

CHEMISTRY

51. Two oxides of a metal contain 50% and 40% metal (M) respectively. If the formula of first oxide is MO_2 , the formula of second oxide will be
- (A) M_2O_5 (B) M_2O (C) MO_3 (D) MO_2
52. The hydrogen atoms confined at the same pressure and volume as the same number of atoms of He, will move faster by a factor of
- (A) 1.713 (B) 2.0 (C) 1.414 (D) 4.0
53. Among the following possible transitions in Bohr hydrogen atom which one emits light of longest wave length?
- (A) $n=4$ to $n=3$ (B) $n=1$ to $n=2$
(C) $n=2$ to $n=3$ (D) $n=2$ to $n=5$
54. The orbital angular momentum (in units of $h/2\pi$) of an electron in the 3d orbital is
- (A) 3 (B) 2 (C) $\sqrt{6}$ (D) $\sqrt{2}$
55. The wave length of light emitted when electron falls from $n=50$ to $n=49$ orbit of hydrogen atom is
- (A) 55nm (B) 0.55cm (C) $0.55 \text{ } ^\circ\text{A}$ (D) 55m
56. The correct order of ionic radii for the ions S^{2-} , Cl^- , P^{3-} , Ca^{2+} is
- (A) $\text{Ca}^{2+} > \text{Cl}^- > \text{S}^{2-} > \text{P}^{3-}$
(B) $\text{S}^{2-} > \text{P}^{3-} > \text{Cl}^- > \text{Ca}^{2+}$
(C) $\text{P}^{3-} < \text{S}^{2-} < \text{Cl}^- < \text{Ca}^{2+}$
(D) $\text{Ca}^{2+} < \text{Cl}^- < \text{S}^{2-} < \text{P}^{3-}$