

MOCK TEST PAPER # 6

SOLUTION

SCIENCE (CLASS-X)

2. Chipko Andolan (Hug the Trees Movement) was the result of a grassroot level effort to end the alienation of people from their forests. It took place in the year 1974 in the Garhwal region, as a result of indiscriminate cutting down of forest trees.

5. Photosynthesis is important biological process
 (i) Food : By photosynthesis, green plants synthesise food from simple raw materials like CO_2 and H_2O . Thus, it sustains life on Earth.

(ii) Oxygen : Oxygen released during the process of photosynthesis is needed by animals and humans for respiration. It is also required for respiration of microbes. Oxygen also supports combustion of fuels.

(iii) Fuels : Fossil fuels like coal, oil and natural gas are forms of stored solar energy synthesised by photosynthesis millions of years ago.

7. Equivalent resistance of series combination is equal to the sum of their individual resistance and slope of $V-I$ graph gives the resistance. So, slope of $V-I$ graph is more for equivalent resistance and less for individual resistance. Hence, graph C represents for series combination of the other two.

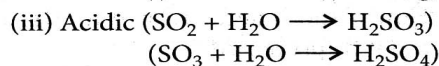
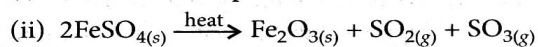
8. (a) Arpit and his father were concerned about the power situation and wanted to do something to improve the condition.

(b) Some of the ways to limit the consumption of power are :

- (i) Use CFLs or fluorescent tubes in place of bulbs.
- (ii) Take stairs to reach your flat in place of lifts.
- (iii) Use public transport.
- (iv) Use less room heater / AC.

(c) If we do not controlled the use of power, it will result in global warming. The earth will not be worth living on.

10. (i) Element X is sulphur.



12. $u = -25 \text{ cm}$, $f = +10 \text{ cm}$ (converging lens)

Lens formula $\frac{1}{v} - \frac{1}{u} = \frac{1}{f}$

$\therefore \frac{1}{v} - \frac{1}{(-25)} = \frac{1}{10}$ or $v = \frac{50}{3} \text{ cm}$

and $\frac{h'}{h} = \frac{v}{u}$ or $h' = \frac{50 \times 5}{3 \times (-25)} = \frac{-10}{3} \text{ cm}$

Real, inverted, diminished.

14. Maximum current through $A = \sqrt{\frac{P}{R}} = 3 \text{ A}$

$\frac{I_B}{I_C} = \frac{R_C}{R_B} = \frac{2}{2} = 1$ and $I_A = I_B + I_C$

$3 = 2 I_B$ or $I_B = \frac{3}{2} \text{ A}$

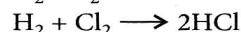
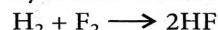
17. (i) Lithium and potassium, due to same number of valence electrons.

(ii) $\text{N} \longrightarrow 2, 5$

$\text{P} \longrightarrow 2, 8, 5$

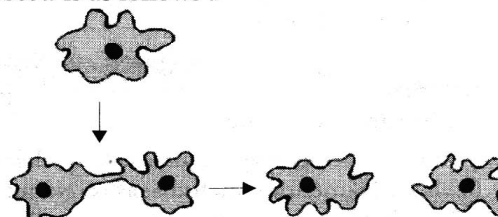
N is more electronegative element as electronegativity decreases on moving down the group.

(iii) Both fluorine and chlorine form their hydrides on reacting with hydrogen.



23. Sodium bicarbonate > Water > Lemon juice.

27. The labelled diagram of the binary fission in Amoeba is as follows :



Amoeba shows binary fission. Binary fission is the division of parent cell into two small, nearly equal sized identical daughter cells.