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Frist mid term

Model number 1

1- what is the mass in (g) of piece of metal (d = 7.14 g / cm³) as shown in

L = 3 cm , d = 1.5 cm , h = 0.2 cm

  a) 6.42   b) 1.43   c) – 10.71   d) 21.42

V لتوازى المستطيلات = الارتفاع × العرض × الطول

  = 0.2 × 3 × 1.5 = 0.9 cm³

 d=m/v ➤ m= d×v = 7.14 × 0.9 = 6.42 g

2- the melting point of bromine is -7⁰ C . what is the melting point in ⁰F ?

   a) 39.3   b) – 28.8   c) – 13.8   d) 19.4

 F = 9/5 × ⁰C + 32

 = 9/5 × -7 + 32 = 19.4 ⁰F

3- How many significant figures are in (4 3070) ?

    a) 1   b) 5   c) 4   d) 3

4- How many significant figures should be reported as the sum of 8.5701 + 2.38

    a) 6   b) 5   c) 4   d) 3

8.5701 + 2.38 = 10.9501 ➤ 10.95

5- walking consume 5.0 kcal per minute . how many hours are required to consume 1881 kJ ? (1 Kcal = 4.18 KJ)

   a) 2.5   b) 1.25   c) 1.75   d) 1.5

 K Cal = 5 × 4.18 = 20.9 KJ

 20.9 KJ   1min

 1881 KJ   x   ➤   x= 1881 / 20.9 = 90 min / 60 = 1.5 h

6- Non SI unit from the following is .

    a) kilogram (kg)   b) second (S)   c) inch (in)   d) meter (m)

7- which of the following is a chemical change ?

    a) mixing water and oil   b) oxidation of iron in air

    c) melting ice   d) dissolving suger in water
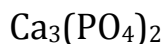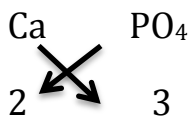
8- which is not an extensive property of matter ?

    a) volume   b) mass   c) density   d) Length

9- How many protons (P) and electrons (e) are present in a $_{20}^{40}Ca^{+2}$ ion ?

    a) 20 p and 18 e   b) 18 p and 20 e

    c) 20 p and 22 e   d) 22 p and 20 e

10- the formula of the ionic compound formed by Calcium ions and Phosphate ions , is

    a) $CaPO_4$ b) $Ca (PO_4)_3$ c) Ca_3PO_4 d) $Ca_3(PO_4)_2$

Ca   PO₄

2   3 $Ca_3(PO_4)_2$

11- the correct name of $COCl_3$ is

    a) Cobalt Chloride   b) Cobalt tri chloride

    c) Cobalt (III) chloride   d) Cobalt (III) trichloride

12- the gold foil experiment (Rutherford experiment) confirmed that .

  a) atoms are composed of only electrons

  b) Protons are located in the atom nucleus

  c) electrons are located in thee atoms nucleus

  d) atoms are composed of only protons

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13- How many protons (P),neutrons (n) and electrons (e) are three in 1739Cl atom

   <u>a)</u> 17P , 22n , 17 e   b) 17P , 17 n , 22e

   c) 17 P , 39 n , 17e   d) 22P , 17n , 17e

14- two isotopes of an element differt in their .

   a) numbers of electrons   b) atomic numbers

   c) numbers of protons   <u>d)</u> atomic masses

Model number 2

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1- which of the following is an extensive property of matter ?

   a)density   b) temperature   c) color   <u>d)</u> Length

2- how many L are 2050mL ?

   <u>a)</u> 2.050L   b) 20.50 L   c) 205.0 L   d) 0.205L

$V_{(L)}$ = 2050 / 1000 = 2.050 L

3- what is the scienentific from for 3500000000 ?

   a) $3×10^8$ <u>b)</u> $3.5×10^9$ c) $3.5×10^8$ d)$3.50×10^9$

4- express the answer to the following calculation in scientific $3×10^4 + 2.5×10^5$

   a) $5×10^5$ b) $2.8×10^5$ c) $3.25×10^5$ d)$5.5×10^9$

   $3×10^4 + 2.5×10^5 = 0.3 ×10^5 + 2.5×10^5 = 2.8×10^5$

5- How many significant figures are in 0.0510 km ?

   <u>a) 3</u>   b) 4   c) 2   d) 5

6- Convert 35⁰ C to degrees Fahrenheit .

    a) 85F   b) 65F   c) 105F   <u>d) 95F</u>

    $F = 9/5 \times {}^0C + 32$

      $= 9/5 \times 35 + 32 = 63 + 32 = 95\ F$

7- A metal has volume $1.48\ cm^3$ and a mass of 6.67g . Calculate the d metal in g/cm^3

    a) 5.85   <u>b) 4.50</u>   c) 0.585   d) 0.005

$d = m / v = 6.67 / 1.48 = 4.51\ g/cm^3$

8- How many protons (P),neutrons (n) and electrons (e) are there in ${}^{78}_{34}Se$.

    a) 34P , 34n , 44e   b) 44P , 34n , 78 e

    <u>c) 34p , 44n , 34e</u>   d) 78p , 34 n , 44e

9- Choose the partical that carries a positive charge .

    a) neutron   b) electron   <u>c) Alpha</u>   d) Beta

10-the number of neutrons in ${}^{65}_{30}\ Cl^{+2}$ is .

    a) 30   <u>b) 35</u>   c) 33   d) 37

n= 65 – 30 = 35

11- which of the following is not an empirical formula ?

    a) H_2O b) CO_2 c) NH_3 <u>d) C_3H_6</u>

12- two isotopes of an element different in their .

    a) number of protons   <u>b) number of neutrons</u>

    c) number of electrons   d) element symbol

13- what is the formula for the ionic compound formed by calcium ions and phosphate ions ?

    a) $CaPO_4$ b) Ca_3PO_4 <u>c) $Ca_3(PO_4)_2$</u>   d) $Ca(PO_4)_3$

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14- the correct stock system name for CoCl₃ is .

a) cobalt (III) chloride   b) cobalt trichloride

c) cobalt chloride   d) cobalt (III) trichloride

15- the Oxoanion of HClO₄ is .

a) Perchlorate   b) Chlorate   c) Perchlorite   d) Hypochlorite

Model number 3

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1- What do scientists call apure substance that can not be broken down in to other pure substance

a) compound   b) An emulsion   c) An element   d) A particle

2-

matter → Mixture ← physical change → puresubstance chomogenous

A ← chemical change → B

Mixture → Hetrogeneous mixture , solution homogenous
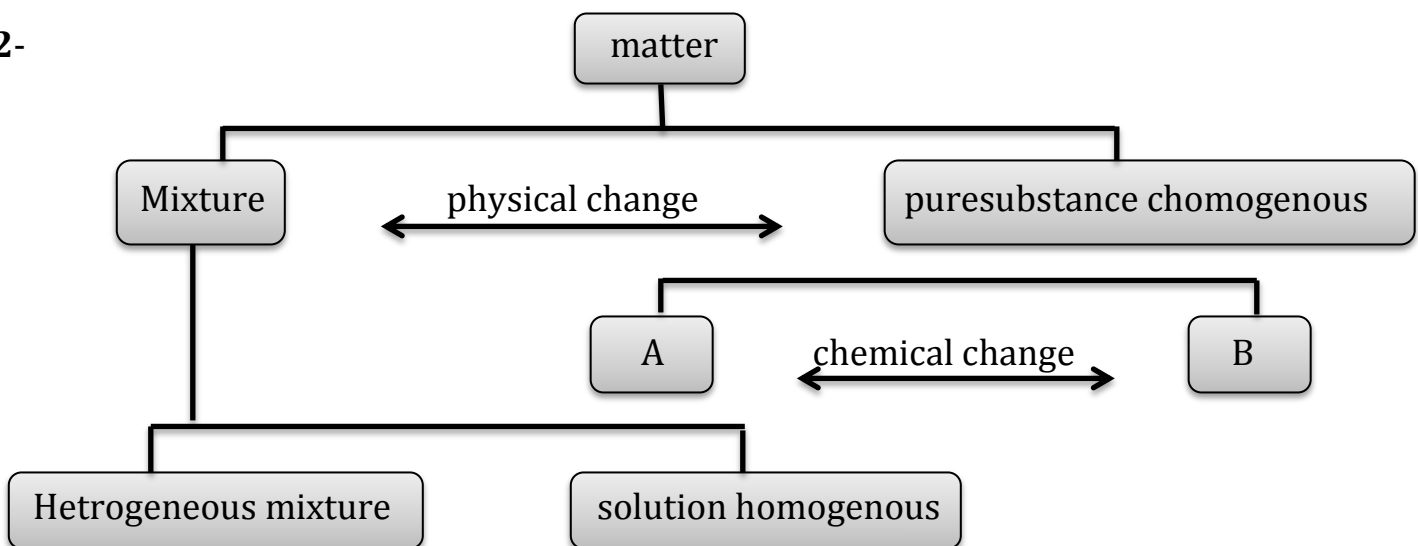
Which of the following two terms best represent

a)(A) element and (B) compound   b) (A) element and mixture

c)(A) element and (B) ion   d))(A) element and (B) property

3- which of the following measurements will be useful in dentifying a substance ?

a) Mass   b) density   c) volume   d) quantity

4- A change that occurs when one or more substances with different properties ?

   a) intensive change   b) extensive change

   c) physical change   <u>d)</u> chemical change

5- Apiece of gold with a mass of 521g is added to 50cm³ of water level rises to avolume of 77cm³ , what is density of the gold in g / cm³

   a)6.77   b) 10.4   <u>c)</u> 19.3   d) 0.0518

6- the number 0.045×10^{-3} in scientific notation is

   a) 45×10^{-7} <u>b)</u> 4.5×10^{-5} c) 0.45×10^{-4} d) 4.5×10^{-2}

7- the following digram represent the represent the results of student experiment and can be described

a) Accurate , but not precise

<u>b)</u> precise , but not accurate

c) Accurate and precise

d) Neither Accurate not precise

8- which of the following numbers cantains the correct number of significant figures

   a) 0.0400 (5 S.F)

   b)0.00302 (2S.F)

   c) 3.0650 (4S.F)

   <u>d)</u> 1.04 (3S.F)

9- when 2610 + 11.7 + 0.22 are added the answer to the correct number of significant figures

   a) 2621   b) 2620   c) 2621.9   d) 2621.92

_____

10- At temp . of 41 ^{0}F is the same as

    a) 16 ^{0}C   b) 42 ^{0}C   c) 310 ^{0}C   <u>d)</u> 5^{0}C

11- the correct name for $CuSO_4 . 5 H_2O$ is

    a) Copper (II) sulfate hydrate   <u>b)</u> Copper (II) sulfate penta hydrate

    c)Coppper (I) sulfat pentahydrate   d) Copper sulfate pentahydrate

12- the number of protons , neutrons and electrons of the following elements

       Sr Ca^{+2}

 a) 38P , 50n , 38e   20p, 18n , 21e

 <u>b)</u> 38P , 50n , 38e   20p, 20n , 18e

 c) 50P , 38n , 38e   18p, 20n , 20e

 d) 38P , 38n , 50e   20p, 18n , 20e

13- which element , when combined with fluorine F would most likely from an ionic compound

    <u>a)</u> Lithium (Li)   b) Phosphours (P)   c)Carbon (C)   d) Chlorine (Cl)

14-the name of $HClO_2$ is

<u>a)</u> Chlorous acid   b) Hypo chlorous acid   c)Chloric acid   d) Perchloric acid

15- what is the correct name for $Sn_3(PO_4)_2$

    <u>a) Tin</u> di phosphate   b) Tin (II) Phosphate

    c) Tin (III) phosphate   d) Tin (IV) phosphate

<div align="center">مع تمنياتي بالتوفيق</div>