Philadelphia University

Faculty: Science

Department: Basic sciences

Exam time 50 min. Date: 21/03/2019



General chemistry 0212101 First exam

Name:	Student No.:
Section:	Professor Name:

Direction: 2 Each of the question bellow is followed by four suggested answers. Select the one that is best in each case and type it in the above table.

1	2	3	4	5	6	7	8	9	10

 $\label{eq:Useful data: Avogadro's No = <math>6.022 \times 10^{23}$, 1kg = 1000g, g= 1000mg, 1L = 1000 ml, 1ml = 1cm³

1 H Hydrogen 1.01																	2 He Helium 4.00
3 Li Lithium	4 Be Beryllium											5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon
6.94 11 Na Sodium 22.99	9.01 12 Mg Magnesium 24.31											10.81 13 AI Aluminum 26.98	12.01 14 Si Silicon 28.09	14.01 15 P Phosphorus 30.97	16.00 16 S Sulfur 32.07	19.00 17 CI Chlorine 35.45	20.18 18 Ar Argon 39.95
19 K Potassium 39,10	20 Ca Calcium 40.08	21 Sc Scandium 44.96	22 Ti Titanium 47.87	23 V Vanadium 50.94	24 Cr Chromium 52.00	25 Mn Manganese 54.94	26 Fe Iron 55.85	27 Co Cobalt 58.93	28 Ni Nickel 58.69	29 Cu Copper 63.55	30 Zn Zinc 65,39	31 Ga Gallium 69.72	32 Ge Germanium 72.61	33 As Arsenic 74.92	34 Se Selenium 78.96	35 Br Bromine 79.90	36 Kr Krypton 83.80
37 Rb Rubidium 85.47	38 Sr Strontium 87.62	39 Y Yttrium 88.91	40 Zr Zirconium 91.22	41 Nb Niobium 92.91	42 Mo Molybdenum 95.94	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.91	46 Pd Palladium 106.42	47 Ag Silver 107.87	48 Cd Cadmium 112.41	49 In Indium 114.82	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.60	53 lodine 126.90	54 Xe Xenon 131.29
55 Cs Cesium 132.91	56 Ba Barium 137.33	57 La Lanthanum 138.91	72 Hf Hafnium 178.49	73 Ta Tantalum 180.95	74 W Tungsten 183.84	75 Re Rhenium 186.21	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.97	80 Hg Mercury 200.59	81 TI Thallium 204.38	82 Pb Lead 207.2	83 Bi Bismuth 208.98	Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)
87 Fr Francium (223)	88 Ra Radium (226)	Ac Actinium (227)	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (269)	109 Mt Meitnerium (268)									
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				58 Ce Cerium 140.12	59 Pr Praseodymium 140.91	60 Nd Neodymium 144.24	Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.96	64 Gd Gadolinium 157.25	65 Tb Terbium 158.93	66 Dy Dysprosium 162.50	67 Ho Holmium 164.93	68 Er Erbium 167.26	69 Tm Thulium 168.93	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.97
				90 Th Thorium 232.04	91 Pa Protactinium 231.04	92 U Uranium 238.03	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)	97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	No Nobelium (259)	103 Lr Lawrencium (262)

Question one (10 Pts)

1- Convert the 50 °C to A- 225	Fahrenheit (°F); B- 150	C- 122	D-100
2- A mixture of oxygen A- homogenous mixture	_	C- element	D- compound
3- Which one of the fo A- Sc	llowing is an nonmeta B- Ge	l element? C- Mg	D- Se
4- Na₂S is Called A- sodium sulfate	B- sodium selenide	C- sodium sulfite	D- sodium sulfide
5-Which ion of the fo	ollowing has 10 electro B- Ca ⁺²	ons? C- O ⁻²	D- S ⁻²
6- The element has the A- Zn	e atomic number 48 is B- Cd	C- Lu	D- La
7- Name an extensive A- color	property B- boiling point	C- weight	D- density
8- Which one of the fo	llowing is correct nam	e of Nickel(III)Nitrate	
A- Ni ₃ NO ₂	B- Ni(NO ₃) ₃	C- Ni(NO ₂) ₃	D- NiNO ₃
9- Phosphate group is	considered		
A- monatomic ion	B- diatomic molecule	C- polyatomic molecule	D- polyatomic ion
10- Which one of the f	ollowing is an empirica	al formula	
A- H ₂ O ₂	B- C ₆ H ₆	C- Mg(SO ₃) ₂	D- P ₄ H ₁₀

Question two (3 Pts)

- 1- Solve the following equations using the correct number of significant figures
- A (10.003 + 49.250 -2.01) X 9

$$(20.88 \times 10^{9}) (3.12 \times 10^{-7})$$

B - 7.3 - 4

C- Convert 9.87 Kg/m³ to mg/L?

Question three (5 Pts)

- a- If you have 29.6 g of potassium (K). Calculate the following?
 - Moles of K
 - The number of potassium atoms are in 29.6 g.
 - The mass of one potassium atom in gram

Question four(2 Pts)

How many Hydrogen atoms are in 38.0 g of $C_4H_8?\,$