

END OF SEMESTER EXAMINATIONS, NOVEMBER - 2018

ORGANIC CHEMISTRY-II

SUBJECT CODE: 15P3CH06

MAJOR: M.Sc (CHEMISTRY)

TIME : 3 HOURS

SEMESTER : II

MAX. MARKS: 70

SECTION – A (10 X 1 = 10)Answer All the questions:

1. Write the selection rules for electrocyclic reactions.
2. Write an Ene reaction.
3. What is meant by energy transfer?
4. Define the term "Photosensitisation".
5. What is meant by anionotropic rearrangement?
6. Aryl groups have a far greater migratory aptitude than alkyl groups why?
7. Give any two examples of dissolving metals used in reduction reactions.
8. What is clemmenson reduction?
9. Write the R configuration for the following compound 2-hydroxy propanoic acid.
10. Why are Meso compounds optically inactive?

SECTION – B (5 X 4 = 20)Answer All the questions:

11. a) Explain 1,3 dipolar cyclo addition.
(OR)
b) Explain sigmatropic rearrangement.
12. a) Write a short note on Paterno-Buchi reaction.
(OR)
b) Explain photo oxidation reactions.
13. a) Describe the mechanism of Lossen rearrangement.
(OR)
b) Discuss the mechanism of Beckmann rearrangement.
14. a) Explain the formation of C=C bonds by dehydrogenation.
(OR)
b) Explain the mechanism of Wolf-Kishner reduction.
15. a) Describe the stereo chemistry of biphenyls and allenes.
(OR)
b) Explain the conformation and reactivity in mono substituted cyclo hexanes.

SECTION – C (5 X 8 = 40)Answer All the questions:

16. a) Draw the orbital correlation diagram for butadiene-cyclobutene and explain.
(OR)
b) Describe [2+2] and [4+2] cyclo addition using orbital correlations diagram.
17. a) Explain Norrish type-I and type-II reactions.
(OR)
b) (i) Draw and Explain "Jablonski diagram" (ii) Discuss photo reduction.
18. a) Explain (i) Wagner-Meerwein rearrangement (ii) Dienone-phenol rearrangement
(OR)
b) Describe (i) Baeyer-Villiger rearrangement (ii) Favorskii rearrangement
19. a) Describe the allylic oxidation of glycols, alcohols and amines.
(OR)
b) Discuss the mechanism of Birch reduction and acyloin condensations.
20. a) Describe the conformational analysis of decalins.
(OR)
b) Give an account on stereochemistry of sulphur and nitrogen compounds