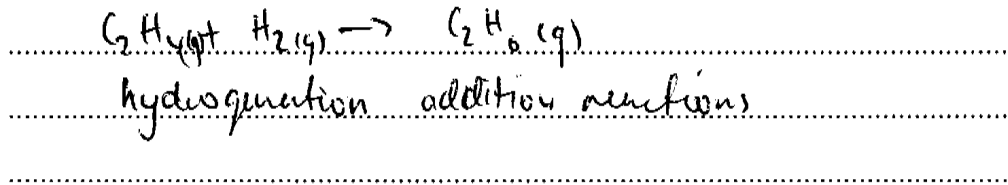


**Question 24** (4 marks)

In the margarine industry, alkenes are often hydrogenated to convert unsaturated oils into solid fats that have a greater proportion of saturated molecules.

- (a) Using ethene as an example, write an equation for this reaction and state the type of reaction this represents. 2



- (b) Describe a test that could be used to confirm that all the ethene has been converted. 2

~~Blow  $Br_2$  (aq) into the reaction vessel.~~ if there  
take a sample of the unsaturated oils and solid fats  
and place into a test tube. add 2 drops of bromine  
water and see if any decolourisation occurs. if  
there is still a brown colour of the Bromine then  
all of the ethene has been converted as if it was  
present the Bromine will undergo an addition  
reaction to form 1,2 dibromoethane.

51

5/6

✓ 8