GALGOTIAS UNIVERSITY

ADMISSION NUMBER												

School of Basic Sciences

Bachelor of Science Honours in Chemistry
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 50

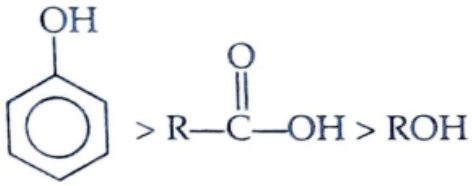
Sem III - C1UB302T - Basic Concepts and Aliphatic Hydrocarbons

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1) Discuss Corey-House alkane synthesis with example. K2 (2)

2) Why benzyl carbonium ion is more stable than ethyl carbonium ion? K1 (3)

3) Explain mesomeric effect. Give reasons of the following: K2 (4)
(a) Acidic strength of



(b) Basic Strength of

$RNH_2 > NH_3 > C_6H_5NH_2$

4) Discuss hyperconjugation effect. Explain the following on the basis of hyperconjugation effect. (a) Directive influence of alkyl groups in aromatic alkylbenzenes. (b) Relative stabilities of alkenes. K2 (6)

5) Utilizing CIP rules assign E or Z configuration of the following compounds: K3 (6)
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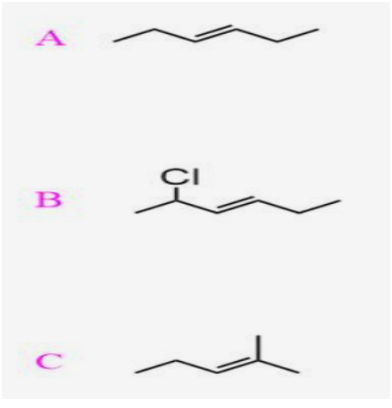
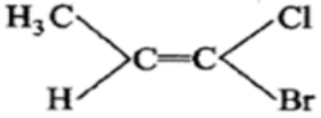
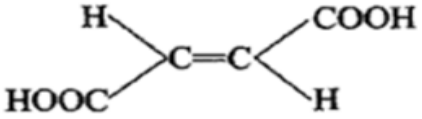


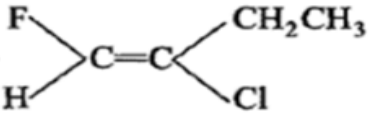
6) Apply the concept of stereochemistry show how does SN2 reaction give rise to inverted product. K3 (9)

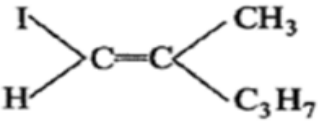
7) Compare Saytzeff and Hoffmann eliminations with examples and write mechanisms. K4 (8)

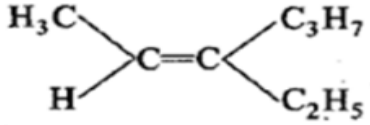
8) Predict E or Z configuration of the following compounds: K4 (12)

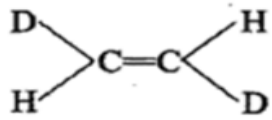
(i) 

(ii) 

(iii) 

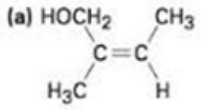
(iv) 

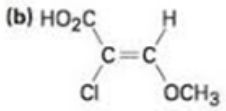
(v) 

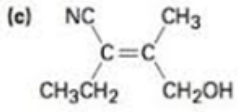
(vi) 

OR

Predict E or Z configuration of the following compounds and write CIP rules: K4 (12)

(a) 

(b) 

(c) 

(d)