

Assessment on d block elements.

1. Why elements do we classify under a specific group called “d”?
2. Give the symbols of 3d elements.
3. 27 is the atomic number of a 3d element called “M”.
 - i) Give the electronic configuration of the ground state atom “M”.
 - ii) Suppose M makes a divalent cation, give the electronic configuration of M²⁺.
 - iii) How many unpaired electrons does M²⁺ ion have?
4. What are transition elements?
- i) Why do certain d elements not considered as transition?
- ii) Name them
5. Say whether the following statements are true or false.
 - a. S block elements make cations preferentially than d block ()
 - b. S block elements are denser than d block elements ()
 - c. Metallic lattice of d block elements are much stronger ()
 - d. All the industrial catalysts are d block metals ()
 - e. Cr, Mn, Fe, Zn are called transition metals while Sc is not ()
 - f. Coordination number of Cr is 5 in $[\text{Cr}(\text{H}_2\text{O})_5\text{OH}]^{2+}$ ()
 - g. Ligands are electron donors while d block cations behave as Lewis acids ()
 - h. Geometry is angular in $[\text{Ag}(\text{NH}_3)_2]$ ()
 - i. CuCl_4 is tetrahedral while $[\text{Cu}(\text{NH}_3)_4]^{2+}$ is square planar although the coordination number is 4 ()

Name the following complex ions and compounds.

