# Rajiv Gandhi University of Health Sciences

## First Year M.Pharm Degree Examination - October 2010

[Time: 3 Hours] [Max. Marks: 100]

## ADVANCED ORGANIC CHEMISTRY

**(Revised Scheme 2)**

# 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. Discuss in detail the formation, stability, reactions and synthetic applications of carbonium ions

2. Give the preparation and applications of aceto acetic and malonic ester

3. Write the synthesis, of: a) Quinazoline b) Pyrazole c) Oxazole d) Benz-Imidazole. Draw the structures of two drugs each belonging to this class

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

4. Discuss the kinetic energy and mechanism of substitution reaction ($SN_2$ and $SN_1$)

5. List the commonly used reducing agents. Discuss the mechanism and applications of any one of them

6. Discuss pharmacologically important benzodiazepines giving the synthesis of any one of them

7. Give the mechanism of a) Pinacol-pinacolone rearrangement b) Allylic rearrangement

8. Discuss the mechanism of a) Claisen condensation b) Aldol condensation

9. Give the synthetic routes for 1, 2, 4 triazole and phenothiazine

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

10. Microwave assisted organic synthesis Vs thermal methods of organic synthesis

11. Stereochemistry of carbohydrates



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