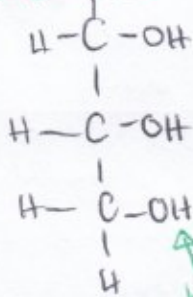
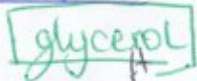
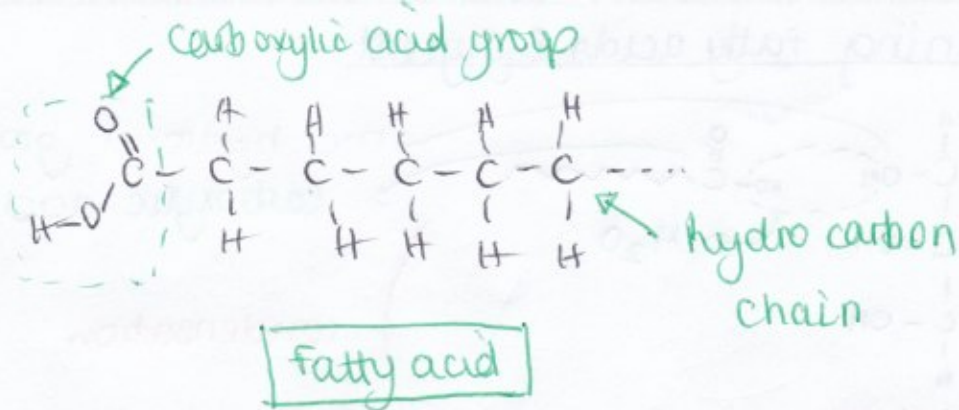


② Lipids

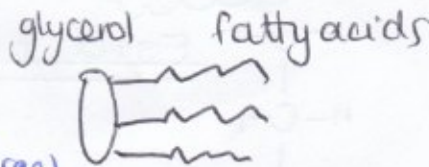


hydroxyl group



Triglyceride

- made of 1 glycerol and 3 fatty acids
 - insoluble in water
 - due to the hydrophobic fatty acid chains (no charge)
 - since no charge, H-bonds don't form between H_2O & lipid
- 
- The diagram illustrates a lipid molecule. On the left, a vertical cylinder represents the glycerol head. To its right, three wavy lines represent the fatty acid tails. Labels 'glycerol' and 'fatty acids' are placed above the respective parts of the diagram.

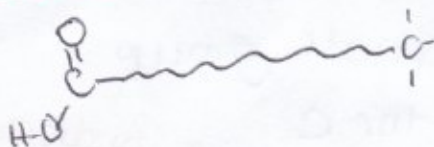


Functions

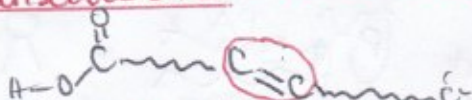
- ① energy source = respired to make ATP
- ② energy store
- ③ Biological membranes (phosphoLipid ...)
- ④ Insulation (blubber)
- ⑤ Protection (around kidneys & waxy cuticle)
- ⑥ Hormones = cholesterol is made of Lipids; steroid hormones

Types of fatty acid

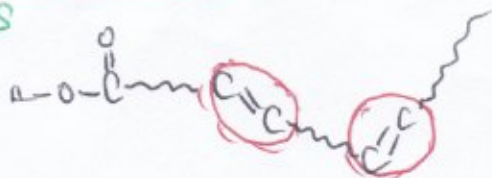
Saturated: max amount of 'H' for each 'C' $\therefore$ no double bonds



monounsaturated = one double bond

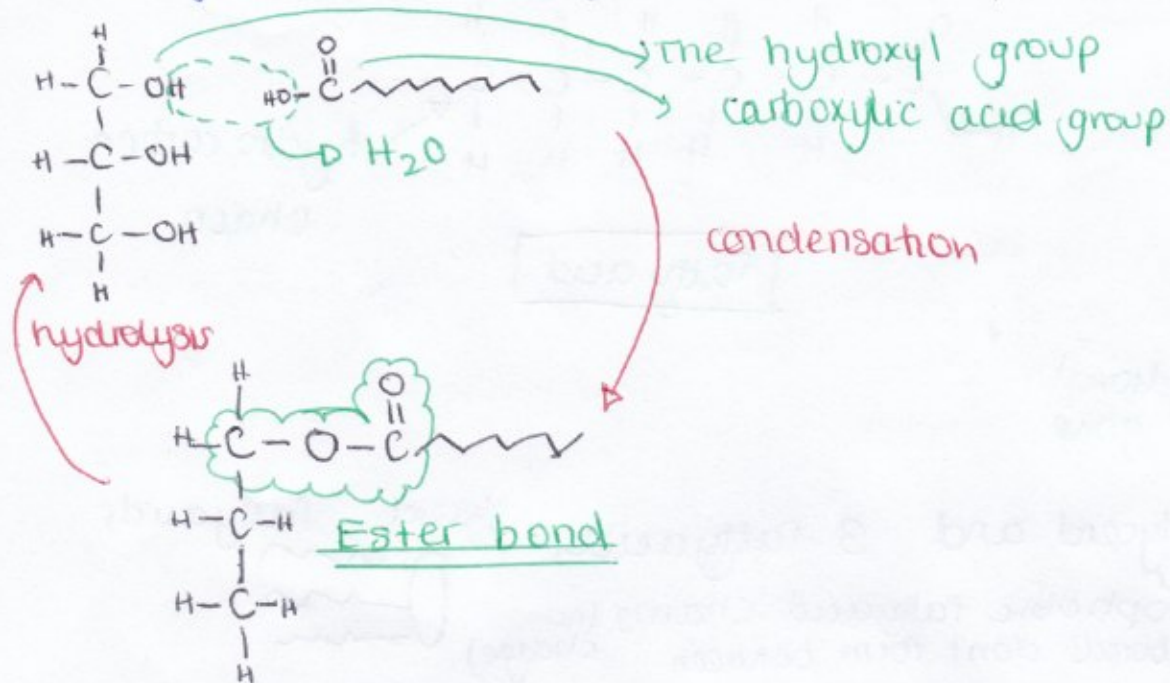


poly unsaturated = more than 1 $C=C$



- * a double bond forms a 'kink' in the H₂C chain
- * means it has an irregular shape
- * thus prevents molecules' close packaging
- * so more fluid
- * so oils

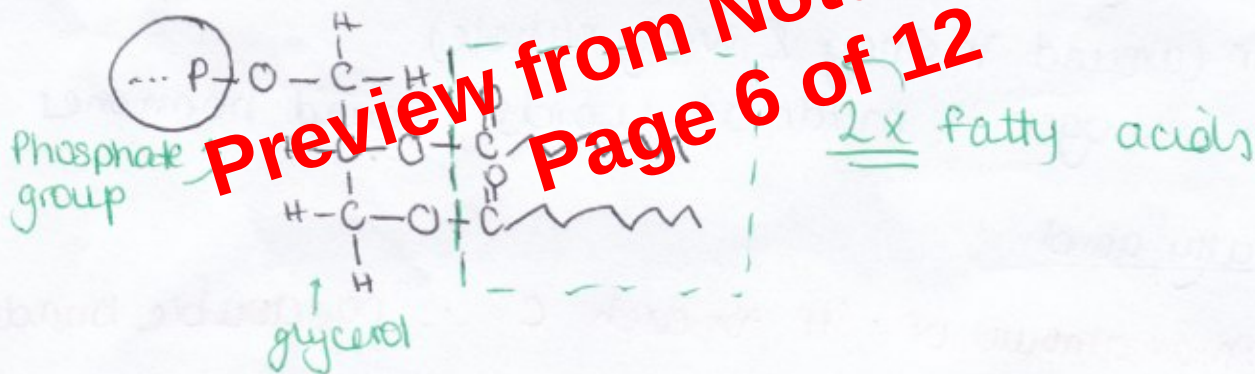
Joining fatty acids & glycerol



Triglycerides:

when hydrolysed, the fatty acids are acidic

phospholipid



- a 3rd fatty acid is replaced by a phosphate group
- is covalently bonded to 3rd O-H on the C
- by condensation

Function:

* form phospho-lipid bilayer which forms the cell membranes

why/how?:

