



[Time: 3 Hours]

[Max. Marks: 75]

Advanced Organic Chemistry - I

Q.P. CODE: 5118

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

LONG ESSAY (Answer any Three)

3 X 10 = 30 Marks

1. Define and classify Carbanions. Write short note on structure, stability and reactions of carbanions.
2. Explain the mechanism involved in Brook rearrangement and Sandmeyer reaction.
3. Explain any two methods for synthesis of Purine nucleus and give structure of any five drugs with purine nucleus.
4. Explain retro-synthesis by involving functional group modifications with suitable examples.

SHORT ESSAY (Answer any Nine)

9 X 5 = 45 Marks

5. Explain mechanism of E1 reaction with suitable example.
6. Make a comparative statement on reactions of aliphatic vs aromatic compounds.
7. Explain asymmetric epoxidation with suitable example.
8. Write short note on application of Beyer-Villiger oxidation in organic synthesis.
9. Explain synthetic applications of n-bromo succinamide and diethyl azodicarboxylate.
10. Write short note on amino protecting groups.
11. Explain synthetic applications of titanium chloride and osmium tetroxide in organic synthesis.
12. Explain the synthesis and uses of 6-mercaptopurine.
13. Write the structure and uses for any five quinoline containing drugs.
14. Write short note on application of retro-synthesis in prospect of drug discovery process.

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