YAKEEN NEET 2.0

2026

Redox Reaction

MPQ Solution - 01

Physical Chemistry

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QUESTION (AIIMS 2015)

Oxidation numbers of P in PO_4^{3-}, of S in SO_4^{2-} and that of Cr in $Cr_2O_7^{2-}$ are respectively

(A) +3, +6 and +5

(B) +5, +3 and +6

(C) –3, +6 and +6

(D) +5, +6 and +6

$x - 8 = -3$

$x = 8 - 3$

$= +5$

$x - 8 = -2$

$x = 8 - 2 = +6$

$2x - 14 = -2$

$2x = 14 - 2 = 12$

$x = \frac{12}{2} = 6$

QUESTION (AIIMS 2010, 12)

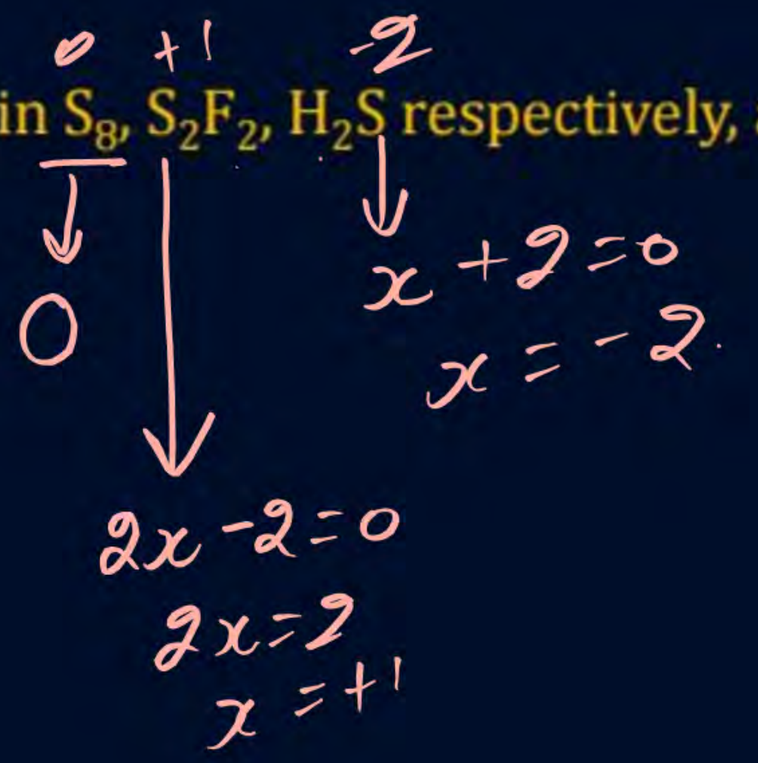
The oxidation states of sulphur in S_8, S_2F_2, H_2S respectively, are

(A) 0, +1 and –2

(B) +2, +1 and –2

(C) 0, +1 and +2

(D) –2, +1 and –2



QUESTION (AIIMS 2008)

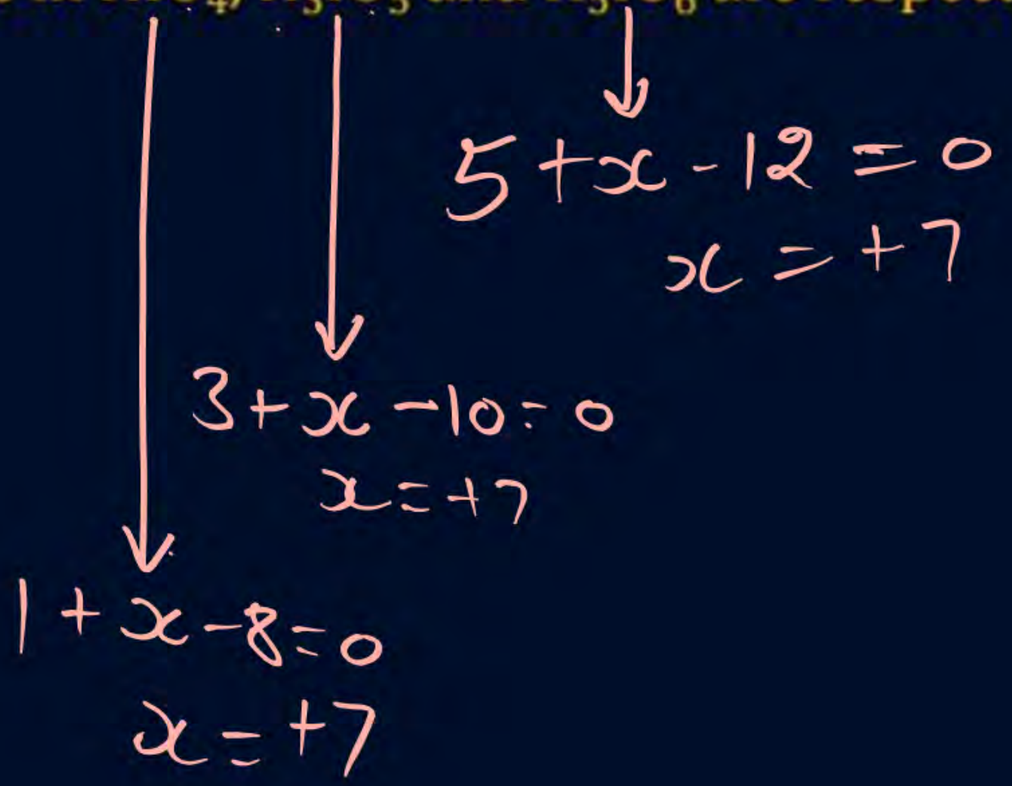
The oxidation state of iodine in HIO_4, H_3IO_5 and H_5IO_6 are respectively

(A) +1, +3, +7

(B) +7, +7, +3

(C) +7, +7, +7

(D) +7, +5, +3



QUESTION (AIIMS 2002)

Oxidation state of Fe in Fe_3O_4 is:

A $\frac{3}{2}$

B $\frac{5}{4}$

C $\frac{4}{5}$

D $\frac{8}{3}$

avg. o.n. of Fe $= \frac{+2 + 2\times3}{3}$

$= \frac{8}{3}$

QUESTION (AIIMS 2001)

Both oxidation and reduction takes place in:

A $NaBr + HCl \rightarrow NaCl + HBr$

B $HBr + AgNO_3 \rightarrow AgBr + HNO_3$

C $H_2 + Br_2 \rightarrow 2HBr$

D $CaO + H_2SO_4 \rightarrow CaSO_4 + H_2O$

QUESTION (AIIMS 2000)

In the following chemical reaction:

$$\overset{+1\ -2}{Ag_2O} + \overset{+1\ -2}{H_2O} + 2e^- \rightarrow 2\overset{0}{Ag} + 2\overset{-2+1}{OH^-}$$

Reduction

(A) ✗ hydrogen is reduced

(B) ✓ electrons are ~~reduced~~ gained

(C) ✗ water is oxidised

(D) ✗ silver is oxidised

QUESTION (AIIMS 2000)

The oxidation number of Sulphur in $H_2S_2O_7$ is:

(A) +2

(B) +6

(C) +4

(D) +8

$$2 + 2x - 14 = 0$$

$$2x = 12$$

$$x = 6$$

QUESTION (AIIMS 1999)

Oxidation number of Os in OsO_4 is:

(A) +2

(B) +4

(C) +8

(D) +10

$x - 8 = 0$

$x = +8$

QUESTION (AIIMS 1999)

Oxidation is:

A. Gain of electrons

B. Loss of neutrons

C. Loss of electrons

D. Decrease in positive valency

QUESTION (AIIMS 1997, 2001)

The oxidation number of Cr in $K_2Cr_2O_7$ is:

A. +3

B. −3

C. +6

D. −6

$2+2x-14=0$

$2x=12$

$x=6$

THANK YOU