J.E.E./A.I.P.M.T.Foundation - XI Chemistry Worksheet

Time: 30 min   **Ch#1 : Some Basic Concepts of Chemistry -02**   **Full Marks: 20**

Instructions:
1. All questions are compulsory.
2. Please give the explanation for the answer where applicable.

Q1 - Express the results of following calculations to appropriate number of significant digits

816 + 0.02456 + 215.36

(2 Marks)

Q2 - Calculate the molar volume of water at 273 K (density of water = 1.00 g/cm3).

(1 Mark)

Q3 -How many moles of methane are required to produce 22 g CO?

(5 Marks)

Q4 - A solution is prepared by dissolving 5.85g of NaCl in 90g of H2O. Find mole fraction of NaCl and H_2O.

(3 Marks)

Q5 - Find the molarity of solution prepared by dissolving 7.1g of Na_2SO_4 in 100ml of aqueous solution.

(3 Marks)

Q6 - What is one atomic mass unit (amu) or Unified mass (U)?

(1 Mark)

Q7 - Find the number of significant figures in 3.248×10^{-3}.

(1 Mark)

Q8 - Write the S.I. unit of molality.

(1 Mark)

Q9 - What is the value of Avogadro constant?

(1 Mark)

Q10 - Empirical formula of an organic compound is $C_2H_3O_2$. Its molecular weight is 118. Write its molecular formula.

(2 Marks)