**Reg. No. \_\_\_\_\_\_\_\_**

**Karunya University**

**(Karunya Institute of Technology and Sciences)**

(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)

**Supplementary Examination - June 2011**

**Subject Title: ORGANIC CHEMISTRY - II Time: 3 hours**

**Subject Code: 10CH305 Maximum Marks: 100**

**Answer ALL questions (5 x 20 = 100 Marks)**

1. **Compulsory**:

a. Explain Frontier orbital model (4)

b. Explain with examples

i) Diels- Alder reaction (8)

ii) Claisen Rearrangements (8)

2. a. What is meant by disconnection of functional groups explain with examples. (5)

b. What is the need of order of events in organic synthesis? Explain with any one example.

(10)

c. Write note on one group C-X disconnection. (5)

(OR)

3. a. What is the principle used in reversal of polarity? Explain with example. (4)

b. Write note on cyclisation reaction. (8)

c. What is meant by regioselectivity? Explain it in Michael reaction. (8)

4. Write about the reaction and mechanism of the following

a. Mannich Reaction b. Oppenauer Oxidation c. Chichibabin Reaction

d. Fischer- Indole synthesis (4 x 5)

(OR)

5. a. How will you prepare the following reagents? Give the organic synthesis in which it is used.

i) Lithium Diisopropylamide (LDA) ii) Osmium Tetraoxide (7+7)

b. Which reagent will be suitable to oxidize Allylic compound? Explain with example. (6)

6. a. What is meant by singlet and triplet in energy transition reactions? (6)

b. State the selection rules. (6)

c. Write note on various types of excitation. (8)

(OR)

7. a. Explain the mechanism of Norrish type I and II reactions. (10)

b. Give the reaction of Paterno- Buchi reaction. (5)

c. Write one example for cis-trans isomerism. (5)

8. Describe the mechanism of the following rearrangements

a. Pinacol- Pinacolone (8)

b. Benzilic acid (8)

c. Baeyer Villiger (4)

(OR)

9. Explain in detail with mechanism of the following

a. Curtius rearrangement (6)

b. Beckmann rearrangement (8)

c. Cope rearrangement (6)