

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

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

4. Give the methods of synthesis and applications of malonic ester
5. Explain the mechanism and synthetic applications of aldol condensation
6. Write the mechanism of
 - a) Beckmann rearrangement
 - b) Schmidt reaction
7. Write a note on catalytic reaction with suitable examples
8. Explain nucleophilic substitution reactions with suitable illustrations
9. Write the synthetic route for Quinazoline and quinoline

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

10. Write a note on stereomeric separation
11. Explain epoxidation with suitable example

* * * * *