

Intermediate Examination 2020
Sundarban Mahavidyalaya
Sem-II CEMA
Paper - CC-4 (Inorganic)

Answer any 10 questions

1. Madelung Constant is for
a) Dimension of lattice b) Geometry of lattice c) length between unit cell d) none
2. Fajan's Rule explain the following
a) ionic character of a covalent compound b) H-bond character of a covalent compound c) covalent character of an ionic compound d) all
3. Limiting radius ratio for octahedral geometry is
a) 0.155 - 0.225 b) 0.225 - 0.414 c) 0.414 - 0.732 d) 0.732 - 1.0
4. Complete the radioactive reaction

$${}_{12}^{24}\text{Mg} + {}_1^2\text{H}(\text{D}) = {}_2^4\text{He} + \dots$$
 a) ${}_{11}^{23}\text{Na}$ b) ${}_{11}^{24}\text{Na}$ c) ${}_{12}^{24}\text{Mg}$ d) ${}_{10}^{22}\text{Ne}$
5. Binding energy corresponding to 1 amu is
a) 932.28 MeV b) 930.28 MeV c) 941.28 MeV d) 931.28 MeV
6. Bond order of O_2^+ is
a) 2 b) 2.5 c) 1.5 d) 3
7. KHF_2 is solid compound, due to
a) ionic bonding b) covalent bonding c) weak force d) H-bonding
8. In CO_2 and SO_2 , the polar compound is
a) CO_2 b) SO_2 c) both d) none
9. The hybridization of Xe in XeF_2 compound is
a) sp^3 b) sp^3d c) sp^3d^2 d) sp^3d^3
10. Which is the correct sequence of hydration energy
a) $\text{Na}^+ > \text{K}^+ > \text{Li}^+ > \text{H}^+$ b) $\text{K}^+ < \text{Na}^+ < \text{Li}^+ < \text{H}^+$ c) $\text{H}^+ < \text{Li}^+ < \text{Na}^+ < \text{K}^+$ d) none
11. The values of bond angles present in PF_5 are as
a) $90^\circ, 90^\circ$ b) $90^\circ, 120^\circ$ c) $90^\circ, 80^\circ$ d) $120^\circ, 120^\circ$
12. Which of the following has p_n-d_n bonding?
a) NO_3^- b) SO_3^{2-} c) BO_3^{3-} d) CO_3^{2-}