Q1: 24 Feb (Shift 2) - Single Correct

The incorrect statement among the following is :

(1) $VOSO_4$ is a reducing agent

(2) Red colour of ruby is due to the presence of CO^{3+}

(3) Cr_2O_3 is an amphoteric oxide

(4) RuO_4 is an oxidizing agent

Q2: 24 Feb (Shift 2) - Single Correct

What is the correct order of the following elements with respect to their density?

(1) $Cr < Fe < Co < Cu < Zn$

(2) $Cr < Zn < Co < Cu < Fe$

(3) $Zn < Cu < Co < Fe < Cr$

(4) $Zn < Cr < Fe < Co < Cu$

Q3: 25 Feb (Shift 1) - Single Correct

In which of the following pairs, the outer most electronic configuration will be the same?

(1) Fe^{2+} and Co^{+}

(2) Cr^{+} and Mn^{2+}

(3) Ni^{2+} and Cu^{+}

(4) V^{2+} and Cr^{+}

Q4: 26 Feb (Shift 1) - Single Correct

On treating a compound with warm dil. H_2SO_4, gas X is evolved which turns $K_2Cr_2O_7$ paper acidified with dil. H_2SO_4 to a green compound Y. X and Y respectively are :

(1) $X = SO_2, Y = Cr_2(SO_4)_3$

(2) $X = SO_2, Y = Cr_2O_3$

(3) $X = SO_3, Y = Cr_2O_3$

(4) $X = SO_3, Y = Cr_2(SO_4)_3$

Q5: 26 Feb (Shift 1) - Single Correct

Which one of the following lanthanoids does not form MO_2 ?

[M is lanthanoid metal]

(1) Nd

(2) Yb

(3) Dy

(4) Pr

Q6: 26 Feb (Shift 1) - Numerical

Dichromate ion is treated with base, the oxidation number of Cr in the product formed is :

Answer Key

Q1 (2) **Q2** (4) **Q3** (2) **Q4** (1)

Q5 (2) **Q6** (6)