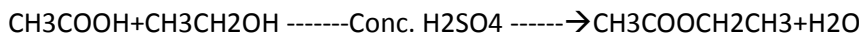


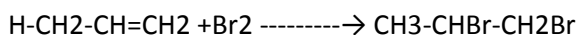
**Q.1** What name is given to the reaction which take place when Ethanoic acid reacts with ethanol in the presence of conc. Sulphuric acid ? Name the products obtained in this reaction.

Ans-When ethanoic acid reacts with ethanol in presence of conc.  $H_2SO_4$  .the reaction is called esterification .In this reaction products formed are ethyl ethanoate and water.



**Q.2** What is bromination ? Write the structural formula of product obtained on bromination of propene.

Ans –The addition of bromine to unsaturated hydrocarbon is called bromination.



**Q.3** Define covalency ?

Ans-The number of electrons contributed by an atom in the formation of a covalent bond is called the covalency. The covalency of an element in a covalent compound is equal to the number of covalent bond formed by an atom of the element with other atom.

**Q4.** Write the structural formula of the isomers of n-butane?

Ans-i - $CH_3-CH_2-CH_2-CH_3$  n-Butane.

ii- $CH_3-CH-CH_3$  iso-Butane  
 $\quad \quad |$   
 $\quad \quad CH_3$

**Q5.**Name the organic acid present in vinegar. Write its Chemical formula also.

Ans-Ethanoic acid. Its chemical formula is  $CH_3COOH$ .

**Q 6.** The structural formula of an ester is  $HCOOCH_2CH_2CH_3$  write the formula of acid and the alcohol from which it is made ?

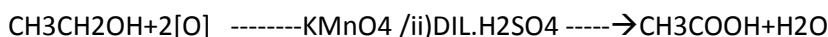
Ans-To write the formula of the acid and the alcohol add  $-COO$  bond of the ester so that  $-OH$  goes with  $-CO$  part ; Acid  $HCOOH$  and the alcohol  $CH_3CH_2CH_2OH$

**Q7.** What happens when ethanol reacts with (i) sodium (ii) potassium permanganate solution.

Ans-(i) with sodium metal ,sodium ethoxide formed.



(ii) With alkaline potassium permanganate, ethanol is oxidised to ethanoic acid.



**Q8.** What is hydrogenation? Write its industrial application.

Ans- The addition of hydrogen to an unsaturated hydro- carbon is called hydrogenation. This process takes place in the presence of nickel or palladium metal as catalyst.

i) it is used to prepare vegetable ghee from vegetable oil.

ii) Vegetable oil such as ground nut, cottonseed oil are unsaturated and contain double bonds (C=C) On hydrogenation in the presence of catalyst, vegetable oil produces vanaspati ghee.

**Q9. Give a test that can be used to differentiate between butter and cooking oil ?**

Ans- If a carbon compound decolorises bromine water, it will be an unsaturated compound. Thus we can distinguish between a cooking oil and butter.

i) cooking oil decolorises bromine water, this shows that it is an unsaturated compound.

ii) butter does not decolorise bromine water. This shows that it is a saturated compound.

**Q10. Give the names of the functional group;-**

(i) -CHO

(ii) -C=O

(iii) -OH

(iv) -COOH

Ans- (i) Aldehyde group

(ii) Ketone group

(iii) alcoholic

(iv) carboxylic