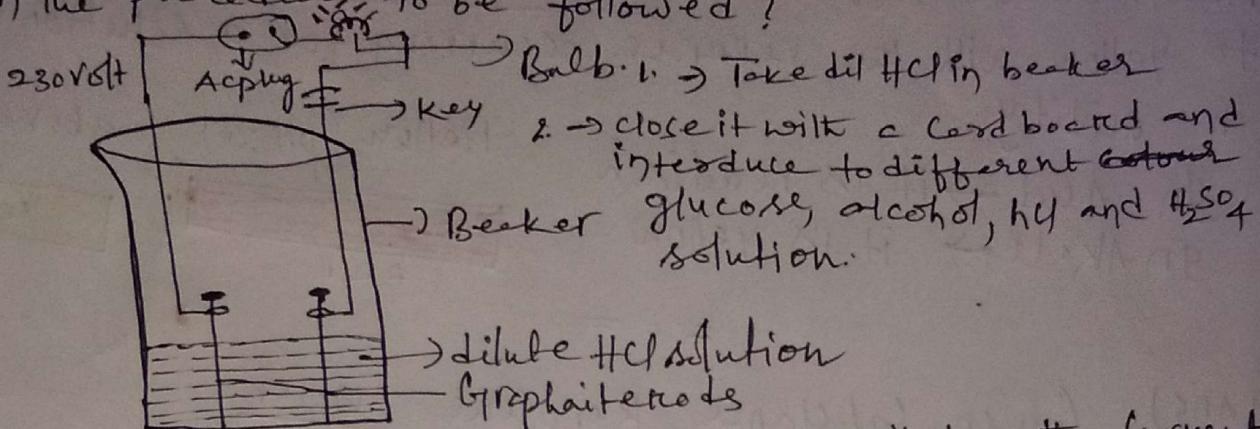


X - FORMATIVE ASSESSMENT-2 SET-2 KEY PS-FM  
 QP prepared by Nagamurthy Sir.

1 How can you prove that acidic solution conduct electricity ? Explain the procedure to be followed ?

Ans:-



3. Now pour some dilute HCl in the beaker and switch on the current.  
 4. We observe the bulb glows only in acid solution but not glucose and alcohol solutions. Glowing of bulb indicates that there is flow of electric current through the solution. Acid solutions have ions and the movement of these ions in solution helps for flow of electric current through the solution.

2 Formation of mirage:- Mirage is an optical illusion where it appears that water has collected on the road at a distant place but when we go there, we do not find any water. This is due to the variable refractive index of medium and total internal reflection.

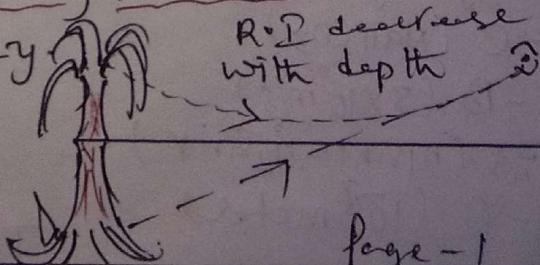
Explanation:- 1) Density of air increases with density and also with height.

2) When the light from a tall object like tree or from the sky passes through a medium it suffers refraction and takes a curved path because of Total internal reflection.

3) The refracted light from sky is reflected from the ground for observer.

4) Hence observer feels that water being present on road which is virtual image of the sky.

figure



### III) Finding of Acid or Base using Methyl orange :-

Methyl orange solutions in a solution becoming less acidic  
 Methyl orange moves from RED TO ORANGE and finally to  
 to yellow with the reverse occurring for a solution increasing  
 in acidity.

In Acid  $\rightarrow$  it is reddish

In Alkali  $\rightarrow$  it is yellow

Below pH 3.0

Red

Above pH 4.4

Yellow.

= o =

Ques) Given substance Kerosene Water  
 R.D 1.44 1.33

i) The speed of light in more is water

ii) more density medium is kerosene because kerosene  
 is a complex phenomenal carbon compound constituting alkane  
 (propane -  $C_3H_8$ ). formula of water is  $H_2O$ . So kerosene has  
 more no of atoms than water per molecules. So it decrease  
 the speed of light.

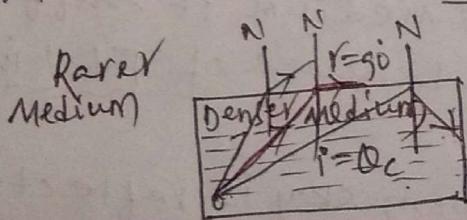
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5) Olfactory Indicators :- 1) Clove oil 2) Vanilla essence

3) Onion.

6) Diagram for show critical angle :- ( $\theta_c$ )

Angle of incidence in a denser medium, for which the angle of  
 refraction in the rarer medium is  $90^\circ$  is called critical angle.



7- Tooth decay (lower than 5.5) (B)

8- Hydrogen ( $H_2$ )

9- C ( $NaHCO_3$ )

10- B ( $3 \times 10^8$  m/s)

11- A ( $n_1 \sin i = n_2 \sin r$ )

12- C ( $10^{-6}$  meter)

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