

Karan Arora

R.L. Chemistry Classes

M: 99968-68554

Max Time : 1 hr

Class = 11th Chemistry Test

Max Marks : 30

Topic : Mole Concept

- Q.1 What is the mass in grams of 0.5 mol copper? Cu = 63.5 amu. [2]
- Q.2 What is the mass in grams of 0.4 mol of nitrogen dioxide (NO₂)? N = 14; O = 16 [2]
- Q.3 Calculate the number of atoms present in 11.2 litres of a : [2]
a) monoatomic and b) diatomic gas at NTP
- Q.4 The volume of a gas is $1.12 \times 10^{-7} \text{ cm}^3$ at NTP. Calculate the number of molecules of the gas. [2]
- Q.5 How many H atoms are present in 25.6 gm of urea [(NH₂)₂ (CO)] having molar mass of 60 g/mol? [2]
- Q.6 How many oxygen atoms are there in 6.025 g Ba₃(PO₄)₂? Ba = 137.5; P = 31; O = 16 [2]
- Q.7 How many moles, no. of atoms and no. of protons are in 360 gm glucose (C₆H₁₂O₆). [3]
- Q.8 Calculate the number of moles in the following: [3]
a) 7.85 gm of iron b) 4.68 mg of silicon c) 65.6 µg of carbon
- Q.9 Calculate the volume at STP occupied by : [3]
a) 14g of nitrogen b) 1.5 moles of carbon dioxide c) 10²¹ molecules of oxygen
- Q.10 Calculate the number of atoms in each of the following: [3]
a) 0.5 mole molecules of nitrogen b) 0.8 mole atoms of helium
c) 0.26 mole molecules of sulphur (S₈)
- Q.11 Calculate the percentage of the naturally occurring isotopes ³⁵Cl and ³⁷Cl that accounts for the atomic mass of chlorine taken as 35.45. [3]
- Q.12 Calculate the number of molecules present in 350 cm³ of NH₃ gas at 273 K and 2 atmosphere pressure? [3]