

25/5/24

Performa-QP-I



DOON UNIVERSITY, DEHRADUN
End Semester Examination, Semester 2nd
Academic Year 2023-24 (Even Semester)
School of Physical Sciences
Department Name- Chemistry
Programme Name- B.Sc H Chemistry
Course Code with Title – CYG-102, General Organic Chemistry and Hydrocarbon.

Time Allowed 2Hours

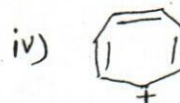
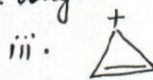
Maximum Marks: 30

SECTION: A

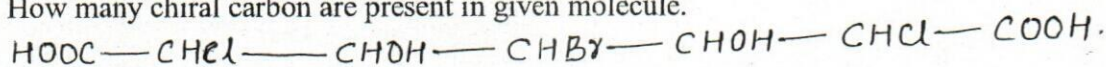
(Very Short Answer Type Questions)

1x10=10 marks

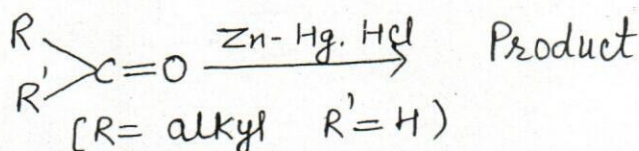
- Write the structure of (2R, 3S)-2,3 dibromohexane.
- Define optical activity and chirality.
- Which compound is not aromatic? why.



- How many chiral carbon are present in given molecule.



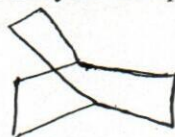
- Identify the product.



- What product you will get when ketone react with Zn-Hg and HCl.
- Write the IUPAC name of Bicyclo compounds.

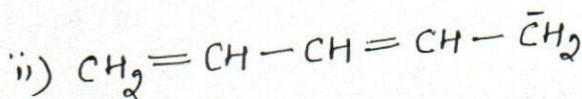


(i)



(ii)

- Write the difference between reactivity and selectivity..
- Define Friedel craft acylation.
- Which of the following is stable resonating structure.



SECTION: B

(Short Answer Type Questions)

2x5=10.

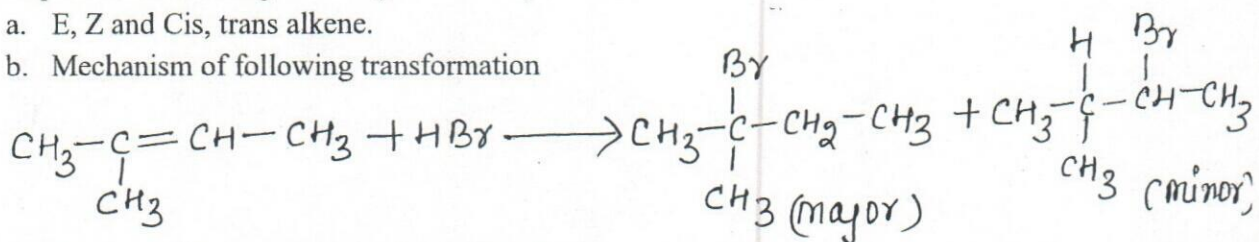
1. What are elimination reactions, write the mechanism of dehydration of alcohol.
2. Write the mechanism of Hydroboration - oxidation of alkene.
3. Draw the New mann projection of n- butane.
4. Explain why 1,3,5 cycloheptatrienyl cation is aromatic but 1,3,5 cycloheptatriene is not.
5. Explain Markovnikov's and Anti-markovnikov's rule in an unsymmetrical alkenes.

SECTION: C

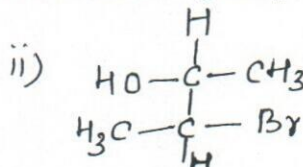
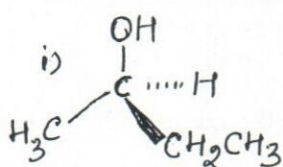
2x5=10

(Long answer type question)

1. Explain the following. (1 + 2 + 2 = 5)
 - a. E, Z and Cis, trans alkene.
 - b. Mechanism of following transformation



- c. What is the R and S nomenclature of following compounds.



2. Explain the following: (2.5 X 2 = 5)
 - a. What are ortho and para directing group? Give examples.
 - b. Saytzeff and Hoffmann alkene with suitable examples.