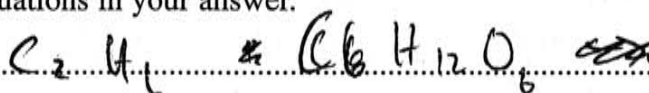


**Question 30** (8 marks)

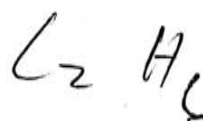
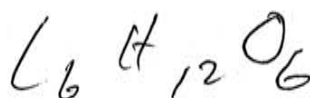
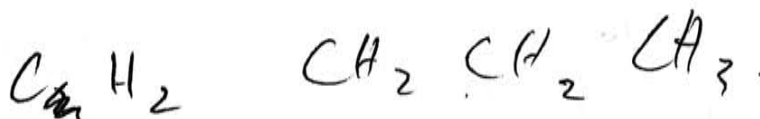
- (a) Compare the process of polymerisation of ethylene and glucose. Include relevant chemical equations in your answer.

3



ethylene requires less work as it is a refined product of glucose and is easily broken down to create monomers and effectively create polymers when reacted, as for glucose it requires refining, and ~~the polymer~~ ~~is~~ reduced to eliminate the oxygen then furthermore refined to create polymers.

Question 30 continues on page 22



## Question 30 (continued)

- (b) Explain the relationship between the structures and properties of THREE different polymers from ethylene and glucose, and their uses. 5

poly vinyl chloride a strong rigid plastic used in piping due to its longevity and strength.

poly benzene. used as a chemical and is in liquid state

poly hydro carbons. used in plastics such as bottles, which are flexible. easily recycled

End of Question 30