DPP
DAILY PRACTICE PROBLEMS

CLASS : XIIth
DATE :

SOLUTIONS

SUBJECT : CHEMISTRY
DPP NO. :1

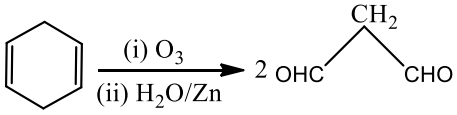
Topic :-HYDROCARBONS

1 **(d)**

Unsaturated molecules decolourise Baeyer's reagent.

2 **(c)**

An alkene on reductive ozonolysis gives 2-molecules of $CH_2(CHO)_2$. Hence, the alkene is 1, 4-cyclohexadiene.

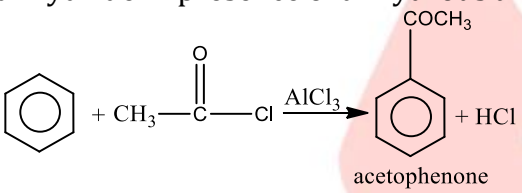


3 **(b)**

$C_2H_5I + C_3H_7I + 2Na \xrightarrow{\text{Ether}} C_2H_5C_3H_7; C_4H_{10}; C_6H_{14}$

4 **(d)**

Friedel-Craft's acylation it involves the treatment of benzene with acetyl chloride or acetic anhydride in presence of anhydrous aluminium chloride.



5 **(b)**

Oxidation of 1-butene first gives a mixture of propionic acid and formic acid. Formic acid, however, gets further oxidised to CO_2 and H_2O. Therefore, option (b) is correct.

7 **(b)**

A compound is said to be aromatic if it meets of the following criteria.

1. The rings of the compound should be planer.

2. The cyclic system must contain $(4\pi + 2)\pi$-electrons.

Only option (b) contains 6π-electron, so it is aromatic.

8 **(b)**

$CH_3CH = CH_2 \xrightarrow{B_2H_6} (CH_3CH_2CH_2)_3B \xrightarrow{H_2O_2} CH_3CH_2CH_2OH + H_3BO_3;$

The process is called hydroboration.

9 **(b)**

$$(i)CH_3 - CH = CH - CH_3 \xrightarrow[H_2O]{Zn} CH_3CHO + CH_3CHO + ZnO$$

2 molecules of ethanal

$$(ii)C_6H_5CH = CH_2 \xrightarrow[H_2O]{O_3 \atop Zn}$$

$C_6H_5CHO + HCHO + ZnO$
benzaldehyde methanol

(iii) $CH_3CH = CH_2 \xrightarrow[\frac{Zn}{H_2O}]{O_3} CH_3CHO + HCHO$

Ethanol methanol

(iv) $(CH_3)_2C = C(CH_3)_2 \xrightarrow[\frac{Zn}{H_2O}]{O_3}$

$CH_3COCH_3 + CH_3COCH_3 + ZnO$
2 molecules of acetone

11 **(c)**

Alkynes are not found in free state due to their high reactivity.

12 **(a)**

Least hindered rotation means free rotation, *i*. *e*., round a single bond.

13 **(c)**

$H_2C = CH_2 \xrightarrow{HBr} CH_3 - CH_2Br$
(X)

$\xrightarrow{Aq.KOH} CH_3 - CH_2OH \xrightarrow[I_2 excess]{Na_2CO_3} CHI_3$
(Y) (Z)
iodoform

15 **(b)**

In Wurtz reaction, an ether solution of an alkyl halide is treated with sodium which removes the halogen of alkyl halide and the two alkyl radicals join together to form an alkane

17 **(d)**

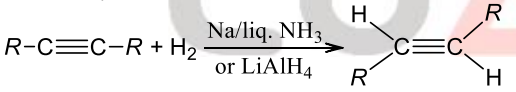
An immiscible and lighter substance with water will float over it.

18 **(d)**

These all are obtained from coal-tar.

19 **(b)**

For *trans*product we take Na/liquid NH_3 or $Li - NH_3/C_2H_5OH$ or $LiAlH_4$ as a reducing agnet (*anti*-addition)



trans-alkene

20 **(a)**

$CH_3CH = CH_2 + H\overline{O}Cl^+ \rightarrow CH_3 - CH - CH_2$
Propyene hypochlorous | |
acid OH Cl
propene chlorohydrin

ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	D	C	B	D	B	A	B	B	B	C
Q.	11	12	13	14	15	16	17	18	19	20
A.	C	A	C	D	B	B	D	D	B	A