

Q1 2021 (01 Sep Shift 2)

The oxide without nitrogen-nitrogen bond is :

- (1) N_2O
- (2) N_2O_4
- (3) N_2O_3
- (4) N_2O_5

Q2 2021 (31 Aug Shift 2)

The number of $S = O$ bonds present in sulphurous acid, peroxodisulphuric acid and pyrosulphuric acid, respectively are :

- (1) 2,3 and 4
- (2) 1,4 and 3
- (3) 2,4 and 3
- (4) 1,4 and 4

Q3 2021 (31 Aug Shift 2)

Which one of the following correctly represents the order of stability of oxides, X_2O ; (X = halogen)?

- (1) $Br > Cl > I$
- (2) $Br > I > Cl$
- (3) $Cl > I > Br$
- (4) $I > Cl > Br$

Q4 2021 (31 Aug Shift 1)

The number of halogen / (s) forming halic (V) acid is _____.

Q5 2021 (31 Aug Shift 1)

Consider the sulphides HgS , PbS , CuS , Sb_2S_3 , As_2S_3 and CdS . Number of these sulphides soluble in 50% HNO_3 is _____.

Q6 2021 (27 Aug Shift 2)

Which one of the following is formed (mainly) when red phosphorus is heated in a sealed tube at 803 K ?

- (1) White phosphorus
- (2) Yellow phosphorus
- (3) β -Black phosphorus
- (4) α -Black phosphorus

Q7 2021 (27 Aug Shift 1)

Match *List – I* with *List – II* :

List-I

(Species)

List-II

(Number of lone pairs of electrons on the central atom)

(a) XeF_2

(b) XeO_2F_2

(c) XeO_3F_2

(d) XeF_4

(i) 0

(ii) 1

(iii) 2

(iv) 3

Choose the *most appropriate* answer from the options given below :

- (1) (a) – (iv), (b) – (i), (c) – (ii), (d) – (iii)
- (2) (a) – (iii), (b) – (iv), (c) – (ii), (d) – (i)
- (3) (a) – (iii), (b) – (ii), (c) – (iv), (d) – (i)
- (4) (a) – (iv), (b) – (ii), (c) – (i), (d) – (iii)

Q8 2021 (26 Aug Shift 2)

The number of non-ionisable hydrogen atoms present in the final product obtained from the hydrolysis of

PCl_5 is :

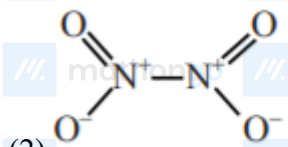
- (1) 0
- (2) 2
- (3) 1
- (4) 3

Q9 2021 (26 Aug Shift 1)

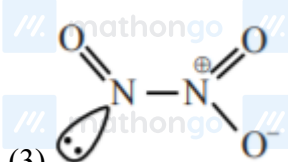
The incorrect statement is:

- (1) Cl_2 is more reactive than ClF .
- (2) F_2 is more reactive than ClF .
- (3) On hydrolysis ClF forms HOCl and HF .
- (4) F_2 is a stronger oxidizing agent than Cl_2 in aqueous solution

Q1 (4)

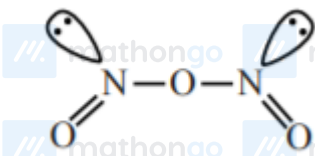


(2)

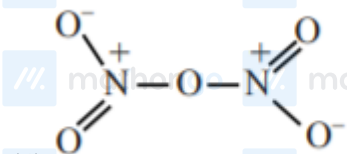


(3)

unsymmetrical

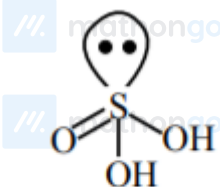


symmetrical



(4)

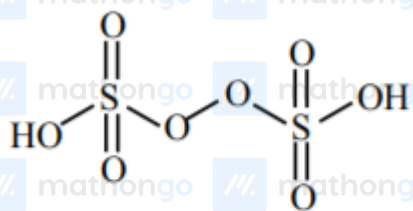
Q2 (4)



Sulphurous acid

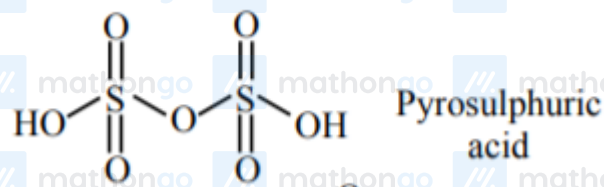


1 S Bond.



Peroxodisulphuric
acid

4 S Bond.



Pyrosulphuric
acid

4 S Bond.

Q3 (4)

Stability of oxides of Halogens is

$I > Cl > Br$

Q4 (3)

The number of halogen forming halic (V) acid

$HClO_3$

$HBrO_3$

HIO_3

So Answer is 3.

Q5 (4)

PbS , CuS , As_2S_3 , CdS are soluble in 50% HNO_3 HgS , Sb_2S_3 are insoluble in 50% HNO_3

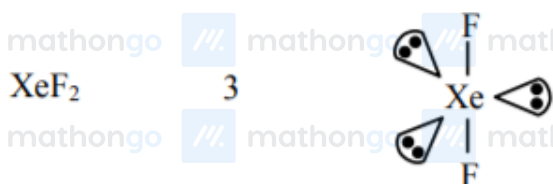
So Answer is 4.

Q6 (4)

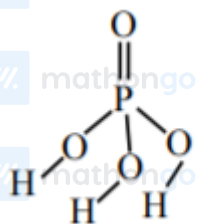
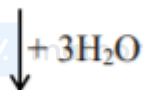
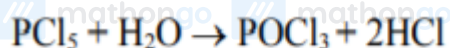
When red phosphorus is heated in a sealed tube at 803 K, α -black phosphorus is formed.

Q7 (4)

Species (Number of lone pairs of electrons on the central atom)



Q8 (1)



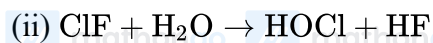
In

all hydrogens are ionisable

\therefore Ans is zero.

Q9 (1)

(i) Reactivity order :



(iii) Oxidizing power in aqueous solution

