(b) Discuss reduction methods in conversion of cyclohexanone to cyclohexanol. 8

9. (a) Discuss stereochemistry of 5 and 6 membered nitrogen containing cyclic compounds. 8

(b) Comment on the statement" All stereospecific reactions on stereoselective in nature. 8

Roll No. .....

42003

M. Sc. Chemistry 4th Semester Examination – May, 2019

ORGANIC SPECIAL- IV

Paper : CY(H) - 401 (C)/4283

Time : Three hours] ***[Maximum Marks : 80***

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt ***five*** questions in all, selecting ***one*** question from each Section. Question No. **1** is ***compulsory***. All questions carry equal marks.

1. ***Compulsory Question:***

(a) Why there is need of photo chemistry ?

(b) Comment on the energy requirements of intersystem crossing.

(c) Out of ortho, para products of photofries reaction, which is more stable and why ?

(d) How Photochemical reactions on useful in degradation of polymers ?

(e) Show diagrametically antera and suprafaeial shift.

(f) What are Pericyclic reactions ?

(g) Give one example of stereoselective reaction.

(h) What is N-inversion in stereochemistry ?

SECTION – A

2. (a) Discuss Photochemistry of Cyclic ketones . 8

(b) Discuss Jablonski diagram. 8

3. (a) Explain with suitable examples intramolecular reaction in Photochemistry. 8

(b) Discuss Photoreduction reaction in detail. 8

SECTION – B

4. (a) Discuss the Photorearrangement in Cycalohexadienones. 8

(b) Describe in detail Hunsdicker reaction ? 8

5. (a) What is Poterno-Buchi reaction ? Discuss its stereochemical consequences. 8

(b) Discuss the methods of generation of fr radicals.

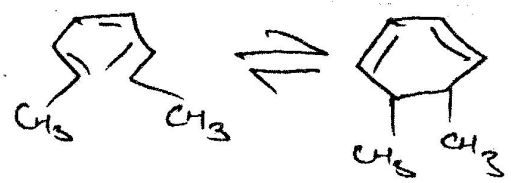
SECTION – C

6. (a) Explain exo and endo reactions with speci reference to Diel's Alder's reaction.

(b) Discuss cope and clasian rearrangement in detail

7. (a) Explain Various steps involved in the conversion of -5, 6- dimethyl 1-1, 3 cyclohexadiene into cis isomer.

(b) Explain the following reaction whether it is thermally or photochemically allowed.



SECTION – D

8. (a) Discuss stereochemistry of cyclic compounds starting from seven membered to nine membered ring. 8