



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**

- Explain free radicals with suitable illustration. Write the reaction in which they are generated. Add a note on stability of free radicals
 - Write the mechanism and application of microwave irradiation techniques
- Explain the stereochemistry of monosaccharides
 - Explain the mechanism and applications of
 - Friedel crafts reaction
 - Meerwein-Ponndorf-Verley reduction
- Give one method of synthesis and an example of medicinal molecule belongs to the following heterocyclic ring system
 - Thiophene
 - Phenothiazine
 - Benzodiazepine
 - Furan

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

- Give the methods of synthesis and applications of malonic ester
- Explain the mechanism and synthetic applications of aldol condensation
- Write the mechanism of
 - Beckmann rearrangement
 - Schmidt reaction
- Write a note on catalytic reaction with suitable examples
- Explain nucleophilic substitution reactions with suitable illustrations
- Write the synthetic route for Quinazoline and quinoline

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

- Write a note on stereomeric separation
- Explain epoxidation with suitable example

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