

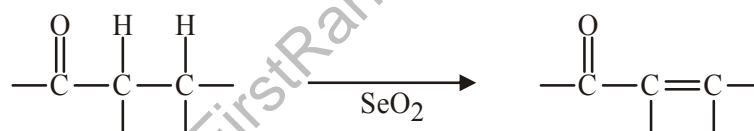
**Total No. of Pages : 02**

**ORGANIC CHEMISTRY**  
**Subject Code : MSCH-102**  
**M.Code : 71596**

**Max. Marks : 100**

1. Attempt Five questions in all including question no. I which is compulsory and selecting one each from Unit I to IV.
2. All Questions carry equal marks.

(d) Offer a suitable mechanistic pathway for the following transformation :



(j) How the pyrylium salt is synthesized?

**UNIT-I**

- Q2. (a) Discuss the protection and deprotection of amines.  
(b) Discuss the use of dithiones in the synthesis of organic compounds (umpolung reaction).
- Q3. (a) Explain the applications of green chemistry to organic synthesis.  
(b) Write a short note on synthon and synthetic equivalent with suitable examples.

**UNIT-II**

- Q4. How Wilkinson's catalyst, crown ethers and dicyclohexylcarbodiimide are useful reagents for synthesis of organic compounds. Discuss with suitable examples.
- Q5. (a) Write a short note on Merrifield resin.  
(b) With suitable example, illustrate the use of 2,3-dichloro-5,6-dicyano-1,4-benzoquinone and trimethylsilyl iodide.

**UNIT-III**

- Q6. What do you mean by asymmetric induction? Discuss in detail for the various methods of asymmetric induction.
- Q7. (a) Write a short note on asymmetric acyl transfer reactions.  
(b) Discuss the use of chiral quaternary ammonium salts in asymmetric synthesis.

**UNIT-IV**

- Q8. (a) Discuss the different methods used in the synthesis of oxiranes and indene derivatives.  
(b) Outline the methods for the reactions of furan and coumarins.
- Q9. Give the synthesis of following:
- (a) oxetanes
  - (b) azetidines
  - (c) pyrrolidine
  - (d) pyridones
  - (e) tetrahydrofuran

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**