
- Mutual Exclusion Principle  
- Classes and Similarity Transformation |
| 16  | 15.02.2015 | Dr. Shanmuga Sundaram | VHNSN | - $^{13}$C NMR Spectra  
- Additivity Rule |