

[Time: 3 Hours]

[Max. Marks: 100]

**ADVANCED ORGANIC CHEMISTRY**

**(RS 2 & RS 3)**

**Q.P. CODE: 9202**

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) What are Carbonium ion ? Write the reaction which they generated. Explain the stability of carbonium ion with suitable example.
2. a) Describe the preparation and synthetic application of malonic ester  
b) Explain the types of pericyclic reaction with examples.
3. Give one Synthesis and an example of active medicinal agent belonging to the following Heterocyclic ring system  
a) Furan b) Thiazoles c) Phenothiazine d) Pyridine

**SHORT ESSAY (Answer any FIVE)**

**5 X 10 = 50 Marks**

4. Give the synthetic route for quinoxaline & quinoline.
5. Explain the mechanism of applications of a) Aldol condensation b) Claisen Condensation.
6. Describe different type of chemical bonds and their properties
7. Outline the mechanism of Hoffmann's rearrangement reaction and its application.
8. What is Grignard reagent ? Write mechanism of reaction involving Grignard reagent and its Synthetic application.
9. Explain the mechanism and orientation of elimination reactions.

**SHORT NOTES**

**2 X 5 = 10 Marks**

10. Hydrogen bonding
11. Friedel craft reaction

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