Lipids :-

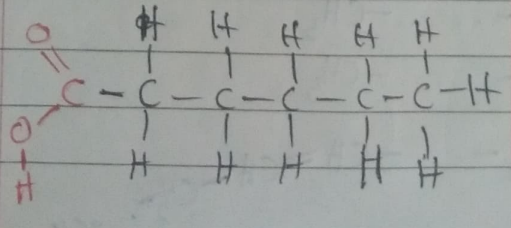
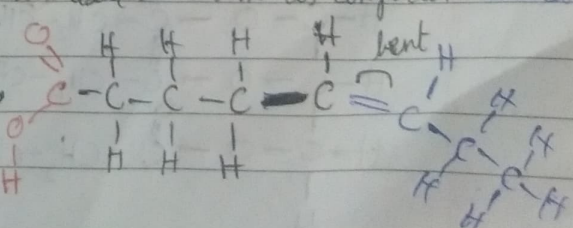
- Lipids are hydrophobic [hydro means water & phobic means fear]
- They do not mix with water { Insoluble in water, Soluble in inorganic solvents (C_6H_6) }
- Includes fats, waxes, steroids & oils [They do not mix with water]
- Useful for long term energy storage and provides insulation & protection

⊛ Fatty acids :-

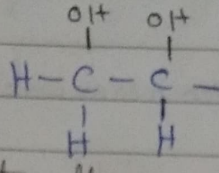
- Structure :- ~~~●COOH (R-chain)

Here, R-chain is hydrophobic (away from H_2O)
COOH is hydrophilic (towards H_2O)

- Types of Fatty acids :-

Saturated	v/s	Unsaturated
• Double bonds absent		• Double bonds present
• Melting point is high. This is due to its linear molecular geometry with zigzag. This allows molecules to stack together leading to higher energy required to break the bonds (Hence, solid at room temperature)		• Melting point is low. This is due to it having double bond in their carbon chain. This creates ⊛ bends in the molecule which prevents molecules from packing together as tightly leading to lower energy required to break the bonds
• Has maximum number of hydrogen bonded to carbon		• Has lesser number of hydrogen bonded to carbon as compared to saturated
• 		• 

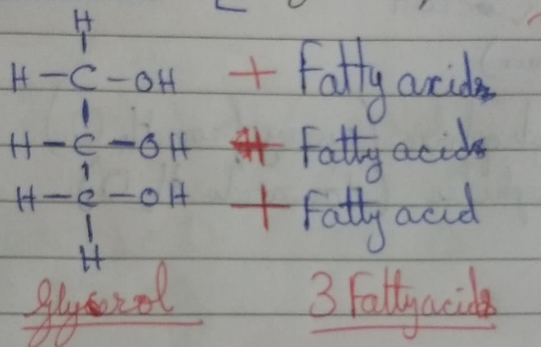
✱ Glycerol :-

- Structure :-  $(C_3H_8O_3)$ → Propane-1,2,3-triol
- It is a naturally occuring alcohol

✱ Triglyceride :-

Our body cannot store Fatty acids (in its natural form) because the C-chain is too long

To store it :- [Body uses it for ~~energy~~ energy & storage]



- Triglyceride is composed of Glycerol and 3 Fatty acids
- Glycerol forms the backbone of fat
- In the above reaction :-

Dehydration process