

School of Basic and Applied Sciences

Chemistry
ETE - Sep 2023

Time : 3 Hours

Marks : 50

Sem I - MSCH5001 - STEREOCHEMISTRY and REACTION MECHANISMS

Your answer should be specific to the question asked

Draw neat labeled diagrams wherever necessary

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| 1. | Relate the concept of chirality by showing proper chemical reaction. | K2 CO1 (2) |
| 2. | Extend the Stereochemistry of biphenyls. | K2 CO2 (2) |
| 3. | Develop any two-preparation method and uses of free radical. | K3 CO3 (2) |
| 4. | Develop the mechanism of aldol condensation. | K3 CO4 (2) |
| 5. | Examine the Sharpless asymmetric epoxidation reaction. | K4 CO5 (2) |
| 6. | Organize and discuss the all types of symmetry elements. | K3 CO1 (5) |
| 7. | Plan and draw the different conformation of cyclohexane and some substituted cyclohexane and draw the conformation of decalins. | K3 CO2 (5) |
| 8. | Discuss recent advances in the stereoselective synthesis with major applications | K6 CO6 (6) |
| 9. | Inspect the role of reaction intermediates and explain the formation, stability and reactions of carbenes and Nitrene. | K4 CO3 (8) |
| 10. | Inspect the mechanism of Lossen and Curtius rearrangement reactions. | K4 CO4 (8) |
| 11. | Explain the reaction mechanism of Barton reaction and its applications | K5 CO5 (8) |