Q1: 24 Feb (Shift 1) - Single Correct

Consider the elements Mg, Al, S, P and Si, the correct increasing order of their first ionization enthalpy is:

(1) $Al < Mg < Si < S < P$

(2) $Al < Mg < S < Si < P$

(3) $Mg < Al < Si < S < P$

(4) $Mg < Al < Si < P < S$

Q2: 25 Feb (Shift 2) - Single Correct

The correct order of bond dissociation enthalpy of halogen is :

(1) $F_2 > Cl_2 > Br_2 > I_2$

(2) $Cl_2 > F_2 > Br_2 > I_2$

(3) $Cl_2 > Br_2 > F_2 > I_2$

(4) $I_2 > Br_2 > Cl_2 > F_2$

Q3: 26 Feb (Shift 1) - Single Correct

Match List-I with List-II

List –I Electronic configuration of elements	**List-II $\Delta_i H$ in kJ mol^{-1}**
(a) $1s^2 2s^2$	(i) 801
(b) $1s^2 2s^2 2p^4$	(ii) 899
(c) $1s^2 2s^2 2p^3$	(iii) 1314
(d) $1s^2 2s^2 2p^1$	(iv) 1402

(1) (a) – (ii), (b) – (iii), (c) – (iv), (d) – (i)

(2) (a) – (iv), (b) – (i), (c) – (ii), (d) – (iii)

(3) (a) – (i), (b) – (iv), (c) – (iii), (d) – (ii)

(4) (a) – (i), (b) – (iii), (c) – (iv), (d) – (ii)

Q4: 26 Feb (Shift 2) - Single Correct

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: In TII_3, isomorphous to CsI_3, the metal is present in +1 oxidation state.

Reason R: TI metals has fourteen f electrons in its electronic configuration.

In the light of the above statements, choose the most appropriate answer from the options given below:

(1) Both A and R are correct and R is the correct explanation of A

(2) A is not correct but R is correct

(3) Both A and R are correct R is NOT the correct explanation of A

(4) A is correct but R is not correct

Q5: 26 Feb (Shift 2) - Single Correct

The correct order of electron gain enthalpy is:

(1) S > Se > Te > O

(2) O > S > Se > Te

(3) S > O > Se > Te

(4) Te > Se > S > O

Answer Key

Q1 (1) **Q2** (3) **Q3** (1) **Q4** (3)

Q5 (1)