

2023
B.A./B.Sc.
Third Semester
 CORE – 6
CHEMISTRY
Course Code: CHC 3.21
 (Organic Chemistry - II)

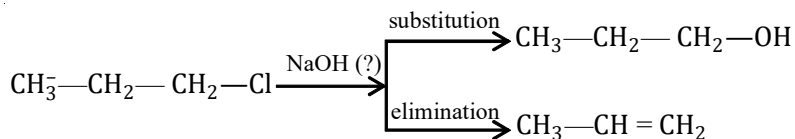
Total Mark: 70
 Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

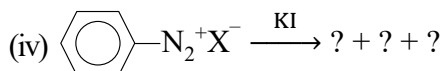
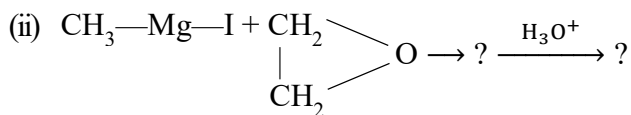
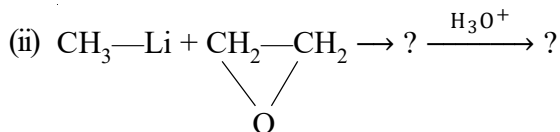
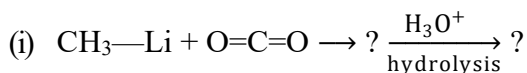
UNIT-I

1. (a) What is Hunsdiecker reaction? Give example. 3
 (b) For the reaction

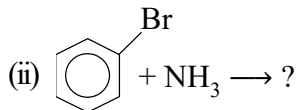
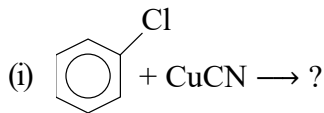


discuss those factors which favour and do not favour above reactions. 5

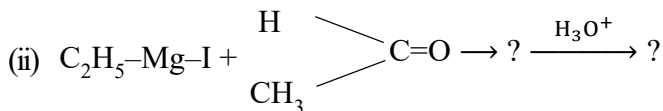
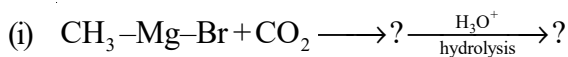
- (c) Complete the following reactions: 1½×4=6



2. (a) What is S_N1 -reaction? Give its mechanism and stereochemical aspects with a suitable example. 6
- (b) Complete the following reaction and give their mechanisms. $2\frac{1}{2} \times 2 = 5$

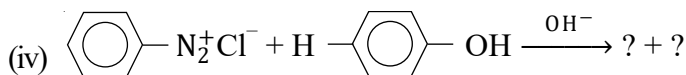
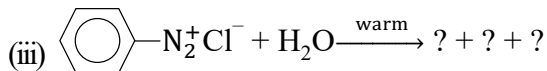
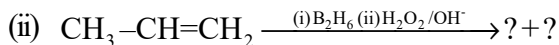
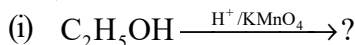


- (c) Complete the following reactions: $1\frac{1}{2} \times 2 = 3$



UNIT-II

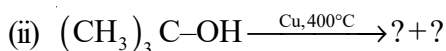
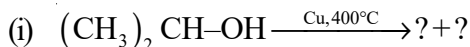
3. (a) Phenols are more acidic than alcohol. Justify. 3
- (b) Complete the following reactions: $1\frac{1}{2} \times 4 = 6$

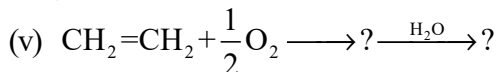
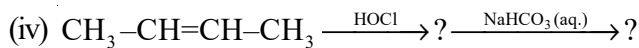
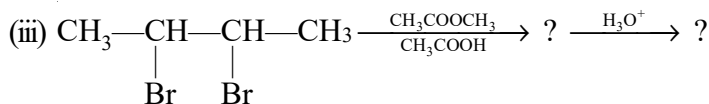


- (c) Discuss the following reaction of phenol: $2\frac{1}{2} \times 2 = 5$

- (i) Reimer-Tiemann reaction
 (ii) Kolbe reaction

4. (a) Complete the following reactions: $1\frac{1}{2} \times 5 = 7\frac{1}{2}$



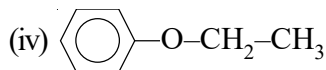
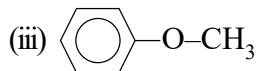
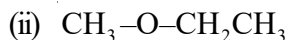
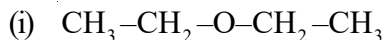


(b) What is pinacol-pinacolone rearrangement? Give its mechanism. 4

(c) Phenols are less soluble in water than corresponding alcohol. Give reason. 2½

UNIT-III

5. (a) Write the common, commercial and IUPAC names of the following compound. 4×2=8



(b) How is ether prepared by dehydration of alcohols? Give its mechanism. 4

(c) Complete the following reactions: 2



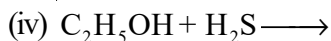
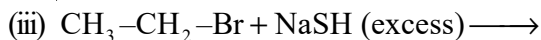
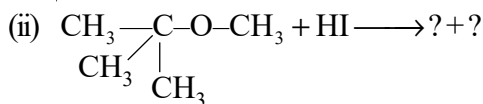
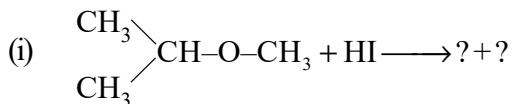
6. (a) Write two methods for the preparation of ethers. 4

(b) Write the common as well as IUPAC name of the following compounds: 3



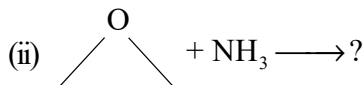
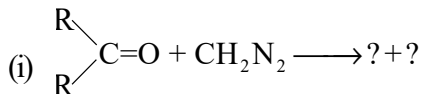
(c) Complete the following reactions:

1×4=4



(d) Complete the following reactions:

1½+2=3



UNIT-IV

7. (a) Explain the following condensation reactions with their mechanism:

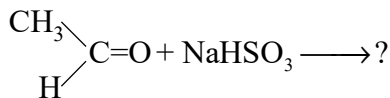
(i) Aldol condensation

4×3=12

(ii) Benzoin condensation

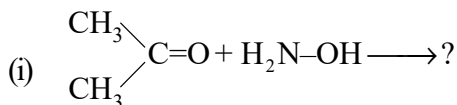
(ii) Knoevenagel condensation

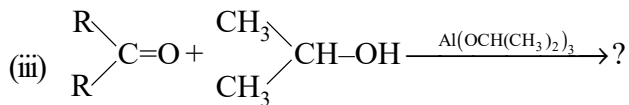
(b) Complete the reaction and write the name of the product:



2

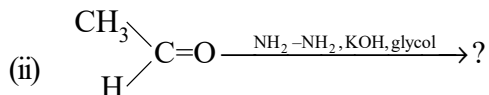
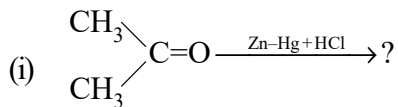
8. (a) Complete the following reactions and give their mechanism: 4×3=12





(b) Complete the following reactions:

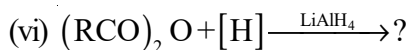
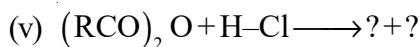
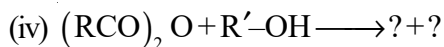
1×2=2



UNIT-V

9. (a) Complete the following reactions:

1½×6=9



(b) What are esters? Give the mechanism of alkaline hydrolysis of ester.

5

10. (a) Give any two methods of formation of the followings:

2×2=4

(i) Acid amide

(ii) Acid chloride

(b) Complete the following reactions:

2×5=10



