CBSE Class 12 physics
Important Questions
Chapter 12
Aldehydes Ketones and Carboxylic Acids

1 Mark Questions

1. Give one use of Formalin.

Ans. Formalin is used as a disinfectant, preservative for biological specimens and in leather industry.

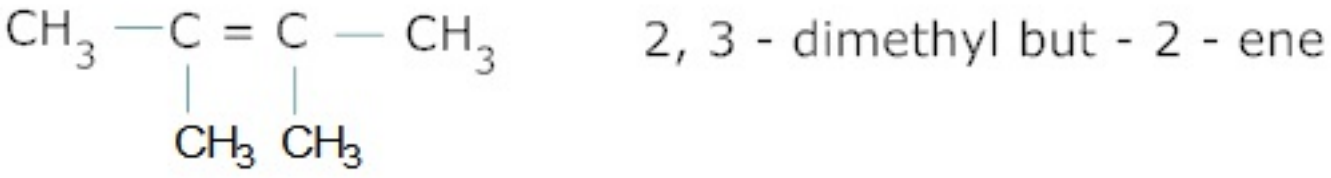
2. What is the chemical name of Tollen's reagent and Fehling's solution.

Ans. Tollen's reagent = Ammoniacal Silver Nitrate

Fehlings solution = Sodium Potassium Tartarate.

3. Write the structure of alkenes that on ozonolysis will give ketone only.

Ans.



4. What is the function of $BaSO_4$ in rosenmund reaction?

Ans. $BaSO_4$ acts as a catalytic poison which prevents further reduction of aldehyde to alcohol.

5. Name the isomers with molecular formula C_3H_6O . Which one will have high boiling point?

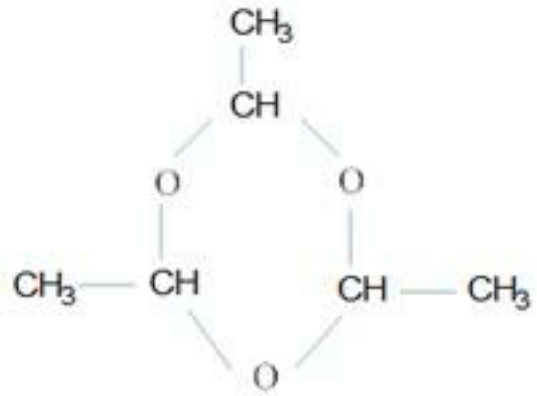
Ans. The two isomers are CH_3COCH_3 and CH_3CH_2CHO . Acetone boils at higher temperature due to presence of two electron donating alkyl groups.

6. Write a chemical test to distinguish between aldehyde and ketone.

Ans. Aldehydes and ketones can be distinguished by Tollen's test. Aldehydes give a silver mirror on reacting with Tollen's reagent whereas ketones will not react.

7. What happens when acetaldehyde is kept with a trace of sulphuric acid? Write the structure of product.

Ans. A trimer of acetaldehyde, called paraldchyde is formed.



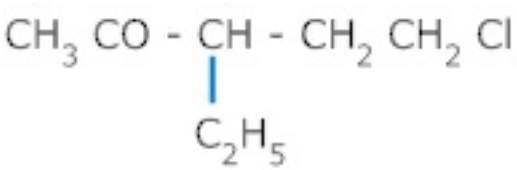
8. What is the Hofmann bromamide reaction? Illustrate with one example.

Ans. Hoffman bromamide reaction is a reaction in which amides are converted to amines of one carbon less than the starting amide. It is a very important step – down reaction.

$$RCONH_2 + Br_2 + KOH \rightarrow RNH_2 + KBr + K_2CO_3 + H_2O$$

9. Give IUPAC names of following

(i)



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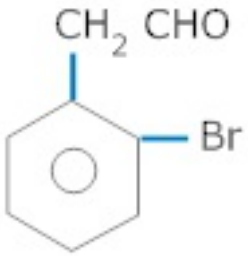

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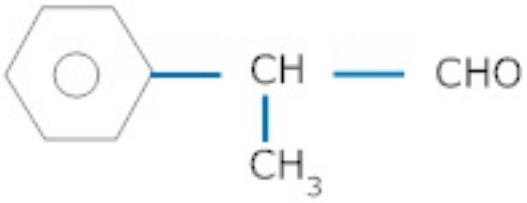
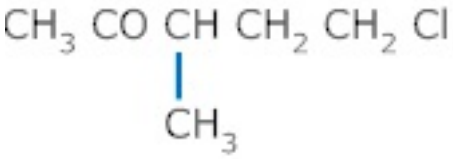
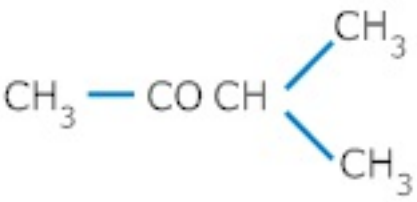


(iv)

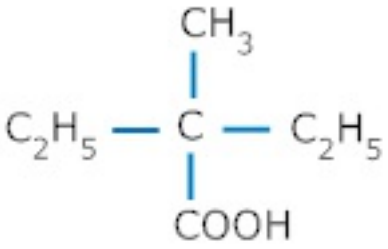


(v) $CH_3CH\ (OH)\ CH_2CO\ CH_3$

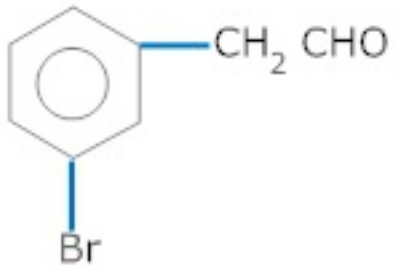
(vi)



(vii)

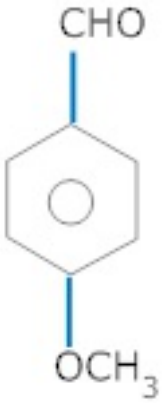


(viii)



(ix) HOOC – CH = CH – COOH

(x)



Ans. (i). 5-Chloro -3- ethylpentan -2-one.

(ii). 2 –(2-bromophenyl) ethanal

(iii). 2- Phenylpropanal

(iv). 5- Chloro -3- methyl pentan -2-one

(v). 4- Hydroxypentan -2- one

(vi). 3- Methylbutan -2-one

(vii). 2- Ethyl -2- methylbutanoic acid

(viii). 2- (3- Bromophenyl) ethanal

(ix). But-2- en -1,4 –dioic acid

(x). 4- Methoxybenzaldehyde

10. Draw the structure of the following –

(i) 4- Methoxybenzaldehyde

(ii) 5- Bromo -3- Chloro -2- iodobenzoic acid

(iii) 3,3 – Dimethyl -1- Chlorobutane

(iv) 2,3- Dihydroxy -4-methylpentanal

(v) 3- Hydroxy-2-methyl -propanal

(vi) 2,4 –Dimethyl -3- pentanone

(vii) 1,2 –Ethaneodioc acid

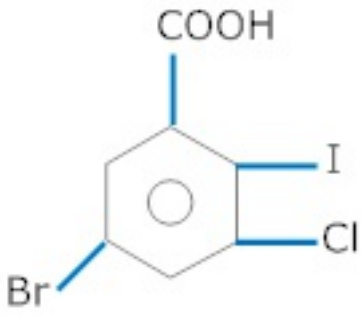
(viii) 3- Pentene -2-one

(ix) 1,3 – Propane –dioic acid

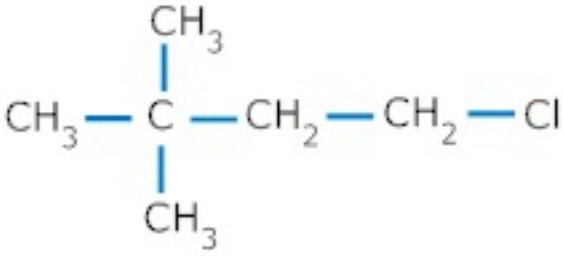
Ans. (i).


CHO
OCH3

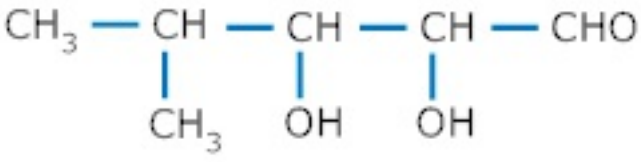
(ii).


COOH
I
Cl
Br

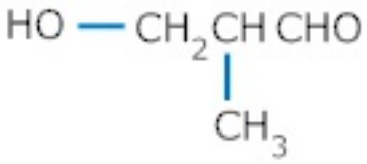
(iii).


CH3
CH3 C CH2 CH2 Cl
CH3

(iv).


CH3 CH CH CH CHO
CH3 OH OH

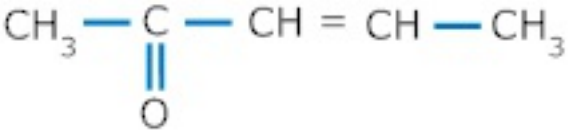
(v).



(vi).

(vii).

(viii).



(ix).