**M. Pharm 1st Semester Examination**

**Subject- Advanced Organic Chemistry (MPCI02T)**

 **Full Marks- 75 Time – 3 hours**

 **Answer any five questions:**

**1. Explain the structure, generation, stability and reaction of carbocation carbanion and free radical. (15)**

**2. Explain the mechanism, Orientation, stereo chemistry of elimination reaction (E1and E­2) (15)**

**3. Write the application with mechanism. (15)**

 **(i) N Bromo succinimide**

 **(ii) Triphenyl phosphine**

 **(iii) Osmium tetroxide**

**4. What do you mean by the word disconnection and explain the order of event or guidelines for disconnection. (15)**

**5. Give the mechanism with example of the following naming reactions.**

 **(i) Ullmann coupling reaction (15)**

 **(ii) Dobner -Miller reaction**

 **(iii) Shapiro and Suzuki reaction**

**6. How will you Synthesize. (15)**

 **(i) Metronidazole (ii) Alprazolam**

**(iii) Chloroquine (iv) Promazine**

 **(v) Mercaptopurine**

**7. Write a short note on (15)**

 **(i) Nitrene**

 **(II) Synthesis of pyrimidine**

 **(iii) Synthesis of Acridine**