

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary. Answer all questions

LONG ESSAY (Answer any TWO)**2 X 20 = 40 Marks**

1. a) Write an account of formation, stability and reactions of free radicals
b) Explain addition to multiple bonds
2. a) Explain Cannizzaro reaction and Favorskii rearrangement with examples
b) Write Polymer-supported synthesis of organic compounds giving examples
3. a) Discuss Benzyne mechanism for Aromatic Nucleophilic substitution giving examples
b) What is the stability of carbocations? Explain with examples Pinacol-Pinacolone rearrangement

SHORT ESSAY (Answer any FIVE)**5 X 10 = 50 Marks**

4. Explain giving mechanism, stereochemistry and examples "Hofman degradation of amides"
5. Write about macro beads in new solid-phase synthesis
6. Explain giving mechanism and examples for Reimer-Tiemann reaction and conversion of Pyrrole to Pyridine
7. Explain giving examples Diels-Alder reaction and stereochemistry of pericyclic reactions
8. Explain homo and heterogeneous catalysis with examples
9. Explain phase transfer catalysis and its applications

SHORT NOTES**2 X 5 = 10 Marks**

10. Curtius, Schmidt and Lossen rearrangement reactions
11. Discuss mechanism, examples of Cope rearrangements

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