

26.4.2020

BOSC. PART-IIIrd ①

CELL-BIOLOGY

PAPER-VI

STRUCTURE OF PLASMA-MEMBRANE

Previously
After discussing the component responsible
for the structural modification of P.M., now
we move to other important component like

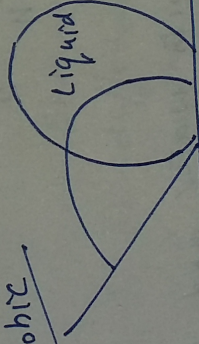
(1) HYDROPHOBIC TAIL

(2) HYDROPHILIC-HEAD

HYDROPHOBIC ^{HEAD} i.e. Fear of water

- o Do not have - charge
- o They are non polar
- o Do not Dissolve in water or in any solution
- o Example - oil, waxes, and steroids

Hydrophobic

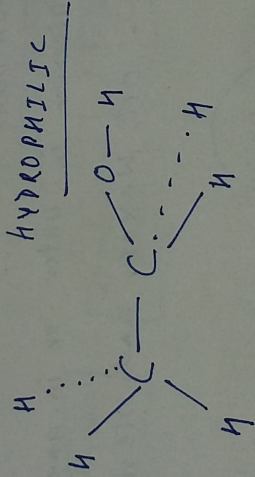
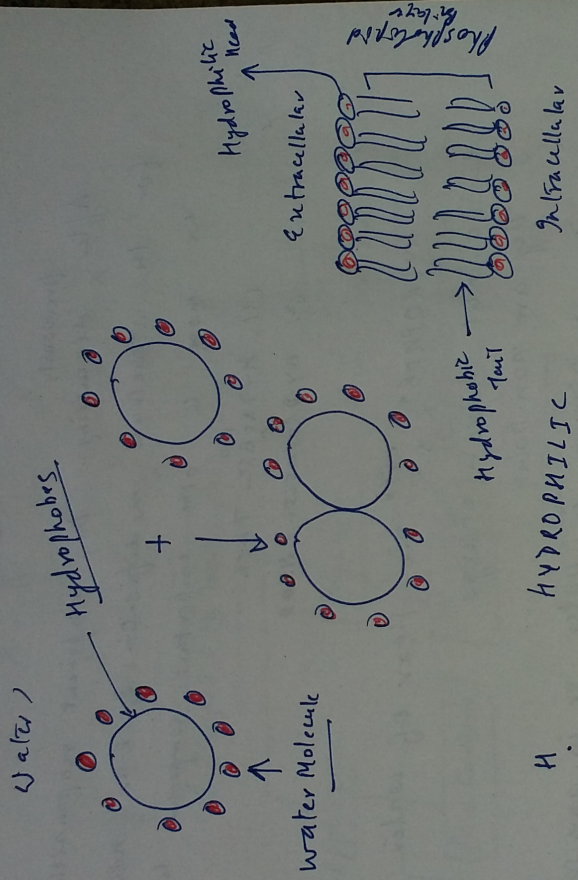


- o It has Partial - Positive or Negative charge

- o It's important for folding of protein
- o Key - to keep protein stable and

②

Biologically active (because it allow to the protein to decrease in surface area and reduce the undesirable interaction with water)



- o ge's interactions with water and other polar substances are more thermodynamically favourable than their interactions with other hydrophobic solvents.
- o Typically charge polarized and capable of hydrogen bonding.

(3)

o Means - water loving
o Chemical groups - that tends to make substance hydrophilic - include - ionic (charged) groups and groups that contain Oxygen and Nitrogen atoms.

o Surface agents contains both hydrophilic and hydrophobic groups on the same molecules.

Surface groups & wettability

More wettability

- OH
- COOH
- $Al_n(OH)_m$
- etc

Less wettability

- CH_3
- CH_2-CH_2-
- CF_3
- etc.

--- End ---

Q. what is the difference betw: hydrophobic and hydrophilic ends? [Marks: - 25]