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**PRESIDENCY UNIVERSITY**

**Bengaluru**

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| **Ph.D. Course Work End Term Examinations –JAN-FEB- 2025** |
| **Date:** 30 – 01- 2025 **Time:** 09:30 am – 12:30 pm |

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| **School:** SOE | **Program:** Ph.D**.** | |
| **Course Code :** CHE807 | **Course Name :** Basic Organic Chemistry and Polymer Chemistry | |
| **Semester**: | **Max Marks**: 100 | **Weightage**: 50% |

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| --- | --- | --- | --- | --- | --- |
| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** |
| **Marks** | **10** | **20** | **20** | **30** | **20** |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Do not write anything on the question paper other than roll number.*

**Part A**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Answer ALL the Questions. Each question carries 10 marks. 6Q x 10M=60 Marks** | | | | |
| **1** | Discuss the process of purification and drying for Acetone and Ethyl acetate | **10 Marks** | **L2** | **CO1** |
| **2** | What are reactive intermediate? Discuss the formation and stability of Carbanion and Carbene intermediates | **10 Marks** | **L3** | **CO2** |
| **3** | Explain Huckel’s rule for aromaticity of benzene | **10 Marks** | **L3** | **CO3** |
| **4** | Explain the mechanism and applications of Acyloin Condensation | **10 Marks** | **L3** | **CO4** |
| **5** | Explain sp, sp2, sp3 hybridization with examples | **10 Marks** | **L2** | **CO2** |
| **6** | Explain any one reaction that follows a free radical mechanism | **10 Marks** | **L2** | **CO4** |

**Part B**

|  |  |  |  |  |  |
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| **Answer the Questions. Each question carries 20 marks 2Q x 20 = 40 Marks** | | | | | |
| **7.** |  | Explain coordination polymerization mechanism | **20 Marks** | **L2** | **CO5** |
|  | | | | | |
| **8.** |  | Explain the mechanisms of Beckman rearrangement and Benzidine rearrangement | **20 Marks** | **L2** | **CO4** |

**\*\*\*\*\* BEST WISHES \*\*\*\*\***