

Level - 1

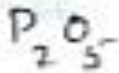
Q-1
 $\frac{1}{4}$ of 16 is 4. So 4 is the base to find relative at. mass for other elements.

\therefore Relative atomic of C-12

$$\therefore \frac{12}{4} = \underline{\underline{3}}$$

Ans: A

Q-2



We know, ox. no of O = -2, keep ox. no of P = x

$$2x + 5(-2) = 0$$

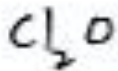
$$2x - 10 = 0$$

$$x = \frac{10}{2}$$

$$x = \underline{\underline{+5}}$$

Ans: B

Q-3



$$O = -2$$

$$Cl = x$$

$$2x + 1(-2) = 0$$

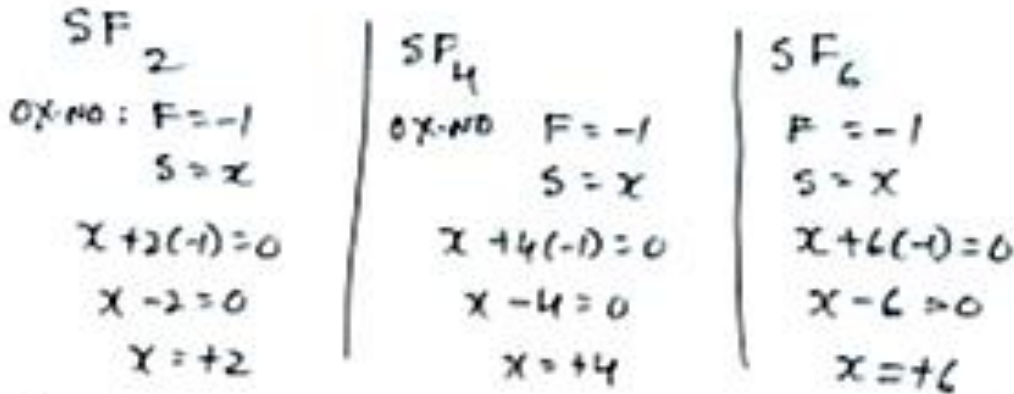
$$2x - 2 = 0$$

$$x = \frac{2}{2}$$

$$x = \underline{\underline{+1}}$$

Ans: C

Q-4

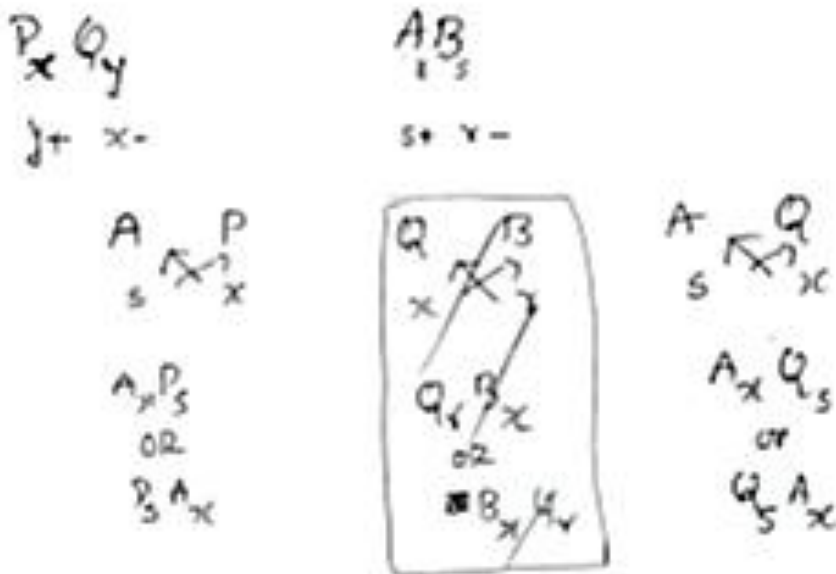


Ans: A

Q-5

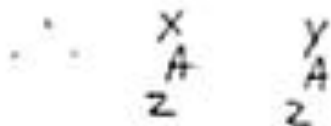
F will have -ve ox no always. Because F is most electronegative element and it always take 1 electron from other elements.

Q-6



Q-7

Isotopes have same Z and different A



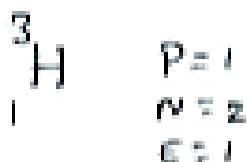
\(\therefore\) NO option \(\therefore\) Ans: D

Level-2

Q.1

Br_2 is liquid in RT

Q.2



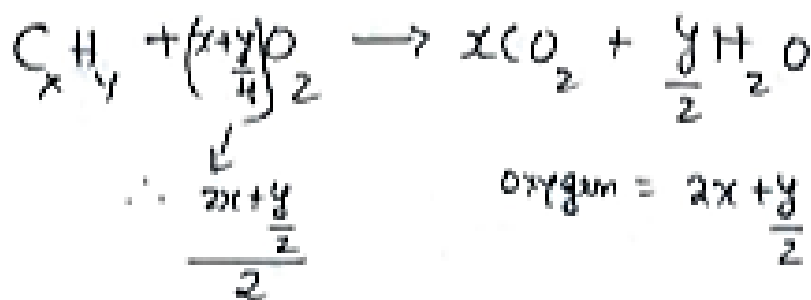
Q.3

${}^{18}_{16}\text{O}$ & ${}^{16}_{16}\text{O}$ are isotopes

Q.4.



In general,



Q.5

Cu^{+2} - cupric ion $\rightarrow +2$.

Q.6

O is divalent = 2

Q.7



Q.8



Q.9

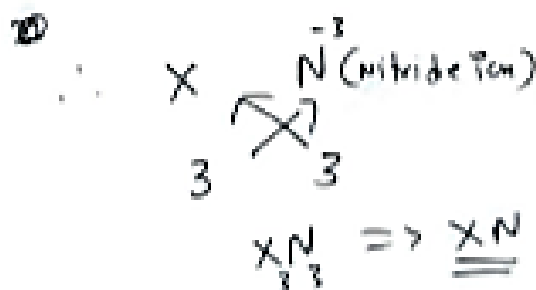


We know,



$$x + \frac{y}{4} = 2 + \frac{6}{4} \Rightarrow 2 + \frac{3}{2} \Rightarrow \frac{4+3}{2} = \frac{7}{2}$$

Q.10



Q.11

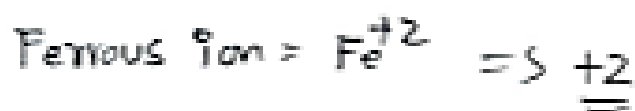
Cm - Curium - named after Madam Curie.

Q.12

$$\begin{array}{l} 20+21 \\ \text{Cation} \\ 20 \end{array} + 2 = 20 - 2$$

\therefore No. of Electrons = 18 e⁻

Q.13.



Q.14

-ve ion - P = 17
E = 19
 \therefore -2 Charge.

Q.15



Mass Equal

\therefore The no. of electrons are different.

Q.16



$\text{Mn} = x$

$\text{O} = -2$

$\therefore x + 4(-2) = -1$

$x - 8 = -1$

$x = +7$

Q.17



$$P = 12 = 2$$

$$N = 13 = 4 - 2$$

$$E = 12 = 2$$

Q.18.



Fe displaces Cu from CuSO_4 . so it is displacement reaction.

Q.19

$$P_u = 124$$

$$\therefore \text{atomic mass is one p} \therefore \frac{124}{4} = \underline{\underline{31}}$$

Q.20



$$A = 2$$

$$B = 4$$

Q.21

Na - Sodium is also called as Natrium

Q.22

every atom tries to attain $8e^-$ in its outermost shell. If outermost shell already contains $8e^-$ then its combining capacity = zero because it's stable.

Q-23

Oxygen exists as diatomic molecule = O_2 .

Q-24 - Subjective Questions

1. monoatomic is always atoms.

∴ Fe, He

Diatomic, triatomic or polyatomic are always molecules if their charge is zero and ~~are~~ are ions if they are charged.

molecule - H_2, CO_2, Fe_2O_3

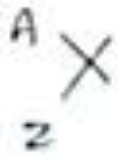
ions - CO_3^{2-}

2.	12	14	16	
	C	N	O	P=2
	6	7	8	E=2
				N= 2 4-2
	p=6	p=7	p=8	
	n=6	n=7	n=8	
	e=6	e=7	e=8	

3.

Because C-12 is the most abundant of the two stable isotopes of carbon (C-13 being the other) amounting to 98.93% of the element carbon. and practically it is easy to measure mass of C-12 than Hydrogen or oxygen.

4.

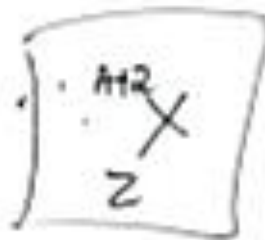


$A = \text{mass no} = P + N$

if no. of neutrons increases then A (mass) increases.

\therefore if 2 neutrons ↑

$$\therefore A + P + (N + 2)$$



5.

if abundance of two or more isotopes become significant then average of ~~the~~ Atomic weight of all those isotopes is considered.

For eg: ${}_{17}^{35}\text{Cl}$ - 75% abundance

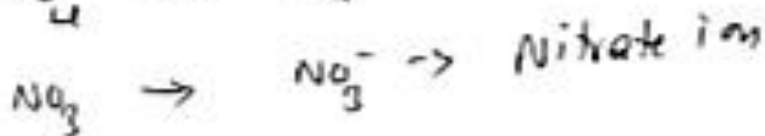
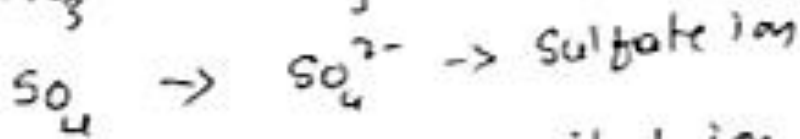
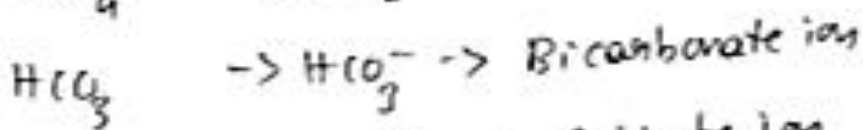
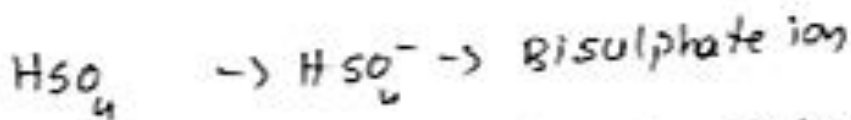
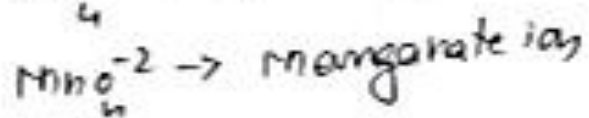
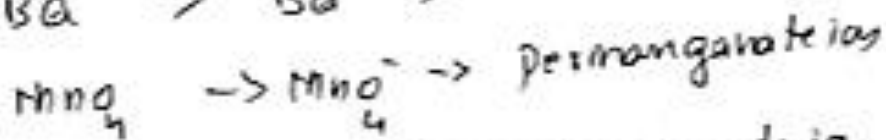
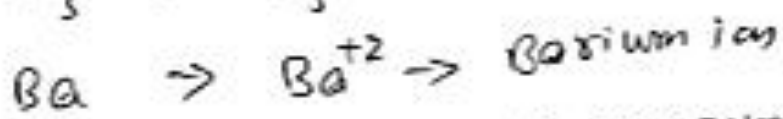
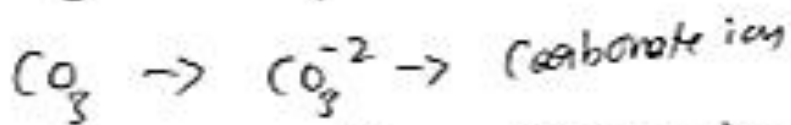
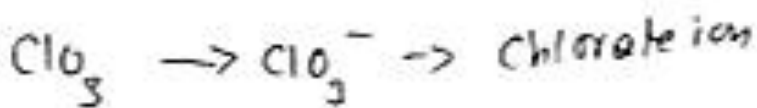
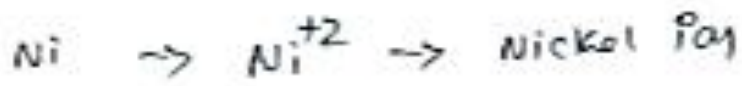
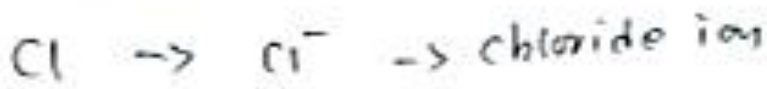
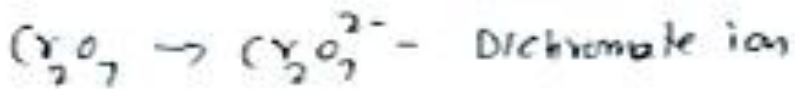
${}_{17}^{37}\text{Cl}$ - 25% abundance

$$\therefore \text{Average Atomic wt} = \frac{\% \times \text{At. mass of one isotope} + \% \times \text{At. mass of second isotope}}{100}$$

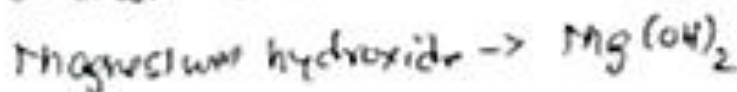
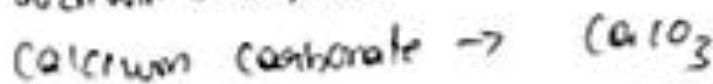
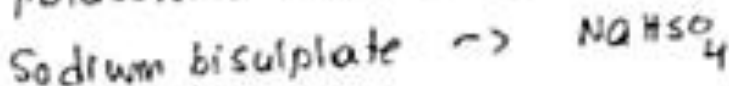
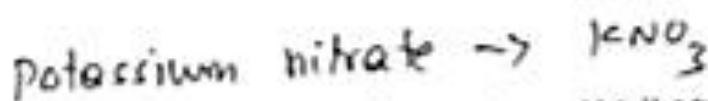
$$= \frac{75 \times 35 + 25 \times 37}{100}$$

$$= \underline{\underline{35.5}}$$

6.



7.



Zinc sulphate \rightarrow $ZnSO_4$

Aluminium oxide \rightarrow Al_2O_3

Copper nitrate \rightarrow $(Cu(NO_3)_2)$

Iron(III) hydroxide \rightarrow $Fe(OH)_3$

Lead (II) sulphate \rightarrow $PbSO_4$

8.

$KClO$ \rightarrow Potassium hypochlorite

$HClO$ \rightarrow Hydrogen hypochlorite.

$K_2Cr_2O_7$ \rightarrow Potassium dichromate

NH_4OH \rightarrow Ammonium hydroxide

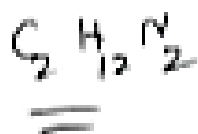
$Cr_2(SO_4)_3$ \rightarrow Chromium sulphate.

9.

C \rightarrow $24 \times 1.66 \times 10^{-24} \Rightarrow 2$ C-atoms

H \rightarrow $12 \text{ amu} \rightarrow 12$ H-atoms

N \rightarrow $28 \text{ amu} \rightarrow 2$ N-atoms



10.

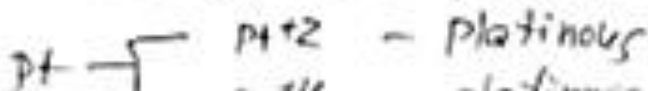
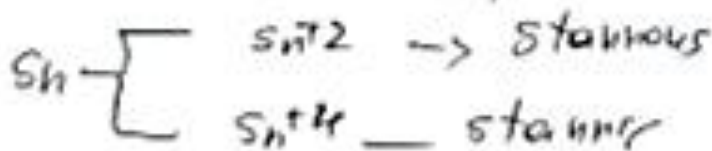
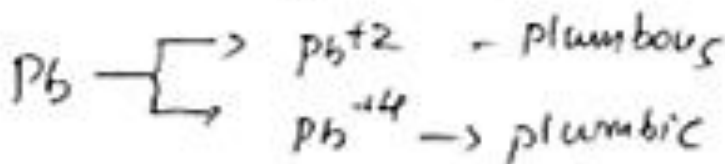
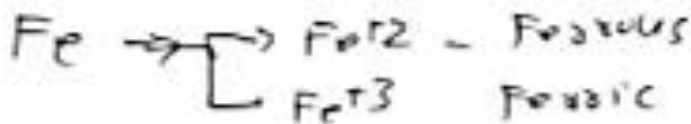
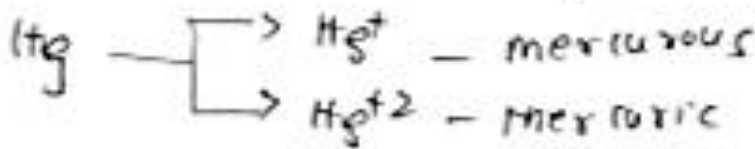
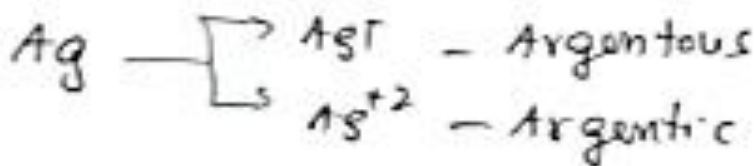
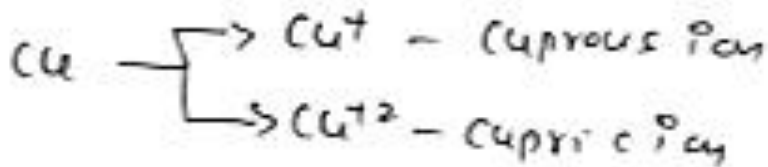
① Rf - Rutherford U - ~~U~~ Uranium.

Am - Americium

Cm - Curium

- ② planet Uranus → Uranium
- ③ Argentina → Ag - silver
- ④ America → Am
- ⑤ Albert Einstein - Es
- ⑥ 100th Element - Fm - Fermium
- ⑦ Farthest planet : Pu - Plutonium
- ⑧ 103th Element : Hs - Hassium
- ⑨ Same as subjective Q.no-6

⑩



12



13



$2x + 5(-2) = 0$

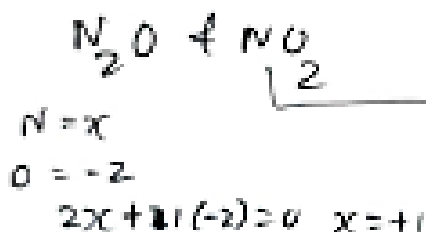
$2x - 10 = 0$

$x = +5$

15 Refer level

q. 4.

14



$x + 2(-2) = 0$

$x = +4$