

Roll No.

Total Pages : 6

8652/MH

AS-2057

ORGANIC CHEMISTRY-II

(Common for B.Sc., B.Sc. Biotech.)

(Semester-II)

Time Allowed : 3 Hours]

[Maximum Marks : 26

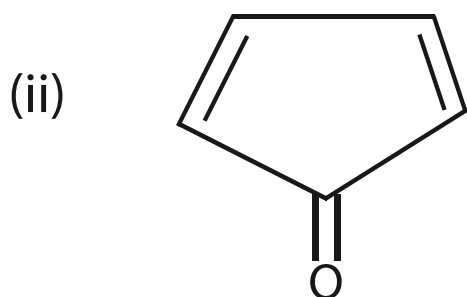
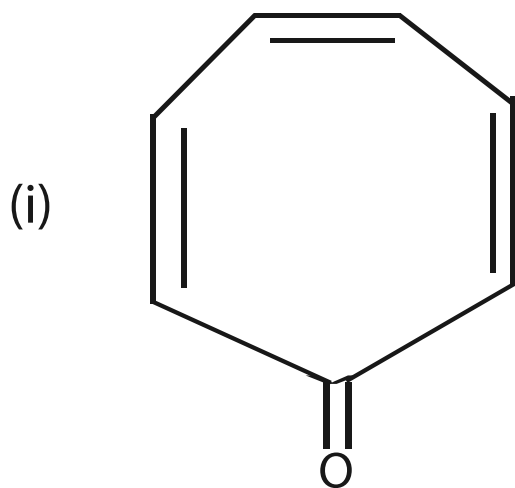
Note :- The candidates are required to attempt two questions each from Sections A and B carrying 4 marks each and the entire Section C consisting of 5 short answer type questions carrying 2 marks each.

SECTION-A

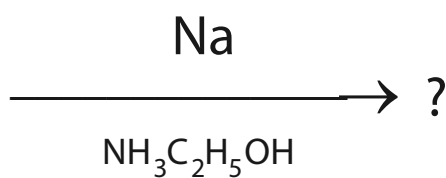
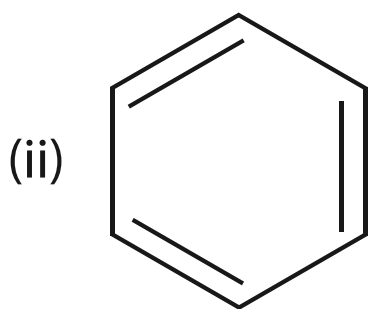
1. (a) What is meant by aromaticity. State Huckel rule of aromaticity. Write the structure of two non-benzenoid aromatic compounds.

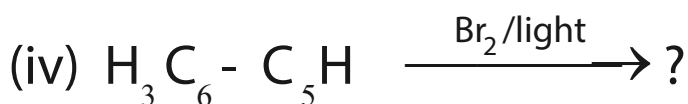
(b) Explain why (i) is more stable than (ii) :

3,1



2. Giving mechanism, complete the following reaction :





4

3. (a) What is peroxide effect? Explain it with one example.

(b) Complete the following reactions giving appropriate mechanism :



2,2

4. (a) What is Hofmann elimination? How does it differs from Saytzeffs elimination. Give one example in each case.

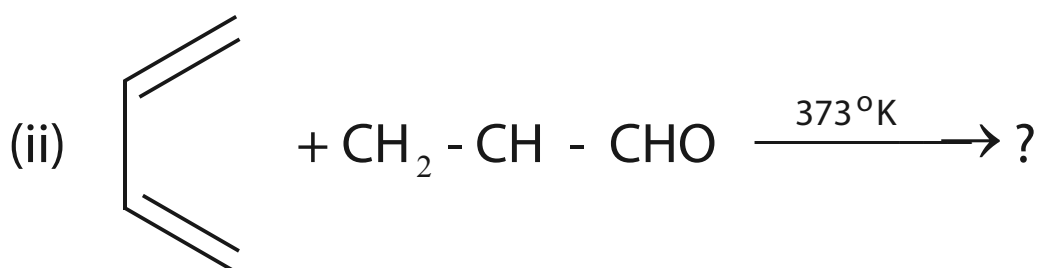
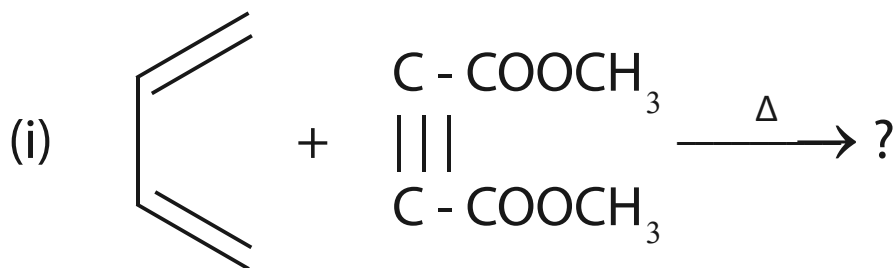
(b) How will you convert $\text{CH}_3 - \text{CHOH} - \text{CH}_3$ to $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ outline the reaction?

2,2

SECTION-B

5. (a) Draw the structure of allene and indicate the state of hybridisation of each carbon.

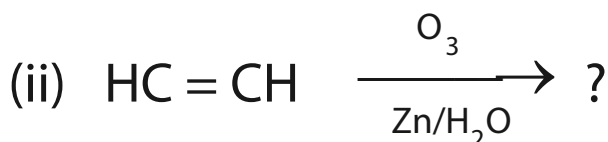
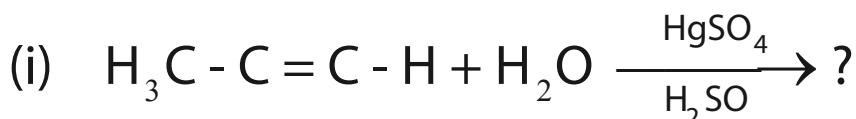
(b) Predict the products of following reactions giving mechanism :



2,2

6. (a) Starting from acetylene how will you prepare (i) methyl vinyl ether, (ii) Acetic acid?

(b) Predict the products of following reactions :



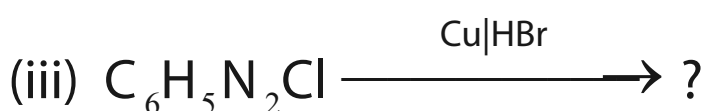
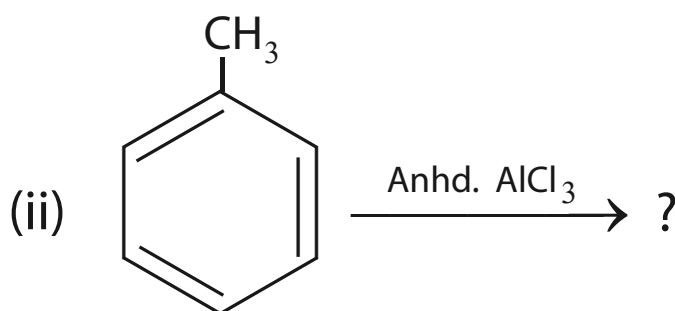
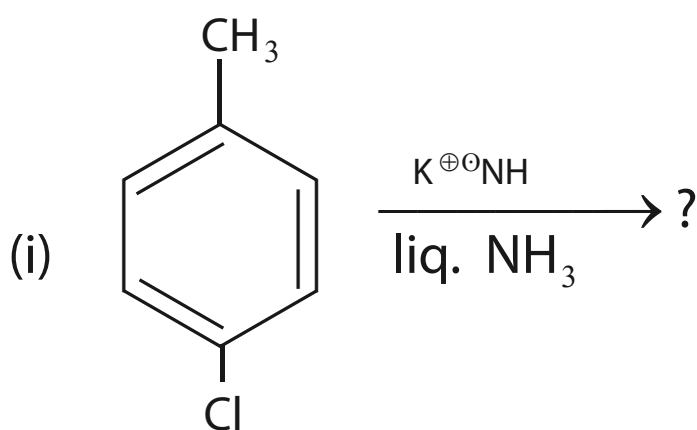
2,2

7. (a) Why SN^2 reaction proceed by inversion of a configuration and SN^1 proceed by racemization.

(b) Why benzyl halide is more reactive than alkyl halide? Discuss with examples.

2,2

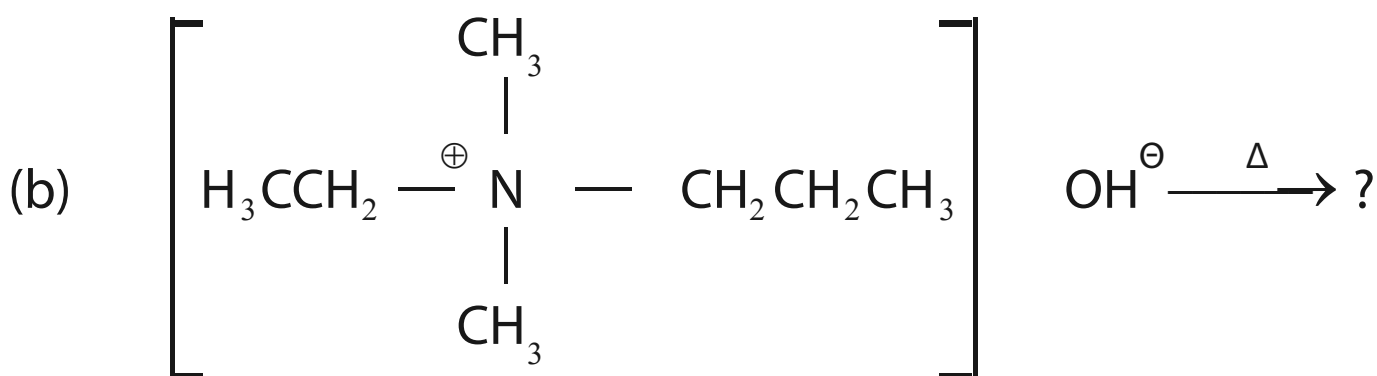
8. Outline the mechanism of the following reactions and predict the products :



4

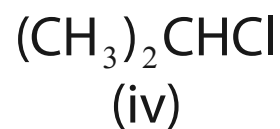
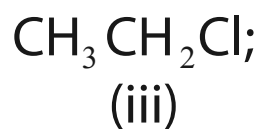
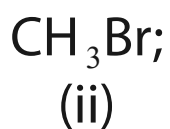
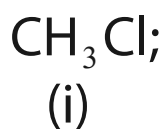
SECTION-C

9. (a) Draw HMO diag. of cyclopentadienyl anion.



(c) What do you understand by 2+2 cyclo addition reaction? Give one example.

(d) Arrange the following halides in the decreasing order of SN^2 reactivity :



(e) How do you account for the racemization of (+)-2-iodobutane when treated with iodide ion?

2x5