
Question 30 (8 marks)

- (a) Compare the process of polymerisation of ethylene and glucose. Include relevant chemical equations in your answer. 3

ethylene has a polar-end and a non-polar end, hence a good solvent for both polar & non-polar.

However, glucose ~~is~~ has a ~~non-polar~~ polar & a non-polar end. Also ~~ethy~~ the monomer ethylene has

C_2H_4

double bonds that breaks down and is able to link to other monomers such as polyethylene.

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Question 30 (continued)

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

As ethylene has a double bond it can breakdown to be linked with other monomers, hence, Polyethylene. Polyethylene, have a bit of transparency and ^{elasticity} are used for plastic bags and such. Also Vinyl Chloride ~~are~~ have a more tough property than polyethylene and are used to make egg cartons and such. Lastly, Styrene is used to make

Also a biopolymer polylactic acid is made from lactobacillus bacteria and are good for making fabrics & sports gear as it has functions of 'Breathability' = low refractive index & 'Wettability' = transfers moisture.

End of Question 30

