

MOCK TEST PAPER # 1

SOLUTION

SCIENCE (CLASS-X)

2. Trypsin

3. Effective resistances,

$$R_p = \frac{30 \times (30 + 30)}{30 + (30 + 30)} = 20 \Omega$$

$$\therefore \text{Current, } I = \frac{V}{R_p} = \frac{2}{20} = 0.1 \text{ A}$$

7. (i) Use of solar energy, tidal energy etc., instead of fossil fuel energy.

(ii) Saving electricity by switching off unnecessary lights and fans.

(iii) Using public transport and pool system for commuting.

(iv) Reusing old newspaper for covering books and copies.

15. $h = 7 \text{ cm}$, $u = -27 \text{ cm}$, $f = -18 \text{ cm}$

Mirror formula : $\frac{1}{v} + \frac{1}{u} = \frac{1}{f}$

$$\frac{1}{v} = \frac{1}{(-18)} - \frac{1}{(-27)} = \frac{-1}{54} \text{ or } v = -54 \text{ cm}$$

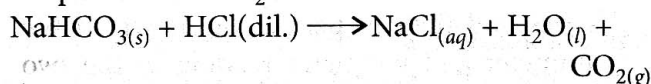
$$\text{and } \frac{h'}{h} = \frac{-v}{u} \text{ or } h' = \frac{-v}{u} h = \frac{-(-54) \times 7}{-27} = -14 \text{ cm}$$

Image will be real, inverted and magnified.

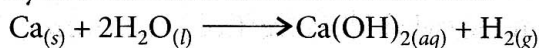
OR

The person is suffering from presbyopia.

17. (a) The gas evolved is CO_2 . Passing the gas through lime water turns it milky which confirms the presence of CO_2 .

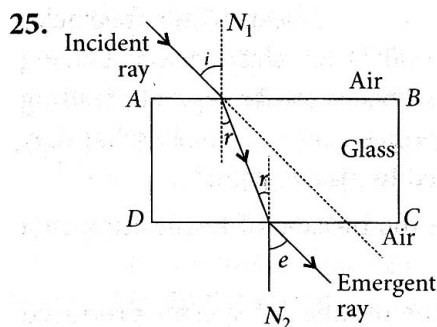


(b) The element is calcium and its oxide $\text{HCl}(\text{dil})$ 'X' is calcium oxide which is used in the cement industry. Calcium phosphate is present in bones. Calcium, on treatment with water, forms calcium hydroxide which turns red litmus blue.



(c) It is because the reaction is highly exothermic. If we add water to concentrated acid, the beaker may break.

24. $I_2 > I_1$ and $V_1 = V_2$



26. (a) (i) Solution - P, (ii) Solution - T

(b) The solution with highest pH (13) will have minimum hydrogen ion concentration whereas solution having the least pH (1) will have maximum hydrogen ion concentration. So, we can arrange the given solutions in increasing order of their hydrogen ion concentrations as follows :

P (pH 13)	Q (pH 8)	S (pH 7)	T (pH 5)	R (pH 1)
Increasing order of hydrogen ion concentration \rightarrow				

