

(CHEM 101 - CHEM 103)  
**FIRST SEMESTER**  
**FIRST MID-TERM EXAM**  
**(1438-1439H) (2017-2018G)**



COLLEGE OF SCIENCE  
 Chemistry Department

Student Name: .....	Write your answer in the table below		
	Q1:	Q6:	Q11:
Student ID No. ....	Q2:	Q7:	Q12:
Group No. ....	Q3:	Q8:	Q13:
Thursday 13/02/1439H	07:00-08:30 pm	Q4:	Q9:
Time allowed : 90 minutes	Q5:	Q10:	Q15:

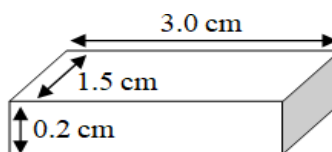
1 IA																	18 VIIIA
1 H 1.008	2 IIA											13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	2 He 4.003
3 Li 6.94	4 Be 9.01											5 B 10.811	6 C 12.01	7 N 14.01	8 O 16.00	9 F 19.00	10 Ne 20.18
11 Na 23.00	12 Mg 24.31	3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8	9 VIII B	10	11 IB	12 IIB	13 Al 26.98	14 Si 28.09	15 P 30.97	16 S 32.07	17 Cl 35.45	18 Ar 39.98
19 K 39.09	20 Ca 40.08	21 Sc 44.96	22 Ti 47.87	23 V 50.94	24 Cr 52.00	25 Mn 54.94	26 Fe 55.85	27 Co 58.93	28 Ni 58.69	29 Cu 63.546	30 Zn 65.41	31 Ga 69.72	32 Ge 72.64	33 As 74.9216	34 Se 78.96	35 Br 79.90	36 Kr 83.80
37 Rb 85.47	38 Sr 87.62	39 Y 88.91	40 Zr 91.23	41 Nb 92.91	42 Mo 95.94	43 Tc [98]	44 Ru 101.07	45 Rh 102.91	46 Pd 106.42	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.71	51 Sb 121.760	52 Te 127.60	53 I 126.90	54 Xe 131.29
55 Cs 132.91	56 Ba 137.33	71 Lu 174.97	72 Hf 178.49	73 Ta 180.95	74 W 183.84	75 Re 186.21	76 Os 190.23	77 Ir 192.22	78 Pt 195.08	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.2	83 Bi 208.980	84 Po [209]	85 At [210]	86 Rn [222]
87 Fr [223]	88 Ra [226]	103 Lr [262]	104 Rf [261]	105 Db [262]	106 Sg [266]	107 Bh [264]	108 Hs [269]	109 Mt [268]	110 Ds [271]	111 Rg [272]	112 Uub [285]	113 Uut [286]					

Name:

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Choose the correct answer:

1) What is the mass “ in g” of a piece of metal ( $d = 7.14 \text{ g/cm}^3$ ), as shown in:



- A) 21.42                      B) 6.42                      C) 1.43                      D) 10.71
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2) **Non-SI** unit from the following, is:

- (A) kilogram (kg)              (B) second (s)              (C) inch (in)              (D) meter (m)
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3) Which of the following is a chemical change?

- A) Oxidation of iron in air.                      B) Mixing water and oil.  
C) Melting ice.                      D) Dissolving sugar in water.
- 

4) Which is **NOT** an extensive property of matter?

- A) Volume                      B) Mass                      C) Length                      D) Density
- 

5) The melting point of bromine is  $-7 \text{ }^\circ\text{C}$ . What is the melting point in  $^\circ\text{F}$ ?

- A) 19.4                      B) -28.8                      C) -13.8                      D) 39.3
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6) How many significant figures are in “ 4.3070 ” ?

- A) 1                      B) 5                      C) 4                      D) 3
- 

7) How many significant figures should be reported for  $(8.5701 + 2.38)$ ?

- A) 6                      B) 5                      C) 4                      D) 3
- 

8) Walking consume 5.0 kcal per minute. How many hours are required to consume 1881 kJ? (1 kcal = 4.18 kJ)

- A) 1.5                      B) 1.25                      C) 1.75                      D) 2.5
- 

9) The gold foil experiment "Rutherford's experiment" confirmed that:

- A) atoms are composed of only electrons.  
B) atoms are composed of only protons.  
C) electrons are located in the atom nucleus.  
D) protons are located in the atom nucleus.

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10) How many protons (p), neutrons (n), and electrons (e) are there in  $^{39}\text{Cl}$  atom?

A) 17 p, 17 n, and 22 e

B) 17 p, 22 n, and 17 e

C) 17 p, 39 n, and 17 e

D) 22 p, 17 n, and 17 e

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11) Two isotopes of an element differ in their:

A) atomic masses.

B) atomic numbers.

C) numbers of protons.

D) numbers of electrons.

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12) How many protons (p) and electrons (e) are present in a  $\text{Ca}^{2+}$  ion?

A) 20 p and 21 e

B) 18 p and 20 e

C) 20 p and 18 e

D) 22 p and 20 e

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13) The formula of the ionic compound formed by calcium ions and phosphate ions, is:

A)  $\text{CaPO}_4$

B)  $\text{Ca}(\text{PO}_4)_3$

C)  $\text{Ca}_3\text{PO}_4$

D)  $\text{Ca}_3(\text{PO}_4)_2$

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14) The correct name of  $\text{CoCl}_3$  is:

A) cobalt chloride.

B) cobalt trichloride.

C) cobalt(III) chloride.

D) cobalt(III) trichloride.

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15) The correct name for  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ , is:

A) copper(II) sulfate hydrate.

B) copper(II) sulfate pentahydrate.

C) copper(I) sulfate pentahydrate.

D) copper sulfate pentahydrate.

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