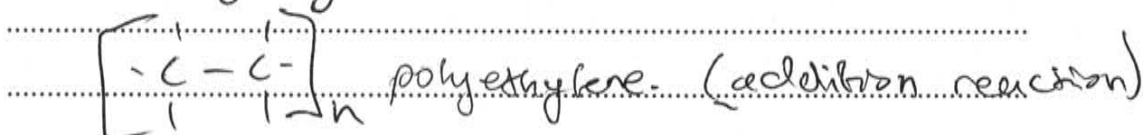
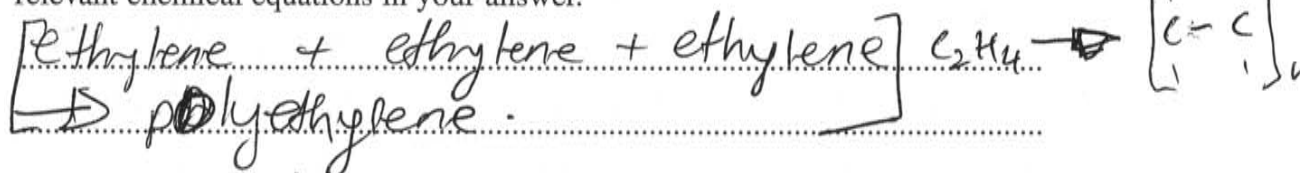


Question 30 (8 marks)

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

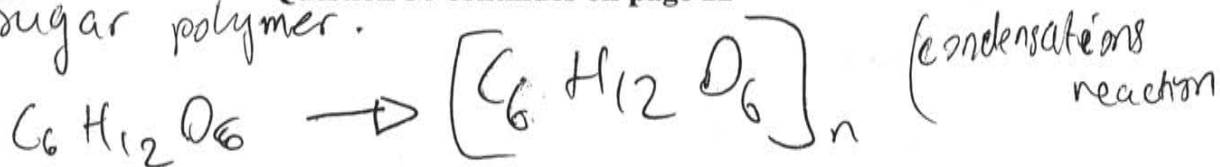


- hydrocarbon polymer
- ~~has a double bond making it very~~ used in medical purpose.

as glucose:

sugar polymer.

Question 30 continues on page 22



- this polymer is widely used in medicine
- has the ability to be fermented by yeast to produce ethanol.

Question 30 (continued)

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

polyethylene - is very useful as plastics, there is two types of polyethylene LDPE and HDPE
LDPE use high pressures to obtains its structure and flexibility property.
HDPE use high temps ~~300~~ (80° - 300° C) to obtain its hardness and structure:
polyethylene belongs to the alkene group therefore can be saturated using HBr and H₂OBr, as for glucose it can't be saturated.
glucose has polar - and non-polar properties, but ~~the~~ both polymers have covalent bonds which makes them good solvents.

End of Question 30