Chemistry Worksheets Class 12 on Chapter 1 Solid State - Set 2

Q-1: If A, E, M, and n represent the atomic mass, equivalent mass, molecular mass and valency of an element respectively, the relation between the given quantities is:

a) $A = E \times n$
b) $A = M/E$
c) $A = M/n$
d) $M = A \times n$

Q-2: The coordination number of a Gold (Au) atom in its crystal structure is_____.

a) 4
b) 8
c) 12
d) 6

Q-3: What is the atomicity of H_2SO_4?

Q-4: The structure having 68% packing efficiency is_____.

a) Hcp structure
b) Ccp structure
c) Fcc structure
d) Bcc structure

Q-5: Mention two properties that occur due to the presence of F-centres inside a solid.

Q-6: Select all the correct options.
Diamond is_____.

a) A covalent solid
b) A lubricant
c) Good conductor
d) sp^3 hybridised

Q-7: How is the electrical conductivity of semiconductors affected with a variation in temperature?

Q-8: What can be the value of "n" in $Be_nAl_2Si_6O_{18}$?

Q-9: Which of the following metals expand on freezing (solidification)?

a) Zinc
b) Aluminium
c) Copper
d) Gallium

Q-10: A haemoglobin-like structure contains one atom of Fe. The Compound has 4.6% of Fe. Calculate the approximate mass of the compound.

Q-11: How many moles of water are produced when 10 g hydrogen is exploded with 64 g oxygen in a steel vessel?

Q-12: The density of CsCl that crystallises in the cubic structure is 3.99 g cm^{-3}. Calculate the distance between the Cs$^+$ ions and the Cl$^-$ ions.

Q-13: The Br$^-$ ion having an ionic radius 195 pm forms a close packed structure. What will be the radius of the cation that just fits into the tetrahedral void?

Q-14: Why do most of the elements have fractional atomic mass?

Q-15: Which one among the following has the least number of molecules?

a) 0.1 mole of O_2
b) 8 g O_2
c) 11.2 L O_2 at NTP
d) 2.24 x 10^4 mL O

Q-16: Three different isotopes of Neon with the mass number 20, 21 and 22 have fractional abundances 0.9051, 0.0027 and 0.0922 respectively.What is the average atomic mass of Neon?

Q-17: In a closed vessel containing 2 g of oxygen, 1 g of magnesium was burnt. Pick a correct fact for the same.

a) The mixture obtained weighs 5 g.
b) 0.25 g Mg is left unburnt.
c) 1.5 g Oxygen is left unused.
d) 1.67 g of MgO is formed

Q-18: The radius of the anion in a solid A$^+$B$^-$ having the NaCl type close packed structure is 241.5 pm. What can be the ideal radius of the cation? Can a cation with radius 50 pm fit into the tetrahedral hole of this structure?

Q-19: Balance the chemical equation given below:

$$Cu + HNO_3 \rightarrow Cu(NO_3)_2 + NO + H_2O$$
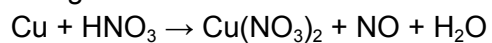
Q-20: How is quartz different from glass? How can quartz be converted into glass?