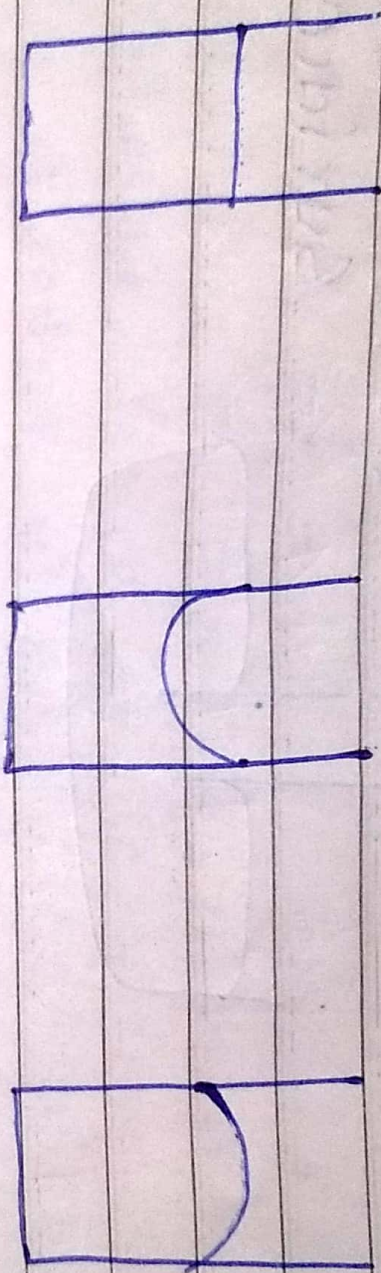
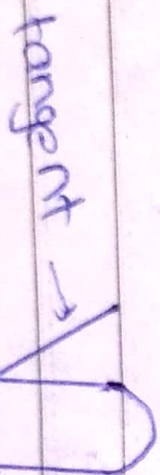


* Types of meniscus



Plane meniscus concave meniscus convex meniscus.

③ * Angle of contact:



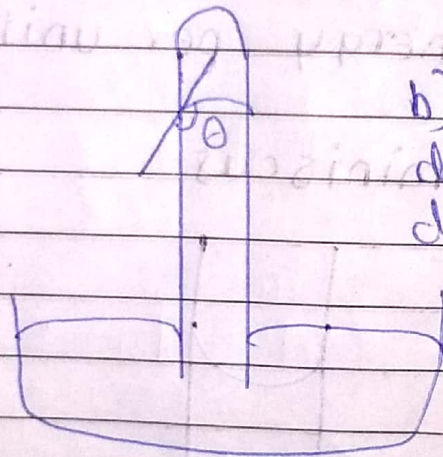
tangent →

a) concave meniscus due to liquids which partially wet a solid surface.

- When a liquid surface comes in contact with a solid surface, it forms the meniscus.

- Angle of Contact (θ) &

The angle between the tangents drawn to the free surface of the liquid & surface of the solid at the point of contact, measured within the liquid.



b) Convex meniscus due to liquids which do not wet a solid surface.

for figure a) &

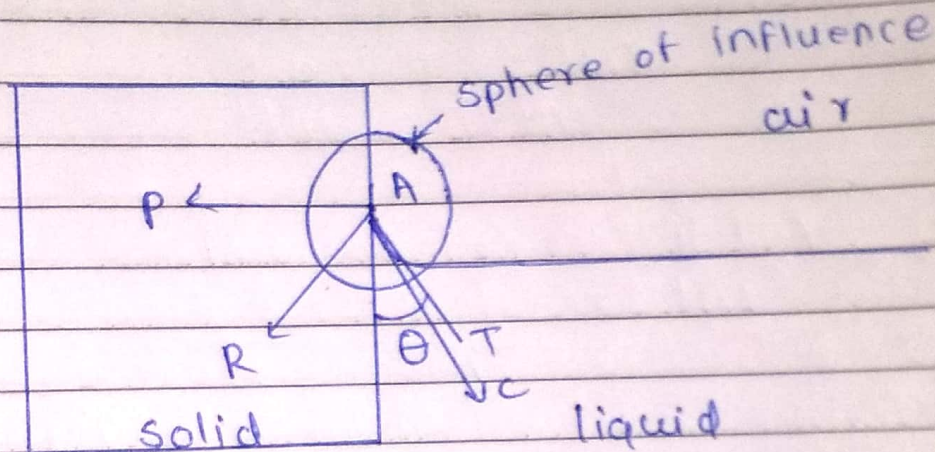
- When a the angle of contact is acute, the liquid forms a concave meniscus.

for figure b) &

- When a angle of contact is obtuse, it forms a convex meniscus.

7) Shape of meniscus

(i) Concave meniscus & acute angle of contact.



(a) acute Angle of contact

Where,

$\overline{AP}$ = acting adhesive force

$\overline{AC}$ = acting cohesive force.

- Cohesive force of $\overline{AC}$ acting on molecule is directed at nearly 45° to either surface.
- Magnitude of adhesive force is so large that the net force ($\overline{AR}$) is directed inside the solid.
- $\overline{AR}$ to be normal to tangent, the liquid near wall should pile up against the solid boundary so that the tangent to the liquid surface is perpendicular to $\overline{AR}$.
- Thus, this makes the meniscus concave.