Course No: DMEC 1303
Course Title: G. Chemistry
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Time: 1 hours
Using Calculator (Yes)

University of Palestine

Midterm Exam "A"
First semester
2011/2012
Total Grade: 40

Instructor Name: Dr Raef Ahmed
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Dep. / Specialist: _____
Using Dictionary (No)

Q. 1) Indicate if the following statements are true (√) or false (X) :- **(10 Marks)**

1) ( ) The SI unit for time is minute.
2) ( ) SO_3 has 6.022×10^{23} S atoms and 18.06×10^{23} O atoms
3) ( ) See water is considered to be Heterogeneous mixture.
4) ( ) Molecule is the basic building unit in an element.
5) ( ) One cannot observe the emission spectrum of an atom in the ground state.
6) ( ) Empirical formula is the true formula. It shows the actual number of atoms in the molecule.
7) ( ) 1 cubic centimetre (cc or cm^3) = 1 millilitre (mL)
8) ( ) Elements in the periodic table are arranged according to their mass number.
9) ( ) The fourth energy level (n = 4) can hold 34 electrons.
10) ( ) **Mn^{4+}** is monatomic molecule.

Q.2) Define the following chemical terms: **(5 Marks)**

1) **Mole:**
……
……
2) **Theoretical yield:**
……
……
3) **Atomic orbital:**
……
……
4) **Matter:**
……
……
5) **Accuracy:**
……
……

Q. 3) Choose the correct answer of each of the following: - **(14 Marks)**

1000 μgram = …… g

a) 1×10^{-6}
b) 1×10^{-3}
c) 100×10^{-4}
d) 100×10^{-3}

The SI unit for temperature is:

a) Degree Celsius
b) Degree Fahrenheit
c) Degree Kelvin
d) None of the above

Mercury is:

a) Metal but liquid at room temperature
b) Nonmetal so it is liquid at room temperature.
c) Metalloid so it is liquid.
d) None of the above.

Sodium Chloride melts at 1474 ^{o}F or ...^{o}C

a) 800
b) 791
c) 801
d) 805

The result of the following calculation to the correct S.F 0.0023 g/2.645 mol is:

a) 0.000869565 g/mol
b) 0.0008 gmol
c) 0.00086 g^2/mol
d) 0.00087 g/mol

What is the volume of 100 g of ethyl alcohol whose density is 0.789 g/cm^3:-

a) 127 g/cm^3
b) 127 cm^3
c) 126 g/cm^3
d) 126 g^2/cm^3

If n = 3 then the values of ℓ are:

a) 0,1,2,3
b) 1, 2, 3
c) 0, 1, 2
d) 1, 2

Fe is one of……. in the periodic table

a) Transition elements
b) Halogens
c) Alkaline metals
d) Noble Gases

Ca^{2+} has…….

a) 20 protons, 20 electrons and 20 neutrons
b) 20 protons, 18 electrons and 20 neutrons
c) 18 protons, 20 electrons and 22 neutrons
d) None of the above

When ℓ quantum number is 3 it is called

a) *s orbital*
b) *p orbital*
c) *f orbital*
d) *d orbital*

Which one of the following molecular formulas is also an empirical formula?

a) $C_6H_6O_2$
b) C_2H_6SO
c) H_2O_2
d) $H_2P_4O_6$

Which of the following is <u>not</u> physical change

a) Boiling point of water is 100 °C
b) The colour of blood is read
c) Body temperature is 37 °C
d) Mg reacts with HCl to give $MgCl_2$

Which of the following is not diatomic molecule:	Which of the following S.N is the write expression for **0.00527**
a) Cl_2 **b)** I_2 **c)** CO **d)** None of the above	**a)** 5.27×10^{-3} **b)** 5.27×10^{3} **c)** 0.527×10^{-2} **d)** 52.7×10^{-4}

Q. 4) Solve the following problems:- **(Total of 11 marks)**

a) How many molecules are there in 9.00 g of ammonia (NH_3)? **(2 Marks)**

Answer:

b) How many moles of Mg are there in 100 g of Mg_2O_2? **(2 Marks)**

Answer:

c) What is the % composition of H, O, and C in CH_3CH_2OH? **(3 Marks)**

Answer:

d) $NaOH + H_3P0_4 \longrightarrow Na_3PO_4 + H_2O$

How many grams of Na_3PO_4 can be formed by complete reaction of 40 g of H_3P0_4 using sufficient NaOH? **(4 Marks)**

Answer:

انتهت الاسئلة

مع تمنياتي لكم بالنجاح الباهر

د. رائف عايش احمد