



**Rajiv Gandhi University of Health Sciences**  
**First Year M.Pharm Degree Examination - May 2012**

[Time: 3 Hours]

[Max. Marks: 100]

**ADVANCED PHARMACEUTICAL CHEMISTRY (ORG.)**

**PAPER II**

**(RS2 and RS3)**

**Q.P. CODE: 9232**

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) Give an account of combinatorial chemistry with special reference to its application in drug discovery.  
b) Define catalysis. Explain the importance of homogenous catalysis in the manufacture of drugs.
2. Explain the following reaction mechanisms and the application in synthesis.  
(a) Perkin condensation (b) Hoffmann rearrangement.
3. Outline the mechanism and discuss the synthetic importance of the following  
(a) Wagner – Meerwein (b) Reimer – Tiemen reaction.

**SHORT ESSAY (Answer any FIVE)**

**5 X 10 = 50 Marks**

4. Explain with examples various pericyclic reactions.
5. Give an account of macro beads in new solid phase synthesis.
6. Explain sigmatropic rearrangement. Explain the mechanism involved in sommelet rearrangement
7. Discuss the mechanism of Diel's Alder reaction and explain its significance in pharma chemistry.
8. Give an account of addition reactions at carbon-carbon multiple bonds.
9. Discuss the neighboring group assistance in free radical reaction.

**SHORT NOTES**

**2 X 5 = 10 Marks**

10. Cope rearrangement.
11. Wolff rearrangement.

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