University of Palestine

Course No:
Course Title: Gen.Chem
Date:27/11/2017
No. of Questions: (1)
Time: 1 hour
Using Calculator (yes)

First Exam.
2017-2018
Total Grade:15

Instructor Name: Dr. Asmaa
Student No.: _____
Student Name: _____
College Name: _____
Dep. / Specialist:
Using Dictionary (No)

Question One:

1.Which of the following is a representation of the set conditions known as standard temperature and pressure(STP)?
a)0 K and 1 atm
b)0ºF and 760 torr
c)0ºC and 760 atm
d)273ºC and 1 atm
e)273 K and 760 torr

2.Which of the following gases has the highest average velocity at a given temperature
a)Oxygen
b)Carbon monoxide
c)Neon
d)Sulfur dioxide
e)Hydrogen chloride

3.A gas has a density of 2.68 g/L (STP). What is the gas?
a)CO_2
b)SO_2
c)NO_2
d)COS
e)He

4.A 2.0 L quantity of 0.10 M HCl contains
a)1.0mol of HCl
b)0.20mol of H_2O
c)20mol of HCl
d)0.05 mol of H_2O
e)0.20 mol of HCl

5.Given the equation
$C(s) + H_2O(l) \rightarrow CO(g) + H_2(g)$
what volume of gas measured at STP would be produced from 24.0 g of carbon?
a)22.4 L
b)89.6 L
c)44.8 L
d)11.2 L
e)4.0 L

Question Two: **6.5 Marks**

1)Given the following balanced equation,

$3HCl(aq) + K_3PO_4(aq) \rightarrow H_3PO_4(aq) + 3KCl(aq)$

What mass of K_3PO_4 is needed to react with 325 mL of 0.250 M HCl?

2)Write the balanced molecular, total ionic, and net ionic equations illustrating the neutralization of HNO_3 with $Sr(OH)_2$.

3)In the following reaction, indicate the substance oxidized, the substance reduced, the oxidizing, and the reducing agent

$ClO_2^- + H_2O_2 \rightarrow O_2 + Cl^-$

4)Given the balanced equation

$4NH_3(g) + 5O_2(g) \rightarrow 4NO(g) + 6H_2O(l)$

What volume of NO gas measured at 550 torr and 25°C will be produced from 19.5g O_2?

5)Given the balanced equation

$2HCl(aq) + K_2S(aq) \rightarrow H_2S(g) + 2KCl(aq)$

What volume of H_2S measured at STP would be evolved from 1.56 L of 0.552 M HCl solution with excess K_2S present?