KV CTPP CHHABRA

WINTER BREAK 2023-24

Class- XII Subject- Chemistry

Q1. Account for the following:-Zn, Cd & Hg are not considered as transition metals.

Q2. Out of Fe2+ and Fe3+, which is more paramagnetic and why?

Q3. Explain with reason:(i) Why is he used in diving apparatus?

Q4. Complete the following reactions :

(a) MnO4- + Fe2+----------------------

(b) Cr2O72- + Fe2+--------------------

(c) I2- + MnO4-(basic medium) --------------------

Q5. What is lanthanoid contraction? Explain its causes.

Q6 . Give reasons:

(i) d block elements have high heat of atomization.

(ii) d block elements act as better catalyst.

(iii) d block elements forms interstitial compounds

(iv)Transition metals form compounds which are usually coloured.

(v)Transition metals exhibit variable oxidation states

Q7Account for the following :

(i) Transition elements show highest oxidation state in their oxidesthan fluorides.

(ii) Cu has positive electrode potential in the first transition series.

(iii) Ionisation enthalpy of lanthanides is higher than actinides.

(iv) Potassium dichromate is a good oxidising agent in acidic medium.

(v) Actinides show more number of oxidation states than

lanthanides.

Q8. ) An element ‘A’ exists as a yellow solid in standard state. It forms a volatile hydride ‘B’ which is a foul smelling gas and is extensively used in qualitative analysis of salts. When treated with oxygen, ‘B’ forms an oxide ‘C’ which is a colourless, pungent smelling gas. This gas when passed through acidified KMnO4 solution decolourises it. ‘C’gets oxidized to another oxide ‘D’in the presence of a heterogeneous catalyst. Identify A,B,C,D,and also give the Chemical equation of reaction of ‘C’ with acidified KMnO4 solution and for conversion of ‘C’ to `D’.

Q9 Prepare a investigatory project file for CBSE Board Exam.

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