GENERAL CHEMISTRY- CHEM 101

FIRST SEMESTER

FIRST MID - TERM EXAM

(1440-1441H) / (2019-2020G)

جامعة الملك سعود
King Saud University
1957

COLLEGE OF SCIENCE
Chemistry Department

Student Name:.....	Write your answer in the table below		
	Q1: A	Q6: D	Q11: C
Student ID No.	Q2: B	Q7: C	Q12: D
Group No.	Q3: C	Q8: B	Q13: C
Sunday 28/02/1441H **07:00-8:30 pm**	Q4: D	Q9: A	Q14: B
Time allowed: **90 minutes**	Q5: C	Q10: D	Q15: A

1 IA												13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	18 VIIIA
1 H	2 IIA																2 He
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg	3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8	9 VIIIB	10	11 IB	12 IIB	13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
55 Cs	56 Ba	71 Lu	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
87 Fr	88 Ra	103 Lr	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	C						

key: atomic number / symbol

Name:	Student ID No:

Choose the correct choice and write your answer in the table below

1) The process of changing gas to liquid is called.....

(A) Condensation (B) Deposition (C) Sublimation (D) Evaporation

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2) Which of the following is not SI derived unit?

(A) m^3 (B) g/cm^3 (C) m/s (D) kg m/ s^2

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3) A small piece of plastic has a mass of 2×10^{-6} microgram (μg) and a volume of 0.001 liter, its density in (g/cm^3) will be .....

(A) 2.0×10^{-6} (B) 2.0×10^{-3} (C) 2.0×10^{-12} (D) 2.0×10^{-9}

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4) If 50 mL of water at 318 K is added to 100 mL of water at the same temperature, the temperature in (°F) of the final volume of water is *almost* equal to .....

(A) 273 (B) 363 (C) 81 (D) 113

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5) Dissolving sugar in water can be described as.....

(A) Chemical change and homogeneous mixture
(B) Chemical change and heterogeneous mixture
(C) Physical change and homogeneous mixture
(D) Physical change and heterogeneous mixture

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6) How many neutrons are in the isotope potassium-40?

(A) 40 (B) 59 (C) 19 (D) 21

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7) How many neutrons and electrons are in the ion $^{40}_{20}Ca^{2+}$?

(A) 22 electrons and 20 neutrons
(B) 20 electrons and 20 neutrons
(C) 18 electrons and 20 neutrons
(D) 20 electrons and 18 neutrons

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8) What is the correct name for $Ni_2(SO_4)_3$?

(A) dinickel trisulfate
(B) Nickel(III) sulfate
(C) Nickel(III) sulfite
(D) Nickel(II) sulfate

Name:	Student ID No:

9) What is the chemical formula for ammonium nitrite?

(A) NH_4NO_2 (B) NH_4NO_3 (C) $(NH_4)_2NO_3$ (D) $(NH_4)_3N$

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10) The name of the compound $HClO_4$ is.....

(A) Chlorous acid

(B) Hypochlorous acid

(C) Chloric acid

(D) Perchloric acid

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11) The three quantum numbers that give the **location** of the electron in the atom are:

(A) n, m_ℓ , m_s

(B) n, ℓ, m_s

(C) n, ℓ, m_ℓ

(D) ℓ, m_ℓ , m_s

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12) Which set of quantum numbers of an electron in an atom is correct?

(A) (2, 1, ½, ½) (B) (2, 1, -2, ½) (C) (3, 3, 0, ½) (D) (3, 2, 1, ½)

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13) Arrange the following atoms in order of decreasing atomic radius: N, F, P

(A) F > P > N (B) P > F > N (C) P > N > F (D) F > N > P

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14) Arrange the following in order of decreasing first ionization energy: Na, Cl, Al, and Cs

(A) Cs > Na > Al > Cl

(B) Cl > Al > Na > Cs

(C) Al > Cl > Na > Cs

(D) Cl > Al > Cs > Na

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15) What *rule* or *principle* describes the filling order of electrons on atomic orbitals starting from the lowest available energy levels?

(A) Aufbau

(B) Pauli exclusion

(C) Dalton

(D) Hund