Debre Markos University
Natural and computational science college
Chemistry department

University chemistry assignment (chapter one only) for first year second semester students
Course code: Chem1012   Weight: 30%   submission dead line: 21/5/2020

1) Classify each statement as an experiment, a law, a theory, a hypothesis, a qualitative observation, or a quantitative observation. (1pt each)
   1. Measured amounts of acid were added to a Rolaids tablet to see whether it really "consumes 47 times its weight in excess stomach acid" .
   2. Heat always flows from hot objects to cooler ones, not in the opposite direction.
   3. The universe was formed by a massive explosion that propelled matter into a vacuum.
   4. Michael Jordan is the greatest pure shooter ever to play professional basketball.
   5. Limestone is relatively insoluble in water but dissolves readily in dilute acid with the evolution of a gas.

2) Classify the following measurement scale / properties / of matter as macrostate property or microstate properties of matter with table. (3pt all)
   Volume ; Temperature; Velocity; Kinetic energy ; Pressure ; Force

3) Classify and reason out the following measurement scale / properties / of matter as intensive property or extensive properties of matter with table. (3pt all)
   Volume; Mass; boiling point; Density ; Length;   Color

4) Classify and reason out the following properties of matter as chemical property or physical properties of matter with table. (3pt all)
   Acidity; Mass; boiling point; Density ;   Oxidation ; Color

5) Write the following decimal notation in scientific/exponential/ notation. (2pt all)
   a) 298,000 kilograms   b) 0.023 m/s^2

6) List the seven fundamental measurement units with their symbol.(2pt)

7) Which one is scientifically correct saying or measurement? Reason out it. (1pt)
   A) The mass of kebede is 50Kg   B) The weight of kebede is 50Kg?

8) How many significant figures does the following measurement have? (3pt all)
   a) 4345 m   b) 67.0 g   c) 0.004507 ml   d) 70.607 ml

9) Round the following to the indicated number of significant figures. (2pt all)
   a. 31.57 (to two significant figures)   c. 0.051065 (to four significant figures)
   b. 8.1649 (to three significant figures)   d. 0.90275 (to four significant figures)

10) Add the following: (1pt all)
   (a) Add 2.334 mL and 0.31 mL   (b) Subtract 55.8752 m from 56.533 m.

11) Abebe measures the height of Muluken three times. Similarly, Walelegne measures the height of Muluken three times. Their data is tabulated as shown in the table below. Who measurement is accurate and whose measurement is precise? The actual height of Muluken is 180 cm. (2pt all)

	Muluken height (cm)		
Abebe	170.5	179.4	179.6
Walelegne	170.9	170.8	170.7

12) Convert 60 m/s in to mm/µs? (1pt)
13) Calculate percentage mass of carbon in 400g of CO_2? (2pt)

Good luck!