

B.Sc.(Bio Technology) - 2nd Semester (Old sylb. 2019-20)
(2721)

Paper : BT-4 Organic Chemistry-B

Time allowed: 2 hrs.

Max. Marks: 40

Note: There are EIGHT questions of equal marks. Candidates are required to attempt any FOUR questions.

Section-A

1. (a) With mechanism, discuss the metal-ammonia reduction of alkynes. (6)
 (b) Why terminal alkynes are acidic in nature? (4)
2. (a) Using the concept of orbital symmetry, discuss the feasibility of cycloaddition reaction between 1,3-butadiene and ethylene at thermal conditions. (6)
 (b) Complete the following reaction with mechanism: (4)

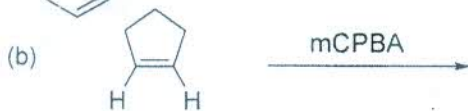
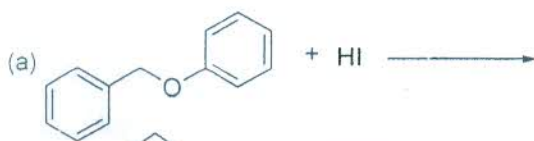


Section-B

3. (a) Account for the fact that phenylmethyl ether reacts with HI to give phenol and methyl iodide and not iodobenzene and methyl alcohol. (6)
 (b) Complete the following reaction with suitable mechanism: (4)



4. Complete the following reactions with a suitable mechanism: (4+4+2)



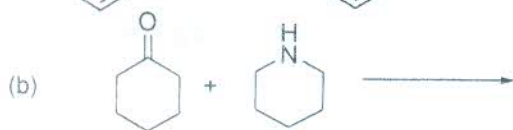
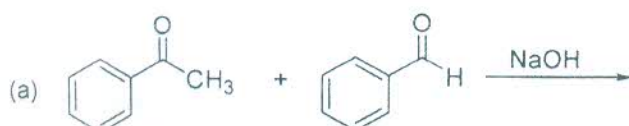
Section-C

5. (a) Discuss Haloform reaction providing a suitable mechanism. (6)
 (b) With a suitable example, discuss cyanohydrin formation reaction. (4)

(2)

6. Complete the following reaction with a suitable mechanism:

(6+4)

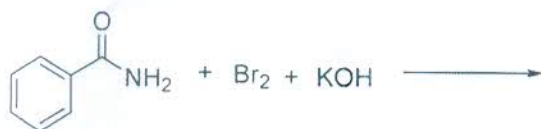


Section-D

7. (a) Discuss Dieckmann condensation and provide its mechanism. (6)

(b) Acetyl chloride undergoes nucleophilic substitution reaction much readily than ethyl chloride. (4)

8 (a) Complete the following reaction with suitable mechanism: (6)



(b) Discuss the mechanism of acidic hydrolysis of amides. (4)

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