

Episode No – 22

Telecast date: 11/04/2017

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Topic: Periodic properties of elements, S-Block and P-block elements.

- The sulphate of a metal has the formula $M_2(SO_4)_3$. The formula of its phosphate will be
a. $M(HPO_4)_2$ b. $M_3(PO_4)_2$ c. $M_2(PO_4)_3$ d. **MPO_4**
- Elements belonging to the same group of periodic table have
a. same number of energy level b. **same number of valence electrons**
c. same ionization enthalpy d. same atomic radii
- Which of the following has the lowest electron affinity?
a. Nitrogen b. oxygen c. **argon** d. boron
- The element having very high ionization enthalpy but zero electron gain enthalpy is
a. H b. F c. **He** d. Be
- Which of the following ions contain maximum number of unpaired electrons?
a. Fe^{2+} b. **Fe^{3+}** c. Co^{2+} d. Co^{3+}
- Which of the following is isoelectronic with hydride ion?
a. Li b. He^+ c. **He** d. Be
- The paramagnetic species among the following is
a. **KO_2** b. SiO_2 c. TiO_2 d. BaO_2
- Which of the following oxides of nitrogen is paramagnetic?
a. N_2O b. N_2O_5 c. **NO_2** d. N_2O_3
- Identify the alkali metal ion having greater degree of hydration?
a. **Li^+** b. Na^+ c. K^+ d. Rb^+
- Sodium forms Na^+ ion but it does not form Na^{2+} ion because of
a. very low value of I and II Ionization enthalpy.
b. very high value of I and II ionization enthalpy
c. high value of I ionization enthalpy and low value of II ionization enthalpy
d. **low value of I ionization enthalpy and high value of II ionisation enthalpy.**
- The hydride from amongst the following that cannot be obtained directly by reaction with hydrogen is
a. CaH_2 b. MgH_2 c. **BeH_2** d. NaH
- Which of the following statements is false for alkali metals?
a. Li is the strongest reducing agent. b. **sodium is amphoteric in nature**
c. alkali metals are monovalent d. form hydrides with hydrogen
- The oxides of alkaline earth metals are basic in nature, exception to
a. Ba b. Mg c. **Be** d. Ca
- Zn reacts with excess of caustic soda to give
a. $Zn(OH)_2$ b. ZnO c. $ZnCO_3$ d. **Na_2ZnO_2**
- Which member of group 13 does not exhibit the group valency in its compound?
a. B b. Al c. Ga d. **Tl**
- Boron halides are Lewis acids, because
a. they are proton donors b. they are ionic compounds
c. **they do not have complete octet** d. have a lone pair of electrons on boron atoms.
- Which of the following oxides is acidic in nature?
a. **B_2O_3** b. Al_2O_3 c. Ga_2O_3 d. In_2O_3
- What is the basicity of boric acid?
a. **1** b. 2 c. 3 d. 4

