

SEM	SET	PAPER CODE	TITLE OF THE PAPER
II	2014	14PCH2106	INORGANIC CHEMISTRY – II

SECTION - A**Answer all the questions:****30 × 1 = 30****Choose the correct answer:**

- The effective nuclear charge of boron regarding the valency electron is
 - 5
 - 2.6
 - 2.4
 - 3.6
- The radius ratio of beryllium sulphide is 0.35. Its possible geometry is
 - square planar
 - octahedral
 - tetrahedral
 - cubic
- Increase in polarisation occurs due to
 - high charge and large size of the cation
 - High charge and large size of the anion
 - Low charge and small size of the cation
 - High charge and small size of the anion
- Given that I.E. of chlorine is 13.0 eV/atom and E.A. value is 3.7 eV/atom then the Pauling electronegativity value is
 - 8.35
 - 4.0
 - 3.0
 - 2.0
- Which of the following has the weakest covalent bond?
 - F–F
 - P–P
 - C–C
 - H–H

15. Copper displaces silver from its aqueous salt solution. Then the condition is
- a) $E^\circ_{\text{Cu}^{2+}/\text{Cu}} > E^\circ_{\text{Ag}^+/\text{Ag}}$ b) $E^\circ_{\text{Cu}^{2+}/\text{Cu}} < E^\circ_{\text{Ag}^+/\text{Ag}}$
c) $E^\circ_{\text{Cu}^{2+}/\text{Cu}} = E^\circ_{\text{Ag}^+/\text{Ag}}$ d) $E^\circ_{\text{Ag}^+/\text{Ag}} = 0$
16. Among the following which is considered as soft acid?
- a) Mg^{2+} b) Ca^{2+}
c) K^+ d) Ag^+
17. Acetic acid behaves as a base in the solvent
- a) H_2O b) liq. NH_3
c) H_2SO_4 d) liq. SO_2
18. Alkali metals give blue solutions without reaction in the solvent
- a) Liq. HF b) H_2SO_4
c) H_2O d) liq. NH_3
19. Which of the following is the weakest $\text{P}_\pi-\text{P}_\pi$ bond
- a) $\text{C}=\text{C}$ b) $\text{C}=\text{Si}$
c) $\text{C}=\text{Sn}$ d) $\text{C}=\text{Ge}$
20. The stability of phosphorus oxygen linkage in phosphine oxides is due to
- a) back bonding b) ionic bond
c) covalent bond d) σ -bond
21. Formation of polyhalide ion is less common in
- a) I b) Br
c) Cl d) F
22. Formation of cation is mostly favoured by the halogen
- a) F b) Cl
c) Br d) I

