

# HOLY MISSION HIGH SCHOOL

[Affiliated to C.B.S.E, Delhi, +2 Level]

SAMASTIPUR - 848101

Std.-X

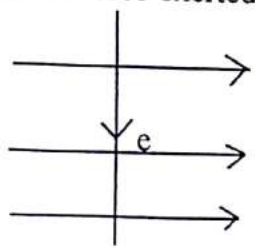
F.M. - 80

Subject:- Science

Time : 3:00 hrs.

## Section - A (Physics) - 26 Marks

1. What is the S.I. unit of magnetic field. 1
2. What is the direction of force exerted on electron 1



Magnetic field
3. State one important characteristic of magnetic field line. 1
4. An electric appliance is connected with a source of 220 v supply. If it consumes 500 J of energy in one sec. find its power and current drawn by it 1

$P = \frac{W}{t}$        $W = 500 \text{ J}$

$P = \frac{500}{1}$        $P = 500 \text{ W}$

$I = \frac{P}{V}$        $V = 220 \text{ V}$

$I = \frac{500}{220}$        $I \approx 2.27 \text{ A}$
5. State Fleming's left hand rule. Write its one application 2
6. Write principle, construction and working of electric AC generator 2
7. Write three characteristics of ideal fuel 5
8. Define nuclear fission with reactions 5
9. Define electromagnetic induction 2
10. Two electric bulb of 100w and 200w are connected in parallel with a source of 220v. Find the total current drawn by these bulbs. 2

$P = 100 \text{ W}$        $P = 200 \text{ W}$

$I = \frac{P}{V}$        $I = \frac{P}{V}$

$I = \frac{100}{220} + \frac{200}{220}$

$I = \frac{300}{220}$        $I \approx 1.36 \text{ A}$
11. What are Ac and Dc electric current. Write the advantage of Ac over Dc. 4

## Section - B (Chemistry) - 26 Marks

1. Fill in the blanks. :-
  - (a) Acid combines with base to form ..... and .....
  - (b) In thermite process ..... is used as reducing agent.
  - (c) Sulphide ore is concentrated by ..... process.
  - (d) PH of blood is .....  $7.35$  to  $7.45$ .
2. What happens when :-
  - (a) Zinc is added into  $\text{FeSO}_4$  aqueous solution.
  - (b) Magnesium ribbon is ignited in air.
  - (c) A small piece of sodium is added in water.
  - (d) Carbon dioxide gas is passed through aqueous solution of NaOH

$P = \frac{V^2}{R}$        $V = 220$        $P = 100 \text{ W}$

$P = \frac{V^2}{R}$        $V = 220$        $P = 200 \text{ W}$

$I = \frac{P}{V}$        $I = \frac{100}{220} + \frac{200}{220}$

$I = \frac{300}{220}$        $I \approx 1.36 \text{ A}$

$4 \times 1 = 4$

$4 \times 2 = 8$

$\text{Zn} + \text{FeSO}_4 \rightarrow \text{ZnSO}_4 + \text{Fe}$

$2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$

$2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$

$\text{NaOH} + \text{CO}_2 \rightarrow \text{Na}_2\text{CO}_3 + \text{H}_2\text{O}$

P.T.O

3. Explain with chemical reaction of the concentration of bauxite ore by chemical method. 3
4. How is pure copper obtained from the impure copper ? Explain with mechanism. 3
5. Classify the following salts as acidic, basic, or neutral 8x1=8  
 $\text{Na}_2\text{SO}_4$ ,  $\text{NaCl}$ ,  $\text{K}_2\text{SO}_4$ ,  $\text{Ca}_3(\text{PO}_4)_2$ ,  $\text{MgCl}_2$ ,  $\text{CH}_3\text{COONa}$ ,  $\text{HCOOK}$ ,  $\text{K}_3\text{PO}_4$  3

Section - C (Biology) - 28 Marks

1. Why are lungs divided into very small sac like structure called alveoli ? 1
2. What is the function of HCL in gastric juice ? 1
3. Draw a labelled diagram of stomata and mention its function. 2
4. What is dental caries ? How can it be prevented ? 3
5. Where are the adrenal glands located. How does our body respond when adrenaline is secreted into the blood. 3
6. Draw a labelled diagram of human heart and mention double circulation. 3
7. (a) Which plant hormone is present in greater concentration in the area of rapid cell division. 5  
 (b) Give one example of a plant growth promotor and a plant growth inhibitor.
8. Draw a labelled diagram of neuron? What are its different types? 5
9. Answer the following 5
  - (a) Why do herbivores have longer intestine?
  - (b) What is the main function of bile?
  - (c) What are the end products of digestion of carbohydrate, fat and protein

$R = \frac{V}{IS}$

\* \* \* \* \*

3) 2200 (1.3)

$$\begin{array}{r} 1613 \\ \times 13 \\ \hline 5870 \\ 10310 \\ \hline 22000 \end{array}$$

1613

$$\begin{array}{r} 1613 \\ \times 22 \\ \hline 3226 \\ 3226 \\ \hline 35486 \end{array}$$

3) 484 (161.3)

$$\begin{array}{r} 161 \\ \times 3 \\ \hline 483 \\ 484 \end{array}$$

22

$$\begin{array}{r} 22 \\ \times 11 \\ \hline 242 \end{array}$$

P =  $\frac{V}{I}$

R =  $\frac{V}{I}$