

D. B. College (Jaynagar)

lect-3

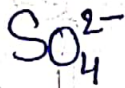
Akhilesh Kumar Singh

Chemistry department B.Sc (Sub)

Mob: - 8750390927

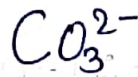


The algebraic sum of O.N. of all atom in a polyatomic ion is equal to total charge



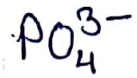
$$x + 4(-2) = -2$$

$$x = +6$$



$$x + 3(-2) = -2$$

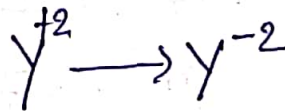
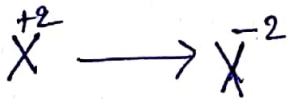
$$x = +4$$



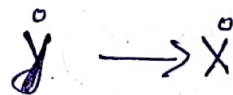
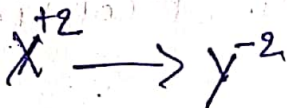
$$x + 4(-2) = -3$$

$$x = +5$$

Case-II: for Coordinate Bond :-

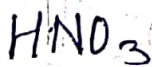


E.N.Y > E.N.X



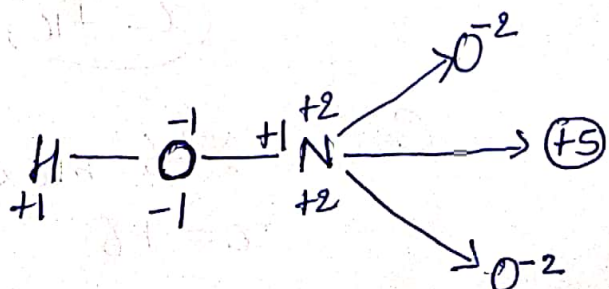
+2      -2

-2      +2

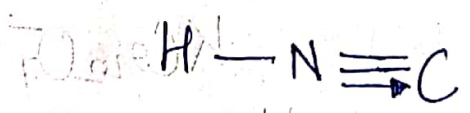
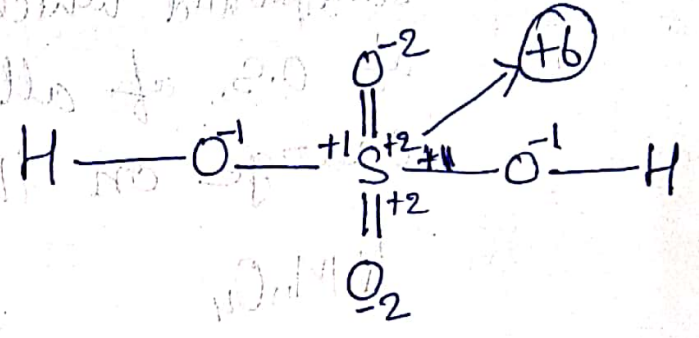
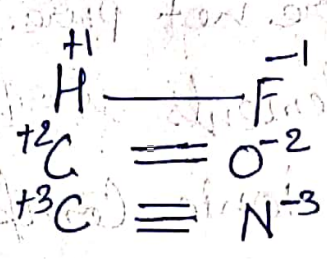
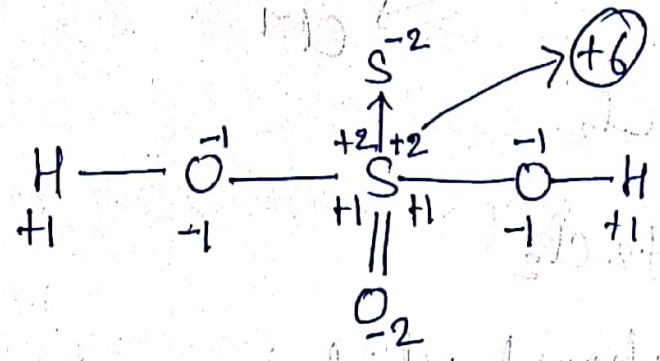


$$+1 + x + 3(-2) = 0$$

$$x = +5$$

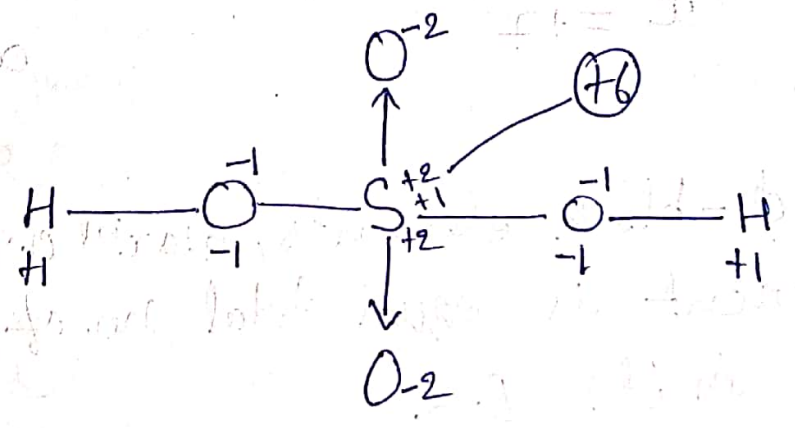


$H_2S_2O_3$  Thionic acid / Thiosulphuric acid



$1 = (5) + 3 + 1 + 1$

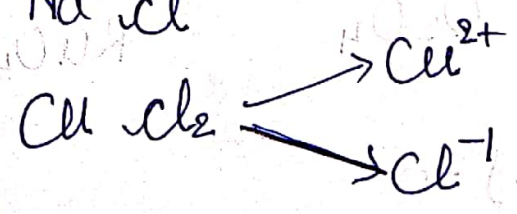
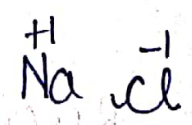
$2 + 2 = 0$



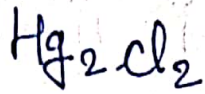
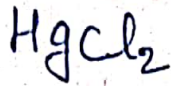
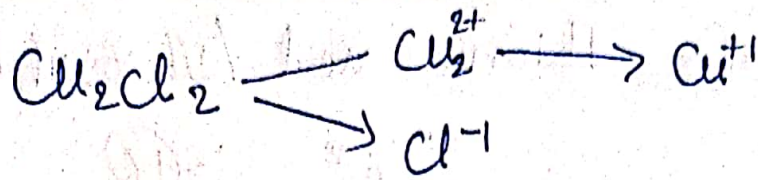
$+2 + 0 - 2 + 0$



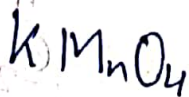
Case-III for ionic Compounds :-





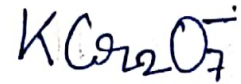


Compound which are not pure ionic, sum of o.s. of all elements is equal to charge on that ionic compounds.



$$+1 + x + 4(-2) = 0$$

$$x = +7$$

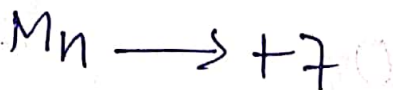
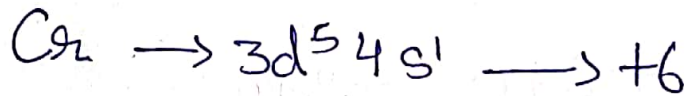


$$+1 + 2x + 7(-2) = -1$$

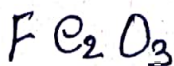
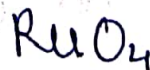
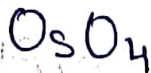
$$x = +6$$

Note

① In d-block elements, max<sup>m</sup> o.s. of an element is equal total no. of unpaired e<sup>-</sup> in its E.S.



② In P.T., max<sup>m</sup> o.s. is shown by Os & Ru i.e. +8



$$2x + 3(-2) = 0$$

$$x = +3$$