

18 FEB 2021

M.Sc. SEM-1 Examination February– 2021
Organic Chemistry
Paper no. 102 Paper code: 22864

Time: 1:30 Hours

Total Marks: 42

- (1) All questions carry equal marks
(2) Attempt any three questions out of four

Q-1 Discuss the Aromatic character of [10] annulenes, [12] annulenes, [14] annulenes, [16] annulenes, [18] annulenes. 14

OR

Q-1 (A) Draw Jablonaski diagram with suitable example and discuss the each term involve in it. 07

(B) Explain Nirrish type-1 reaction with suitable example. 07

Q-2 What do you understand by racemic mixtures? Discuss the methods of separation of enantiomers. 14

OR

Q-2 (A) Draw the axial and equatorial bonds in cyclohexane. Explain the different conformations in mono substituted cyclohexane and discuss the stability. 07

(B) Discuss the concept of Regio-selectivity in detail with suitable example? 07

Q-3 Discuss structure, generation, reactions and stability of carbocations in detail. 14

OR

Q-3 (A) Explain cycloaddition reaction of carbenes in detail. 07

(B) Explain carbonium ion, carbenium ion and cabocation. Discuss different structural features, which influence the stability of carbocations. 07

Q-4 Draw the correlation diagram for the interconversion of 1,3-butadiene to cyclobutene. 14

OR

Q-4 (A) Draw the correlation diagram of (2s+2s) cycloaddition reaction. 07

(B) Write a note on Claisen rearrangement with respect to [3,3] and [5,5] shift. 07