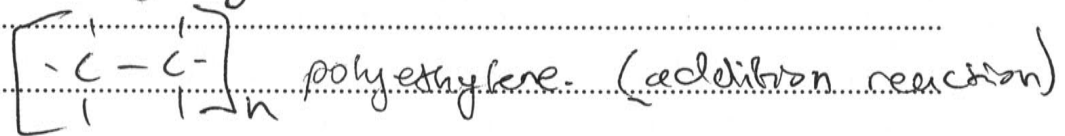
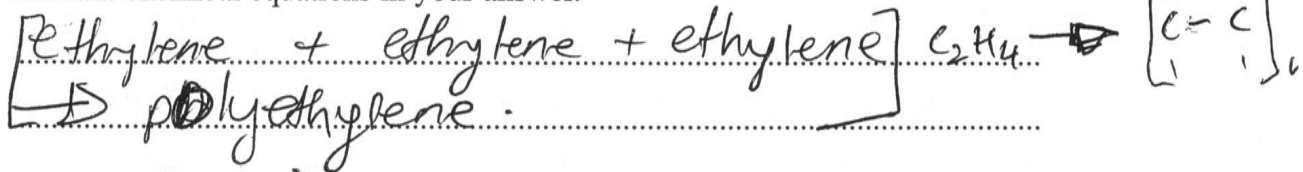


Question 30 (8 marks)

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

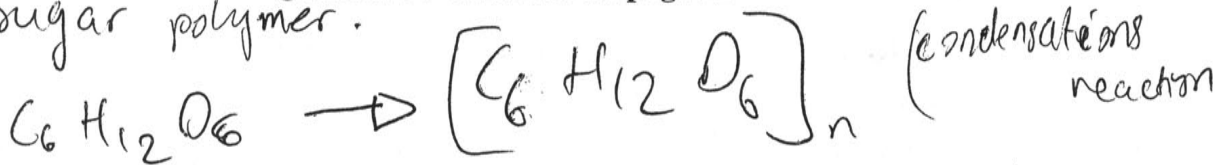


- hydrocarbon polymer
- ~~has a double bond making it very~~ used in medical purpose.

as glucose:

Question 30 continues on page 22

sugar polymer.



- 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 HOBr, 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