

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

### (Chem 108 Chapter 1)

Ques. no.	Question
1	Which is not an example of a pure substance? A   Sugar   B   Water   C   Air   D   Aluminium foil
2	Which is an example of a physical change? A   The rusting of an iron nail   B   The burning of propane in a gas grill   C   Baking cookies   D   Melting of an ice cube in a glass of soda
3	Which state of matter has a definite volume, but takes on shape of the container it occupies A   solid   B   liquid   C   gas   D   plasma
4	Which state of the matter has definite volume and indefinite shape? A   solid   B   plasma   C   liquid   D   gas
5	Which state of the matter has indefinite volume and indefinite shape? A   solid   B   plasma   C   liquid   D   gas
6	Which substance cannot be broken down into simpler substances by a chemical reaction? A   mixture   B   alloys   C   element   D   compound
7	Those that determine how a substance can be converted to another substance are: A   physical properties   B   Electronic properties   C   Chemical properties   D   Photo properties
8	Silver jewellery tarnishing is considered as ..... change. A   physical   B   Electronic   C   Chemical   D   Photo
9	The type of matter of blood is ..... A   Element   B   compound   C   mixture   D   all of these
10	Which pure substance formed by chemically combining two or more elements? A   mixture   B   element   C   compound   D   none of the previous

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

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11	Ozone (O <sub>3</sub> ) is an example of ----? A   Compound   B   Element   C   mixture   D   colloid
12	Which of the following example is an element? A   aspirin   B   table sugar   C   the rust on an iron nail   D   the gas inside a helium balloon
13	Which of the following example is an element? A   Ozone (O <sub>3</sub> )   B   table sugar   C   Hydrogen gas (H <sub>2</sub> )   D   a) and c)
14	The alcohol & H <sub>2</sub> O is an example of ----- A   compound   B   element   C   mixture   D   alloys
15	Milk is an example of ..... A   compound   B   mixture   C   element   D   alloys
16	Which of the following is an example for chemical change? A   Boiling of water   B   Combustion of wood   C   Freezing of water   D   Melting of wax
17	Which of the following processes represents a physical change? A   baking bread   B   making ice cubes   C   H <sub>2</sub> + O <sub>2</sub> → H <sub>2</sub> O   D   burning natural gas
18	How many nanometres are there in one meter? A   10 <sup>9</sup>   B   10 <sup>-9</sup>   C   10 <sup>-6</sup>   D   10 <sup>6</sup>
19	How many micrograms are there in one gram? A   10 <sup>9</sup>   B   10 <sup>-9</sup>   C   10 <sup>6</sup>   D   10 <sup>-6</sup>
20	The term is used for a million meters is ..... A   Deci meter   B   Nano meter   C   Mega meter   D   Micro meter

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21	The basic unit of mass in the metric system is the .....
	A   gram   B   Kilo gram   C   Deci gram   D   Micro gram
22	The temperature 98,6 F° is equal to .....in kelvin
	A   310   B   130   C   330   D   350
23	Which of the following is the smallest quantity?
	A   10 kg   B   10 g   C   10 mg   D   10 μg
24	Which of the following is the largest quantity?
	A   10 L   B   10 mL   C   10 kL   D   10 μL
25	Which of the following is <i>not</i> equal to 1 L?
	A   1000 mL   B   1000 cc   C   1000 cm <sup>3</sup>   D   1000 m <sup>3</sup>
26	Which volume is equivalent to 225 mL?
	A   2.25 × 10 <sup>5</sup> μL   B   0.225 μL   C   2.25 × 10 <sup>-5</sup> μL   D   2.25 L
27	If a piece of rock has a volume of 0.73 L and a mass of 1524 g, what is the density of the rock in g/mL?
	A   2.1 × 10 <sup>3</sup> g/mL   B   2.1 g/mL   C   0.48 g/mL   D   2.088 g/mL
28	When 0.022189 is correctly rounded to two significant figures the number becomes
	A   0.02   B   0.022   C   0.023   D   22
29	Which number contains four significant figures?
	A   3.978   B   0.0085   C   1700   D   0.780
30	Carry out the following calculation and report the answer using the proper number of significant figures: 549.101 + 8.12 + 95.0076 – 651.9
	A   0.328   B   0.3286   C   0.329   D   0.33

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
31	When $5.5490 \times 10^8$ is correctly rounded to three significant figures the number becomes A   5.55   B   $5.55 \times 10^8$   C   $5.54 \times 10^8$   D   555
32	Which measurement has the fewest number of significant figures? A   12.80 m   B   0.1280 m   C   0.001280 m   D   1280 m
33	Which quantity is an exact number? A   3 cars   B   1,000 m   C   2 L   D   453.6 g
34	The number 0.0035880 expressed correctly using scientific notation is A   0.0035889   B   $3.5880 \times 10^{-3}$   C   $3.5880 \times 10^{-4}$   D   $3.5880 \times 10^3$
35	The measurement 78,005,760 expressed correctly using scientific notation is A   $7.8005760 \times 10^7$   B   $7.800576 \times 10^{-7}$   C   $7.8 \times 10^7$   D   $7.8005760 \times 10^{-7}$
36	When $4.870 \times 10^{-3}$ is correctly converted to its standard form the number becomes A   4870   B   0.00487   C   0.0004870   D   0.487
37	How many significant figures are present in the measurement 0.002030 g? A   4   B   5   C   6   D   3
38	The number of significant figure of 250.00 is ..... A   3   B   4   C   5   D   all previous
39	How many significant figures does this number 50 contain? A   1   B   2   C   4   D   3
40	The following number 1.002 has ..... Significant figure A   4   B   3   C   5   D   2

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

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41	Round off these number 1.2567 to three significant figures? A   1.25   B   1.20   C   1.26   D   1.257
42	Round off these number 0.05651 to two significant figures? A   0.56   B   0.056   C   0.057   D   0.06
43	Carry out this calculation ( $120.085/106 = ?$ ), using proper number of significant figures? A   1.132   B   1.13   C   1.14   D   1.12
44	Calculate the following, using proper number of significant figures? $X = (0.00630 \times 2.0030 \times 20.01)$ A   2.52   B   0.253   C   0.2525   D   0.25
45	Write the daily dietary intake of vitamin B12 , 0.000006 g, in scientific notation A   $6 \times 10^{-5}$ g   B   $6 \times 10^{-6}$ g   C   $6 \times 10^{-1}$ g   D   $6 \times 10^{-7}$ g
46	Write the diameter of a red blood cell, 0.000006 m, in scientific notation? A   $6 \times 10^{-5}$ m   B   $6 \times 10^{-6}$ m   C   $6 \times 10^{-1}$ m   D   $6 \times 10^{-7}$ m
47	The unit of temperature in S.I. system is ..... A   Kelvin   B   Celsius   C   Fahrenheit   D   all
48	An infant had a body temperature of 104 °F. Convert this temperature to °C? A   37 °C   B   40 °C   C   140 °C   D   70 °C
49	What is the mass in grams of 15.0 mL of a saline solution that has a density 1.05 g/mL? A   15.8 g   B   1.58 g   C   0.00158 g   D   1.05 g
50	On an autumn day in Washington, DC the outdoor temperature was 21 °C. What was this outdoor temperature in °F? A   44 °F   B   57 °F   C   69 °F   D   70 °F

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Ques. no.	Question
51	An oven is set for a temperature of 298 °F. What is the oven temperature in K? A   166 °K   B   420.78 °K   C   148° K   D   571 °K
52	What is the density of a sample of rubbing alcohol if it has a specific gravity of 0.789? A   1.27 g/mL   B   0.789 g/mL   C   0.895 g/mL   D   1.00 g/mL
53	Calculate the mass in grams of 10.0 mL of diethyl ether that has a density 0.713 g/mL? A   71.3 g   B   0.173 g   C   7.13 g   D   13.7
54	What is the mass in grams of 85.32 mL of blood plasma with a density of 1.03 g/mL? A   85.32 g   B   82.83 g   C   82.8 g   D   87.88 g
55	The estimated average daily requirement of folic acid for pregnant females is 520 micrograms. Which accurately expresses this value? A   520 mg   B   520 Mg   C   520 ng   D   520 µg
56	A patient's urine sample has a density of 1.02 g/mL. If the patient excreted 1250 mL of urine in one day, what mass of urine was eliminated? A   1.28 kg   B   1225 g   C   1275 g   D   128 g
57	Calculate the volume in mL of 5.0 g <i>Acetic acid</i> for synthesis of aspirin which has density of 1.05 g/mL? A   4.8 mL   B   5.0 mL   C   5.5 mL   D   5.8 mL
58	Normal urine has a density of 1.030 g/mL, what is the specific gravity of normal urine? A   1.354   B   13.02   C   1.030   D   10.03
59	If specific gravity of a substance is 2.3, what is the density of substance? A   3.2 g/mL   B   2.3 g/mL   C   4.6 g/mL   D   6.4 g/mL
60	Nitrogen gas (N <sub>2</sub> ) would properly be classified as a compound A   True   B   False



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Ques. no.	Question
61	Changes in state such as melting and boiling are physical changes. A   True   B   False
62	A compound cannot be broken down into simpler substances. A   True   B   False
63	The base unit for volume in the metric system is liter (L). A   True   B   False
64	An inexact number results from a measurement or observation and contains some uncertainty. A   True   B   False
65	A zero counts as a significant figure when it occurs at the end of a number that contains a decimal point. A   True   B   False
66	8 mL is larger than 8 dL. A   True   B   False
67	Specific gravity is a quantity that compares the density of a substance with the density of water. A   True   B   False
68	The specific gravity of a substance has units of g/mL. A   True   B   False
69	When the liquid carbon tetrachloride (density = 1.59 g/mL) is added to water, the top layer will be the water layer. A   True   B   False
70	In reading a number with a decimal point from left to right, all digits starting with the first nonzero number are significant figures. A   True   B   False

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Ques. no.	Question
71	The number 900,027,300 has four significant figures. A   True   B   False
72	Dissolving sugar in water involves a chemical change. A   True   B   False
73	When subtracting 15 from 762.85 the answer should be reported with two significant figures. A   True   B   False
74	Dividing a number by $10^5$ is the same as multiplying a number by $10^{-5}$ . A   True   B   False
75	The measurement 10.3 cm has more significant figures than the measurement 10.3 m. A   True   B   False
76	The temperature $-60\text{ }^\circ\text{C}$ is higher than $-60\text{ }^\circ\text{F}$ . A   True   B   False
77	The temperature $60\text{ }^\circ\text{C}$ is higher than 60 K. A   True   B   False
78	Elements and compounds are both classified as pure substances. A   True   B   False
79	The number 87,927,000 is larger than the number $9.7 \times 10^6$ . A   True   B   False
80	A mixture can be separated into its components by physical changes. A   True   B   False



## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

### (Chem 108 Chapter 2)

Ques. no.	Question
1	One element with 24 neutrons is: A   ${}_{24}\text{Cr}^{52}$   B   ${}_{12}\text{Mg}^{24}$   C   ${}_{21}\text{Se}^{45}$   D   ${}_{11}\text{Na}^{23}$
2	Which of the following element is <u>NOT</u> a metal ? A   Li   B   K   C   N   D   Ca
3	The isotope ${}^3_1\text{H}$ contains two: A   Protons   B   Electrons   C   Neutrons   D   Both A and B
4	The number of protons is: A   Atomic number   B   Atomic weight   C   Mass number   D   Oxidation number
5	The electronic configuration of ${}_{16}\text{S}^{32}$ is: A   $1s^2 2s^2 2p^6 3s^2 3p^3$   B   $1s^2 2s^2 2p^6 3s^2 3p^5$   C   $1s^2 2s^2 2p^6 3s^2 3p^4$   D   $1s^2 2s^2 2p^6 3s^2 3p^6$
6	The following element is a metalloid: A   Cl   B   Al   C   Si   D   P
7	How many protons, neutrons, electrons are contained in ${}^{34}_{16}\text{S}$ ? A   18, 16, 17   B   16, 18, 17   C   16, 18, 16   D   16, 17, 16
8	An example of a noble gases is: A   Fe   B   Xe   C   Na   D   H
9	An example of an alkaline earth metals is: A   K   B   Ca   C   P   D   Na
10	The following element is in period 2 and group 2: A   Al   B   Be   C   C   D   Ni

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
11	Which sets of orbital is possible for second energy level? A   s, d   B   s, p   C   s, p, d   D   s, p, d, f
12	The following element has electronic configuration, $1s^2 2s^2 2p^6 3s^2 3p^1$ ? A   P   B   Si   C   Al   D   Cl
13	The following element has four valence electrons: A   B   B   O   C   N   D   Li
14	The following element has chemical properties similar to oxygen, O? A   B   B   P   C   S   D   N
15	Arrange the elements Ca, Mg, and Be in order of increasing atomic size ? A   Be < Mg < Ca   B   Mg < Ca < Be   C   Be < Ca < Mg   D   Ca < Be < Mg
16	Arrange the elements Cl, F, and Br in order of increasing ionization energy? A   Br < Cl < F   B   Cl < Br < F   C   F < Cl < Br   D   Cl < F < Br
17	Arrange the elements N, B, and C in order of increasing atomic size? A   N < C < B   B   C < N < B   C   B < N < C   D   N < B < C
18	Which element is a non-metal? A   K   B   Co   C   Br   D   Al
19	The mass number of ${}_{11}\text{Na}^{23}$ atom is: A   11   B   12   C   23   D   37
20	Which element is a transition metal in period 4? A   K   B   O   C   Sn   D   Sc

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
21	Which element is a noble gas? A   H                      B   Ne                      C   Br                      D   Ra
22	Which element is not an alkali metal? A   Li                      B   Kr                      C   Rb                      D   Na
23	The element symbol for manganese is: A   M                      B   Ma                      C   Mg                      D   Mn
24	The element symbol for sulphur is: A   S                      B   Su                      C   Sf                      D   Sl
25	What is the maximum number of electrons that can occupy the third (n=3) shell? A   2                      B   8                      C   18                      D   32
26	How many neutrons are in the $^{49}_{22}\text{Ti}$ isotope? A   23                      B   14                      C   92                      D   27
27	The elements in a column of the periodic table are collectively referred to as: A   Metals                      B   A period                      C   A group                      D   A series
28	Which element is a d block element? A   S                      B   Ar                      C   Ag                      D   As
29	The proper electron-dot symbol for aluminium is: A   $\cdot\text{Al}$ B   $\cdot\ddot{\text{Al}}$ C   $\cdot\overset{\cdot}{\text{Al}}\cdot$ D   Both(B)and(C)
30	What is the element symbol for antimony? A   A                      B   An                      C   At                      D   Sb

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
31	An example of an inner transition elements is: A   Ti   B   S   C   U   D   N
32	The subshells consist of orbitals. A   True   B   False
33	A column in the periodic table is called a period. A   True   B   False
34	Protons and electrons reside in the nucleus of an atom A   True   B   False
35	All atoms of the same element contain the same number of protons. A   True   B   False
36	The element symbol S represents sodium. A   True   B   False
37	Helium is an s block element. A   True   B   False
38	The 4s orbital is lower in energy than the 3d orbital. A   True   B   False
39	All of the elements in group 6A are non-metals. A   True   B   False
40	The maximum number of electrons that can occupy the 3d subshell is 10. A   True   B   False

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Ques. no.	Question
41	Which atom has the largest atomic radius? A   K                      B   Ga                      C   Br                      D   Rb
42	Which element has the smallest ionization energy? A   K                      B   Ga                      C   Br                      D   Rb
43	The electron configuration of aluminum is: $1s^2 2s^2 2p^6 3s^2 3p^5$ A   True                      B   False
44	The electrons in the outermost shell of an atom are called the paired electrons. A   True                      B   False
45	The name of the halogen in period 3 is Chlorine. A   True                      B   False
	Elements in the same group have the same number of valence electrons A   True                      B   False
47	Tungsten is a metal containing 74 protons that is widely used in the electronics industry. the elemental symbol for tungsten is: A   Ti                      B   Te                      C   Ta                      D   W
48	The ionization energy is the energy needed to remove an electron from a neutral atom. A   True                      B   False
49	The electron configuration for calcium is $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$ A   True                      B   False
50	Isotopes are atoms of the same element that have a different number of neutrons A   True                      B   False

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

### (Chem 108 Chapter 3)

Ques no.	Question
1	Covalent bonds result from the ..... electrons between two atoms? A   lost   B   gained   C   shared   D   donate
2	Which one of the following compounds has <u>not</u> an ionic compound? A   CO <sub>2</sub>   B   CaCl <sub>2</sub>   C   KCl   D   NaF
3	Which one of the following compounds has ionic bond? A   H <sub>2</sub> O   B   Cl <sub>2</sub>   C   NaF   D   N <sub>2</sub>
4	Which one of the following compounds has covalent bonding? A   MgO   B   N <sub>2</sub>   C   CaF <sub>2</sub>   D   LiCl
5	Which one of the following compounds has <u>not</u> a covalent compound? A   Br <sub>2</sub>   B   NaI   C   NO <sub>2</sub>   D   CO <sub>2</sub>
6	Write the ion symbol for an atom with 9 protons and 10 electrons? A   F <sup>-</sup>   B   Na <sup>+</sup>   C   O <sup>-2</sup>   D   F <sup>+</sup>
7	_____ are negatively charged ions that have _____ electrons than protons. A   Cations, more   B   Anions, more   C   Anions, less   D   Cations, less
8	What is the ion symbol for an atom with twenty (20) protons and eighteen (18) electrons? A   Ca   B   Ar <sup>2+</sup>   C   Ca <sup>2+</sup>   D   Ar
9	Write the ion symbol for an atom with 26 protons and 23 electrons? A   Fe <sup>+3</sup>   B   F <sup>+3</sup>   C   Fe <sup>-3</sup>   D   F <sup>-</sup>
10	How many protons and electrons are present in, Ca <sup>2+</sup> ion? (Z =20) A   p =18,e= 20   B   p = 20, e = 22   C   p = 20, e = 18   D   p = 22, e = 18



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Ques. no.	Question
11	Write the ion symbol for an atom with the 7 protons and 10 electrons? A   $O^{-2}$   B   $N^{-3}$   C   $F^{-}$   D   $Al^{+3}$
12	What is the ion symbol for an atom with 8 protons and 10 electrons? A   $Na^{+}$   B   $F^{-}$   C   $O^{-2}$   D   $N^{-3}$
13	The noble gas that has the same electronic configuration as the iodide ion is krypton? A   True   B   False
14	Elements in group 2A form ions with a +2 charge? A   True   B   False
15	Which of the following statement is <i>False</i> about the ionic compounds? A   Ionic compounds have high melting points.   B   The solution of Ionic compound conduct electricity.   C   Most ionic compounds are insoluble in water   D   Ionic compounds have high boiling points.
16	Select the ionic compound formed from Aluminum, Al and oxygen, O? A   $Al_2O_3$   B   $Al_3O_2$   C   $AlO_2$   D   $Al_2O_2$
17	Write the formula for the ionic compound formed from pair of elements (Mg and O) A   $Mg_2O$   B   $MgO$   C   $MgO_2$   D   $Mg_2O_4$
18	Write the formula of ionic compound, formed from the elements, Fe(III) and Br? A   $FeBr_3$   B   $FeBr$   C   $Fe_2Br_3$   D   $Fe_3Br_2$
19	What is the formula for the ionic compound, formed from the Li and O? A   $Li_2O$   B   $Li_2O_3$   C   $LiO_2$   D   $Li_3O_2$
20	Ionic compounds are usually solids at room temperature? A   True   B   False

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21	Use the group number to determine the charge on an ion derived from <i>Se</i> element? A   $Se^{+2}$   B   $Se^{+4}$   C   $Se^{-2}$   D   $Se^{-4}$
22	Give the name of $Al^{+3}$ ion? A   Aluminous   B   Aluminum   C   Aluminic   D   Alum
23	Give the name of $S^{-2}$ ion? A   Sulphide   B   Sulphur   C   Sulphuric   D   Sulphate
24	Give the name of $Fe^{+2}$ ion? A   Ferric   B   Ferous   C   Ferion   D   Iron
25	Name the ionic compound $Al_2O_3$ ? A   Aluminum oxide   B   Alum oxide   C   Aluminous oxide   D   Aluminic oxide
26	Potassium sulfide has the chemical formula $K_2S$ ? A   True   B   False
27	Which compound has the highest melting point? A   KCl   B   $CH_4$   C   $C_6H_{12}O_6$   D
28	How many covalent bonds are predicted for <i>N</i> atom? A   5   B   7   C   3   D   0
29	How many covalent bonds are predicted for <i>Si</i> atom? A   4   B   5   C   3   D   7
30	Number of non-bonded electron pairs are predicted for <i>Cl</i> ? A   4   B   3   C   5   D   7

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

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31	How many lone pairs of electrons are present in the Lewis structure of ammonia, NH <sub>3</sub> ? A   0   B   1   C   2   D   5
32	Give the formula for <i>dinitrogen tetroxide</i> compound? A   NO <sub>2</sub>   B   N <sub>2</sub> O   C   N <sub>2</sub> O <sub>4</sub>   D   N <sub>4</sub> O <sub>2</sub>
33	Atoms with seven valence electrons typically form one covalent bond? A   True   B   False
34	How many non bonded electron pairs are in the Lewis structure below? $\begin{array}{c} \ddot{\text{O}}::\text{C}::\ddot{\text{O}} \\ \text{O}::\text{C}::\text{O} \end{array}$ A   4   B   2   C   8   D   16
35	Use electronegativity values to classify the bond, H–Cl? [Cl(3) and H(2.1)] A   non-polar covalent   B   polar covalent   C   Ionic bond   D   all of these
36	Which Lewis-dot structure represents a chlorine atom in the ground state? A   $\cdot\ddot{\text{Cl}}\cdot$   B   $:\ddot{\text{Cl}}\cdot$   C   $:\ddot{\text{Cl}}:$   D   $\ddot{\text{Cl}}$
37	Rank these atoms (B, O and N) in order of increasing electronegativity? A   B < O < N   B   N < O < B   C   B < N < O   D   O < N < B
38	Which one of the following molecule is a nonpolar with no net dipole? A   HCl   B   Br <sub>2</sub>   C   H <sub>2</sub> O   D   NaCl
39	Which atom has the lowest electronegativity? A   Al   B   S   C   Se   D   Rb
40	Rank these atoms (Cl, I and F) in order of increasing electronegativity? A   F < Br < Cl   B   Br < Cl < F   C   Cl < Br < F   D   F < Cl < Br

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
41	The bond results from the transfer of electrons is.....? A   Ionic   B   Covalent   C   metallic   D   none of the previous
42	What is the bond type if the electronegativity difference is greater than 1.9 unite? A   Nonpolar   B   polar   C   Ionic   D   All the previous
43	What is the proper name for $MgF_2$ ? A   Magnesium fluoride   B   Magnesium (I) fluoride   C   Magnesium (II) fluoride   D   Magnesium difluoride
44	Which atom fits the electron-dot symbol? $\cdot\overset{\cdot}{X}\cdot$ A   Li   B   B   C   N   D   Na
45	What period 4 element forms an ion with a $-1$ charge? A   Sulfur   B   Bromine   C   Iodine   D   Rubidium
46	What is the charge on the chromium ion in the ionic compound $CrCl_3$ ? A   +6   B   +3   C   -6   D   -3
47	What is the Lewis structure for chloroethylene ( $C_2H_3Cl$ )? A $\begin{array}{c} H & H \\   &   \\ H-C & -C-Cl \end{array}$   B $\begin{array}{c} H & H \\   &   \\ H-C & =C-Cl \end{array}$   C $\begin{array}{c} H & H \\   &   \\ H-C & =C-\ddot{Cl} \end{array}$   D $\begin{array}{c} H & H \\   &   \\ H-C & -C-\ddot{Cl} \end{array}$
48	Rank the atoms Br, Cl, and K in order of increasing electronegativity? A   $K < Br < Cl$   B   $Cl < Br < K$   C   $Br < Cl < K$   D   $K < Cl < Br$
49	Anions are formed when a neutral atom gains one or more electrons A   True   B   False
50	Bonding is the joining of two atoms in a stable arrangement A   True   B   False

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

### (Chem 108 Chapter 4)

Que s. no.	Question
1	<p>The law of conservation of energy states that</p> <p>A   The energy of the reactants and products in a chemical reaction are always equal    B   All chemical reactions are reversible.    C   Energy can be created, but not destroyed.    D   Energy cannot be created or destroyed.</p>
2	<p>Calorie is a unit of energy and equals ..... Joule.</p> <p>A   4.184    B   0.4184    C   41.18    D   418.4</p>
3	<p>31.39 kJ. How many kilocalories does this correspond to?</p> <p>A   7,502 kcal    B   7.502 kcal    C   131.3 kcal    D   0.1313 kcal</p>
4	<p>The interaction between the solid particles is .....</p> <p>A   strong    B   very strong    C   moderate    D   Weak</p>
5	<p>55.2 kcal. How many kilojoules does this correspond to?</p> <p>A   231 kJ    B   0.231 kJ    C   13.2 kJ    D   1,320 kJ</p>
6	<p>There are three types of intermolecular forces between particles, one of them is..... bond</p> <p>A   hydrogen    B   covalent    C   ionic    D   Coordinate</p>
7	<p>Which of the following energy quantities is equivalent to 578 J?</p> <p>A   <math>5.78 \times 10^5</math> kJ    B   138 kcal    C   0.138 kcal    D   <math>1.38 \times 10^5</math> kcal</p>
8	<p>The types of intermolecular forces presents in NH<sub>3</sub> molecule are .....</p> <p>A   London dispersion force    B   dipole-dipole interaction    C   hydrogen bond    D   A+B+C</p>
9	<p>A reaction in which the energy of the products is higher than the energy of the reactants?</p> <p>A   Oxidation-reduction    B   Endothermic    C   Exothermic    D   Combustion</p>

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

10 The boiling point of water is ..... than  $\text{CH}_4$ .  
A | lower                      B | higher                      C | equal                      D | Less

Ques. no.	Question						
11	The particles of a gas.....						
A	are far apart from each other	B	are close to each other but somewhat disorganized	C	are close to each other and highly organized	D	None of the above
12	Which of the following compounds is Only nonpolar ?						
A	$\text{NH}_3$	B	$\text{CH}_4$	C	$\text{CH}_3\text{OH}$	D	HCl
13	The particles of a liquid.....						
A	are far apart from each other	B	are close to each other but somewhat disorganized	C	are close to each other and highly organized	D	None of the above
14	The conversion of solid to vapor is called .....						
A	vaporization	B	condensation	C	Melting	D	sublimation
15	The particles of a solid.....						
A	are far apart from each other	B	are close to each other but somewhat disorganized	C	are close to each other and highly organized	D	None of the above
16	A reaction release 421 kj of energy. How many kilocalories does this corresponds to.....						
A	100.4	B	100.5	C	100.6	D	100.7
17	Which of the following is true about the shape and volume of liquids						
A	Expands to fill its container	B	A fixed volume that takes the shape of the container it occupies	C	A definite shape and volume	D	None of the above
18	Which of the following exhibit London dispersion force Only ?						
A	$\text{NH}_3$	B	$\text{H}_2\text{O}$	C	HCl	D	$\text{C}_2\text{H}_6$
19	Which of the following is true about the shape and volume of gases?						
A	Expands to fill its container	B	A fixed volume that takes the shape of the container it occupies	C	A definite shape and volume	D	None of the above
20	The hydrogen bond formed when H atom attached with .....						
A	N	B	F	C	O	D	A+B+C



## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
21	Which of the following is true about the shape and volume of solids? <b>A</b> Expands to fill its container <b>B</b> A fixed volume that takes the shape of the container it occupies <b>C</b> A definite shape and volume <b>D</b> None of the above
22	which of the following molecules has higher boiling point ? <b>A</b> H <sub>2</sub> O <b>B</b> CH <sub>4</sub> <b>C</b> NH <sub>3</sub> <b>D</b> C <sub>2</sub> H <sub>6</sub>
23	Which of the following is true about the density of gases? <b>A</b> Low(<0.01g/mL) <b>B</b> High (1 – 10 g/mL) <b>C</b> High(~1 g/mL) <b>D</b> Low (>0.01but <1.0 g/mL)
24	when energy is absorbed, a process is said to be ..... <b>A</b> endothermic <b>B</b> exothermic <b>C</b> equilibrium <b>D</b> None of the above
25	Which of the following is true about the density of liquids? <b>A</b> Low(<0.01g/mL) <b>B</b> High (1 – 10 g/mL) <b>C</b> High(~1 g/mL) <b>D</b> Low (>0.01but <1.0 g/mL)
26	Which of the following molecules can form hydrogen bonding ? <b>A</b> H <sub>2</sub> O <b>B</b> CH <sub>4</sub> <b>C</b> NH <sub>3</sub> <b>D</b> A and C
27	Which of the following is true about the density of solids? <b>A</b> Low(<0.01g/mL) <b>B</b> High (1 – 10 g/mL) <b>C</b> High(~1 g/mL) <b>D</b> Low (>0.01but <1.0 g/mL)
28	Joule is a unit of energy and equals ..... calorie. <b>A</b> 4.184 <b>B</b> 0.4184 <b>C</b> 41.18 <b>D</b> 1/4.184
29	Which of the following is true about the interaction between particles of gases? <b>A</b> Weak interaction <b>B</b> No interaction <b>C</b> Strong interaction <b>D</b> Very strong interaction
30	The weakest types of intermolecular forces between particles, is..... <b>A</b> London dispersion force <b>B</b> dipole-dipole interaction <b>C</b> hydrogen bond <b>D</b> None of the above



## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

40	<b>Which of the following is true about vaporization?</b>						
A	Energy is released in vaporization	B	Energy is absorbed in vaporization	C	Vaporization is the opposite of melting	D	Vaporization is the opposite of freezing
Ques. No.	<b>Question</b>						
41	<b>Which of the following is true about condensation?</b>						
A	Energy is released in condensation	B	Energy is absorbed in condensation	C	Condensation is the opposite of melting	D	Condensation is the opposite of freezing
42	<b>Which of the following is true about sublimation?</b>						
A	Energy is released in sublimation	B	Energy is absorbed in sublimation	C	Sublimation is the opposite of melting	D	Sublimation is the opposite of freezing
43	<b>Which of the following is true about deposition?</b>						
A	Energy is released in deposition	B	Energy is absorbed in deposition	C	Deposition is the opposite of melting	D	Deposition is the opposite of freezing
44	<b>Which processes are endothermic?</b>						
	I. Deposition	II. Vaporization	III. Sublimation	IV. Condensation			
A	I, II, III, and IV	B	I and III	C	II and III	D	I, II, and IV
45	<b>Energy is the capacity to do work.</b>						
A	True	B	False	C		D	
46	<b>Kinetic energy is stored energy; and potential energy is the energy of motion.</b>						
A	True	B	False	C		D	
47	<b>When energy is absorbed, the process is said to be endothermic.</b>						
A	True	B	False	C		D	
48	<b>London dispersion forces are exhibited by all covalent compounds.</b>						
A	True	B	False	C		D	
49	<b>Two molecules of dimethyl ether, whose structure is shown below, are capable of hydrogen bonding with each other.</b>						
	$\begin{array}{c} \text{H} & & \text{H} \\   & &   \\ \text{H}-\text{C}-\text{O}-\text{C}-\text{H} \\   & &   \\ \text{H} & & \text{H} \end{array}$						
A	True	B	False	C		D	
50	<b>London dispersion forces can also be called van der Waals forces.</b>						
A	True	B	False	C		D	

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

### (Chem 108 Chapter 5)

Ques no.	Question
1	Breaking bonds between reactants and formation new bonds between products is called A   ionization   B   dissociation   C   chemical reaction   D   addition
2	From the following balanced equation, $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$ the number of resulted atoms are .....
	A   C, 4O, 8H   B   C, 2O, 8H   C   C, 4O, 4H   D   C, O, H
3	The number of molecules present in 0.5 mole $\text{CO}_2$ are .....
	A   $5 \times 6.02 \times 10^{23}$   B   $0.5 \times 6.02 \times 10^{23}$   C   $50 \times 6.02 \times 10^{23}$   D   $6.02 \times 10^{23}$
4	which of the following equations consider a balanced equation .....
	A   $\text{C}_3\text{H}_8 + 5\text{O}_2 \rightarrow \text{CO}_2 + 4\text{H}_2\text{O}$   B   $\text{C}_3\text{H}_8 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$   C   $\text{C}_3\text{H}_8 + \text{O}_2 \rightarrow 3\text{CO}_2 + 4\text{H}_2\text{O}$   D   $\text{C}_3\text{H}_8 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
5	0.5 mole on NaCl molecule weighs ..... grams (Na=23, Cl=35.44)
	A   2922   B   2.922   C   29.22   D   292.2
6	Knowing that M.Wt of $\text{H}_2\text{O} = 18$ grams, the mass of 0.25 mole of $\text{H}_2\text{O}$ is ..... grams
	A   4.5   B   9   C   13.5   D   18
7	From the balanced equation. $\text{C}_6\text{H}_{12}\text{O}_6 \rightarrow 2\text{C}_2\text{H}_6\text{O} + 2\text{CO}_2$ 5 moles of glucose ( $\text{C}_6\text{H}_{12}\text{O}_6$ ) gives ..... moles of ethanol ( $\text{C}_2\text{H}_6\text{O}$ ).
	A   6   B   8   C   10   D   12
8	The reaction which characterized by absorbing of heat is called ..... Reaction
	A   endothermic   B   exothermic   C   precipitation   D   addition
9	Sodium azide ( $\text{NaN}_3$ ) can be composed to $\text{Na}^+$ and $\text{N}_2$ by the following balanced equation
	A   $\text{NaN}_3 \rightarrow \text{Na}^+ + \text{N}_2$   B   $2\text{NaN}_3 \rightarrow \text{Na}^+ + \text{N}_2$   C   $2\text{NaN}_3 \rightarrow 2\text{Na}^+ + 3\text{N}_2$   D   $3\text{NaN}_3 \rightarrow 2\text{Na}^+ + 3\text{N}_2$
10	The law of conservation of mass states that .....
	A   Atoms cannot be created or destroyed in a chemical reaction   B   Molecules cannot be created or destroyed in a chemical reaction   C   Compounds cannot be created or destroyed in a reaction   D   Complexescannot be created or destroyed in a reaction

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques no.	Question
11	Which chemical equation is properly balanced? <b>A</b>   $\text{SO}_2 + \text{O}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{SO}_4$   <b>B</b>   $2 \text{SO}_2 + \text{O}_2 + 2 \text{H}_2\text{O} \rightarrow 2 \text{H}_2\text{SO}_4$   <b>C</b>   $\text{SO}_2 + \text{O}_2 + 4 \text{H}_2\text{O} \rightarrow 2 \text{H}_2\text{SO}_4$   <b>D</b>   $\text{SO}_2 + \text{O}_2 + 4 \text{H}_2\text{O} \rightarrow 2 \text{H}_2\text{SO}_4$
12	In the chemical equation $2 \text{Co}(\text{NO}_3)_3 + 3 (\text{NH}_4)_2\text{S} \rightarrow \text{Co}_2\text{S}_3 + 6 \text{NH}_4\text{NO}_3$ , how many nitrogen atoms are on each side of the equation? <b>A</b>   6   <b>B</b>   12   <b>C</b>   16   <b>D</b>   20
13	How many carbon atoms are in 3.85 mol of carbon? <b>A</b>   3.85 atoms   <b>B</b>   $2.32 \times 10^{24}$ atoms   <b>C</b>   $6.02 \times 10^{-23}$ atoms   <b>D</b>   $3.85 \times 10^{-23}$ atoms
14	What is the formula weight of KCl? <b>A</b>   74.55 amu   <b>B</b>   66.42 amu   <b>C</b>   36.00 amu   <b>D</b>   36.00 amu
15	What is the formula weight of $\text{Co}(\text{NO}_3)_3$ ? <b>A</b>   88.94 amu   <b>B</b>   244.96 amu   <b>C</b>   216.94 amu   <b>D</b>   2.1694 amu
16	What is the mass of 3.81 mol of $\text{PH}_3$ ? <b>A</b>   130. g   <b>B</b>   8.92 g   <b>C</b>   34.0 g   <b>D</b>   340 g
17	How many moles of carbon dioxide are in 211 g of carbon dioxide? <b>A</b>   929 mol   <b>B</b>   4.79 mol   <b>C</b>   0.209 mol   <b>D</b>   209 mol
18	How many moles of sulfur trioxide are formed from 3 moles of sulfur dioxide using the given balanced equation? $2 \text{SO}_2 + \text{O}_2 \rightarrow 2 \text{SO}_3$ <b>A</b>   12   <b>B</b>   9   <b>C</b>   6   <b>D</b>   3
19	Consider the reaction: $2 \text{Al}(\text{OH})_3 + 3 \text{H}_2\text{SO}_4 \rightarrow \text{Al}_2(\text{SO}_4)_3 + 6 \text{H}_2\text{O}$ . How many grams of $\text{Al}_2(\text{SO}_4)_3$ are generated when 152 g of $\text{H}_2\text{SO}_4$ reacts? <b>A</b>   530   <b>B</b>   1590   <b>C</b>   177   <b>D</b>   214
20	The number of molecules present in one mole $\text{O}_2$ are ..... <b>A</b>   8   <b>B</b>   16   <b>C</b>   $2 \times 6.02 \times 10^{23}$   <b>D</b>   $6.02 \times 10^{23}$



## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques no.	Question
21	A balanced chemical equation tells the number of _____ of each reactant that combine and the number of _____ of each product formed A   Grams, grams   B   Grams, moles   C   Moles, moles   D   Grams, liter
22	How many carbon atoms are in 77.28 g of ethane (C <sub>2</sub> H <sub>6</sub> )? A   2.570   B   $1.548 \times 10^{24}$   C   5.140   D   $6.02 \times 10^{24}$
23	What is the mass of $3.4 \times 10^{20}$ molecules of ethanol (C <sub>2</sub> H <sub>6</sub> O) expressed in milligrams? A   26 mg   B   26000 mg   C   0.26 mg   D   260 mg
24	If the products are higher in energy than the reactants, the reaction will be ..... reaction A   exothermic   B   endothermic   C   ionic   D   covalent
25	If the $\Delta H$ is negative, the reaction will be ..... reaction A   exothermic   B   endothermic   C   gases   D   solids
26	If the heat is released in a reaction , the reaction will be ..... reaction A   endothermic   B   exothermic   C   solid   D   liquid
27	Which sample contains the largest number of molecules? A   100 g of CO <sub>2</sub>   B   100 g of CH <sub>4</sub>   C   100 g of CBr <sub>4</sub>   D   100 g of CHBr <sub>3</sub>
28	Potassium metal (K) reacts violently when added to water according to the balanced equation: $2 K(s) + 2 H_2O(l) \rightarrow 2 KOH(aq) + H_2(g)$ . How many moles of H <sub>2</sub> O are needed to react completely with 7.54 mol of K? A   2   B   15.1   C   7.54   D   3.77
29	Which quantity has the greatest mass? A   2.0 mol of Na   B   2.0 mol of Na <sub>2</sub> O   C   2.0 mol of NaCl   D   2.0 mol of O <sub>2</sub>
30	How many carbon atoms are in 77.28 g of ethane (C <sub>2</sub> H <sub>6</sub> )? A   2.570   B   $1.548 \times 10^{24}$   C   $1.238 \times 10^{25}$   D   $3.094 \times 10^{24}$



## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
31	The subscripts in chemical formulas are changed in order to balance a chemical equation A True B False
32	A chemical change alters the chemical composition of a substance, and therefore a new substance is produced. A True B False
33	A mole of copper atoms has more atoms than a mole of lead atoms A True B False
34	One mole of oxygen molecules contains more atoms than one mole of lead atoms A True B False
35	The molar mass of $\text{CaCO}_3$ is greater than the molar mass of $\text{Ca}(\text{NO}_3)_2$ A True B False
36	The balanced reaction: $4 \text{NO}_2 + \text{O}_2 + 2 \text{H}_2\text{O} \rightarrow 4 \text{HNO}_3$ states that four moles of nitrogen dioxide react with each mole of oxygen A True B False
37	The balanced reaction: $4 \text{NO}_2 + \text{O}_2 + 2 \text{H}_2\text{O} \rightarrow 4 \text{HNO}_3$ states that four grams of nitrogen dioxide reacts with each gram of oxygen A True B False
38	A mole is a quantity that contains $6.02 \times 10^{23}$ atoms, molecules, or ions A True B False
39	The formula weight of a compound is the sum of the atomic weights of all the atoms in a compound, reported in atomic mass units A True B False
40	Consider the balanced reaction: $4 \text{NO}_2 + \text{O}_2 + 2 \text{H}_2\text{O} \rightarrow 4 \text{HNO}_3$ . If 100. g of $\text{NO}_2$ is placed in a reaction vessel the theoretical yield of nitric acid ( $\text{HNO}_3$ ) collected will be 137 g A True B False

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
41	<p><math>2 \text{Co}(\text{NO}_3)_3(\text{aq}) + 3 (\text{NH}_4)_2\text{S}(\text{aq}) \rightarrow \text{Co}_2\text{S}_3(\text{s}) + 3 \text{NH}_4\text{NO}_3(\text{aq})</math> is a properly balanced chemical equation</p> <p>A True      B False      C      D</p>
42	<p>One term in a balanced chemical equation contains the coefficient 4 in front of the formula <math>\text{Mg}_3(\text{PO}_4)_2</math>. This term represents that there are 12 Mg atoms, 4 P atoms and 16 O atoms in this term.</p> <p>A True      B False      C      D</p>
43	<p>The molar mass of dibromomethane (<math>\text{CH}_2\text{Br}_2</math>) is larger than the molar mass of dichloromethane (<math>\text{CH}_2\text{Cl}_2</math>).</p> <p>A True      B False      C      D</p>
44	<p>The mass of one ethanol (<math>\text{C}_2\text{H}_6\text{O}</math>) molecule is <math>7.65 \times 10^{-23}</math> grams</p> <p>A True      B False      C      D</p>
45	<p>The molar mass of <math>\text{MgCO}_3</math> is greater than the molar mass of <math>\text{NaNO}_3</math></p> <p>A True      B False      C      D</p>
46	<p>One mole of oxygen molecules contains more atoms than one mole of lead atoms</p> <p>A True      B False      C      D</p>
47	<p><math>2 \text{Co}(\text{NO}_3)_3(\text{aq}) + 3 (\text{NH}_4)_2\text{S}(\text{aq}) \rightarrow \text{Co}_2\text{S}_3(\text{s}) + 3 \text{NH}_4\text{NO}_3(\text{aq})</math> is a properly balanced chemical equation</p> <p>A True      B False      C      D</p>
48	<p>One term in a balanced chemical equation contains the coefficient 4 in front of the formula <math>\text{Mg}_3(\text{PO}_4)_2</math>. This term represents that there are 12 Mg atoms, 4 P atoms and 16 O atoms in this term</p> <p>A True      B False      C      D</p>
49	<p>The molar mass of dibromomethane (<math>\text{CH}_2\text{Br}_2</math>) is larger than the molar mass of dichloromethane (<math>\text{CH}_2\text{Cl}_2</math>)</p> <p>A True      B False      C      D</p>
50	<p>The mass of one ethanol (<math>\text{C}_2\text{H}_6\text{O}</math>) molecule is <math>7.65 \times 10^{-23}</math> grams</p> <p>A True      B False      C      D</p>

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

### (Chem 108 Chapter 6)

Ques. no.	Question Chapter 6			
1	A patient's systolic pressure is measured as 128 mm Hg. What is this pressure in units of atm?			
	A   128 atm	B   1.28 atm	C   0.168 atm	D   $9.73 \times 10^4$ atm
2	An aerosol can has a pressure of 1.86 atm. What is this pressure expressed in units of mm Hg?			
	A   1.86 mm Hg	B   1410 mm Hg	C   1860 mm Hg	D   0.00245 mm Hg
3	A birthday balloon contains helium at a pressure of 815 torr. What is this pressure expressed in units of mm Hg?			
	A   815 mm Hg	B   1.07 mm Hg	C   0.815 mm Hg	D   6.1910 mm Hg
4	A sample of neon gas has a volume of 5.0 mL at a pressure of 1.50 atm. What is the pressure exerted by the gas if the volume is increased to 30.0 mL, at constant temperature?			
	A   0.25 atm	B   9.0 atm	C   1.5 atm	D   0.21 atm
5	Which gas law describes the relationship between the volume and temperature of a sample of gas at constant pressure?			
	A   Boyle's law	B   Avogadro's law	C   Charles's law	D   Gay-Lussac's law
6	A balloon that contains 0.500 L of helium at 25 °C is cooled to 11 °C, at a constant pressure. What volume does the balloon now occupy?			
	A   0.22 L	B   1.1 L	C   0.477 L	D   0.525 L
7	A 54.2 L sample of gas at 115 K is heated to 345 K, at constant pressure. What volume does the gas now occupy?			
	A   $2.15 \times 10^6$ L	B   163 L	C   18.1 L	D   732 L
8	The temperature of a 0.750-L gas sample at 25 °C and 2.00 atm is changed to 250 °C. What is the final pressure of the system, at constant volume?			
	A   20.0 atm	B   0.200 atm	C   3.51 atm	D   0.427 atm
9	A weather balloon contains 222 L of helium at 20 °C and 760. mm Hg. What is the volume of the balloon when it ascends to an altitude where the temperature is -40 °C and 540 mm Hg?			
	A   467 L	B   116 L	C   $2.24 \times 10^7$ L	D   248.5 L
10	A gas cylinder containing 6.38 mol of neon has a pressure of 491 mm Hg at 295 K. If 3.22 mol of helium is added to this cylinder, at constant temperature and volume, what will be the pressure in the cylinder?			
	A   9.73 mm Hg	B   739 mm Hg	C   1460 mm Hg	D   248 mm Hg

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
11	How many moles are contained in 5.33 L of O <sub>2</sub> at standard temperature and pressure? A   5.33 mol of O <sub>2</sub>   B   22.4mol of O <sub>2</sub>   C   0.238 mol of O <sub>2</sub>   D   1.00 mol of O <sub>2</sub>
12	Which cylinder at STP will contain the greatest number of gas particles? A   5.0-L cylinder of neon   B   5.0-L cylinder of helium   C   5.0-L cylinder of nitrogen   D   All of the cylinders above contain the same number of gas particles.
13	Which cylinder at STP will contain the greatest mass of gas particles? A   5.0-L cylinder of neon   B   5.0-L cylinder of helium   C   5.0-L cylinder of nitrogen   D   All of the cylinders above contain the same mass of gas particles.
14	Consider the balanced reaction: $Zn(s) + 2 HCl(aq) \rightarrow ZnCl_2(aq) + H_2(g)$ . What volume of H <sub>2</sub> (g) at STP can be generated when 134 g of zinc reacts? A   2.05 L   B   5.98 L   C   $3.00 \times 10^3$ L   D   45.9 L
15	A sample of gas contains four gases with the following partial pressures: He (113 mm Hg), Ne (184 mm Hg), Ar (35 mm Hg), and Xe (445 mm Hg). What is the total pressure of the sample? A   777 mm Hg   B   760. mm Hg   C   445 mm Hg   D   332 mm Hg
16	A sample of gas contains four gases with the following partial pressures: He (113 mm Hg), Ne (184 mm Hg), Ar (35 mm Hg), and Xe (445 mm Hg). What is the total pressure of the sample? A   777 mm Hg   B   760. mm Hg   C   445 mm Hg   D   332 mm Hg
17	What is the volume of 62.3 g of nitrogen gas at STP? A   22.4 L B) C)   B   49.8 L   C   99.6 L   D   2.78 L
18	What volume does $7.50 \times 10^{20}$ molecules of O <sub>2</sub> occupy at STP? A   22.4 L B) C)   B   $1.68 \times 10^{22}$ L   C   0.0279 L   D   2.79 L
19	The size of gas particles is large compared to the space between the particles. A   True   B   False
20	When a sample of gas is compressed from 6.0 L to 2.0 L at a constant temperature, the pressure of the gas doubles. A   True   B   False

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
21	When a sample of gas is heated from 80. °C to 160. °C at a constant pressure, the volume of the gas doubles. A   True   B   False
22	STP is defined as a pressure of exactly one atmosphere and a temperature of 25 °C. A   True   B   False
23	When the pressure and temperature are held constant, the volume of a gas is inversely proportional to the number of moles present. A   True   B   False
24	The value of the universal gas constant, $R$ , changes as a function of temperature. A   True   B   False
25	The value of the universal gas constant, $R$ , depends on its units. A   True   B   False
26	When the volume of a sample of gas is doubled and the Kelvin temperature is cut in half, the pressure of a sample remains constant. A   True   B   False
27	When the volume of a sample of gas is doubled and the Kelvin temperature is doubled, the pressure of a sample remains constant A   True   B   False   C
28	The density of a sample of gas increases if the temperature is increased but the pressure is held constant. A   True   B   False
29	A sample of 22.4 g of $O_2$ will occupy less than 22.4 L at STP. A   True   B   False
30	The pressure of a gas is proportional to its Kelvin temperature, so increasing the temperature increases the pressure at constant volume. A   True   B   False



## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
31	When 88.4 g of hydrogen gas is put in a 25.8-L container at 300. K the pressure will be 83.7 atm. A True      B False
32	CHCl <sub>2</sub> F is classified as a CFC. A True      B False
33	What is the %O <sub>2</sub> in the air mixture? A 78%      B 1%      C 21%      D 50%
34	What is the %N <sub>2</sub> in the air mixture? A 78%      B 1%      C 21%      D 50%
35	What is the formula of Pressure (P)? A P = F/A      B P = F × A      C P = A/F      D P = F - A
36	Typical pressure in Denver is 630 mm Hg. Convert this value to atmospheres? A 0.83 atm      B 0.75 atm      C 0.45atm      D 0.33 atm
37	Convert the pressure unit 1.5 atm to mm Hg? A 1140 mm Hg      B 114 mm Hg      C 140 mm Hg      D 760 mm Hg
38	For a fixed amount of gas at constant volume, the pressure of a gas is proportional to its ----- temperature? A Fahrenheit; °F      B Kelvin; K      C Celsius; °C      D none
39	Which of the following relation represents the "Ideal gas law"? A $\frac{PV}{T} = R$ B $\frac{PV}{nT} = R$ C $\frac{nT}{PV} = R$ D $\frac{nV}{PT} = R$
40	The total pressure ( $P_{total}$ ) of a gas mixture is the sum of the partial pressures of its component gases. This law relates to.... A Avogadro's law      B Gay-Lussac's law      C Boyle's law      D Dalton's law



## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

Ques. no.	Question
41	A tank of compressed air for scuba diving contains 8.5 L of gas at 204 atm pressure. What volume of air does this gas occupy at 1.0 atm? A   1734 L   B   173 L   C   174 L   D   1347 L
42	A sample of helium gas has a volume of 2.0 L at a pressure of 4.0 atm. What is the volume of gas at 2.5 atm pressures? A   0.32 L   B   3.2 L   C   32 L   D   23L
43	A sample of helium gas has a volume of 2.0 L at a pressure of 4.0 atm. What is the volume of gas at 10 atm pressures? A   8.0 L   B   10.8 L   C   80 L   D   5 L
44	A balloon that contains 0.50 L of air at 25 °C is cooled to -196 °C. What volume does the balloon now occupy? A   1.3 L   B   0.13 L   C   1.9 L   D   19 L
45	If a 4.0 L container of helium gas has a pressure of 10.0 atm, what pressure does the gas exerts if the volume is increased to 6.0 L? A   7.6 L   B   6.7 L   C   8.7 L   D   7.8 L
46	A sample of helium gas has a volume of 2.0 L at a pressure of 4.0 atm. What is the volume of a gas at 380 mm Hg? A   1.6 L   B   6.1 L   C   16 L   D   7.2 L
47	A sample of N <sub>2</sub> gas has a volme of 15.0 mL at a apresure of 0.50 atm. What is the pressure exerted by the gas if the volume is change to 1.0 L? A   0.0075 atm   B   0.075 atm   C   0.750 atm   D   7.50 atm
48	At STP, one mole of any gas has the volume ---- A   24.2 L   B   22.0 L   C   4.22 L   D   22.4 L

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

49	How many liters of 0.3mol of O <sub>2</sub> gas occupy at STP? A   22.4 L   B   12.6 L   C   7.84 L   D   24.2L
50	A volume of 0.50 L of air at 37 °C is expelled from the lungs into cold surroundings at 0.0 °C. What volume does the expelled air occupy at this temperature? A   4.5 L   B   0.44 L   C   3.3 L   D   0.33 L
51	The lung of an average male hold 0.25 mol of air in a volume of 5.8 L. how many moles of air do the lungs of an average female hold if the volume is 4.6 L? A   0.20 mol   B   2.0 mol   C   3.2 mol   D   2.3 mol
52	A volume (25.0 L) of gas at 45 K is heated to 450 K. What volume does the gas now occupy? A   450 L   B   250 L   C   300 L   D   224 L
53	How much volume is called the <i>standard molar volume</i> of any gas? A   24.4 L   B   22.0L   C   4.22 L   D   22.4 L
54	What do you mean by <i>STP</i> ? A   (1 atm, 25 °C)   B   (760 atm,25 °C)   C   (1atm, 760 °C)   D   (1 atm, 0 °C)
55	How many liters of 18.0 g O <sub>2</sub> gas occupy at STP? A   0.38 mol   B   8.3 mol   C   3.8 mol   D   2.8 mol
56	How many moles of gases are contained in a human breath that takes in 0.50 L of air at 1.0 atm pressure and 37 °C? A   0.165 mol   B   2.0 mol   C   1.2 mol   D   2.1 mol
57	Burning 1 mol of propane in a gas grill adds 132.0 g of carbon dioxide (CO <sub>2</sub> ) to the atmosphere. What volume of CO <sub>2</sub> does this correspond to at STP? A   67.2 L   B   22.4 LL   C   22.4 LL   D   27.6 L
58	If a person exhales 25.0g of CO <sub>2</sub> in an hour, what volume does this occupy at 1.00 atm and 37 °C? Given molar mass, CO <sub>2</sub> = 44g/mol, $R = 0.0821 \frac{L \cdot atm}{mol \cdot K}$ A   14.5 L   B   22.4 L   C   5.14 L   D   11.2 L
59	Determine the pressure of N <sub>2</sub> for the conditions of 0.45mol at 25 °C in 10.0 L? Given, $R = 0.0821 \frac{L \cdot atm}{mol \cdot K}$ A   1.1 atm   B   6.7 atm   C   2.2 atm   D   7.6 atm

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

60	Air is a mixture of 21 % O <sub>2</sub> , 78% N <sub>2</sub> and 1% Ar by volume. What is the partial pressure of O <sub>2</sub> , whaere total pressure is 760 mm Hg?	A   395 mm Hg	B   260 mm Hg	C   593 mm Hg	D   160 mm Hg
61	A sample of exhaled air from the lungs contains four gases with the following partial pressures: N <sub>2</sub> (562 mm Hg), O <sub>2</sub> (118 mm Hg), CO <sub>2</sub> (30. mm Hg), and H <sub>2</sub> O (50. mm Hg). What is the total pressure of the sample?	A   670 mm Hg	B   760 mm Hg	C   768 mm Hg	D   0.5 torr.
62	CO <sub>2</sub> was added to a cylinder containing 2.5 atm of O <sub>2</sub> to give a total pressure of 4.0 atm of gas. What is the partial pressure CO <sub>2</sub> in the final mixture?	A   P <sub>CO2</sub> =0.625atm	B   P <sub>CO2</sub> =0.375 atm	C   P <sub>CO2</sub> = 1.25 atm	D   P <sub>CO2</sub> =1.5 atm
63	According to the kinetic-molecular theory of gases, A gas consists of particles that move randomly and rapidly	A   True	B   False		
64	According to the kinetic-molecular theory of gases, The size of gas particles is small compared to the space between the particles.	A   True	B   False		
65	According to the kinetic-molecular theory of gases, gas particles exert no attractive forces on each other,because the space between gas particles is large.	A   True	B   False		
66	The kinetic energy of gas particles does not change with increasing temperature.	A   True	B   False		
67	According to the kinetic-molecular theory of gases,when gas particles collide with each other, they rebound and travel in new directions.	A   True	B   False		
68	If 10.3 g of Ne and 10.3 g of N <sub>2</sub> are put into a 7.0 L container, the partial pressure of N <sub>2</sub> will be less than the partial pressure of Ne in the container.	A   True	B   False		

## بنك الأسئلة في مقرر الكيمياء الطبية 1 (108-تحض)

69	If the lungs of a child hold 0.11 mol of air in a volume of 2.8 L, then the lungs of an average female adult, with a volume is 4.6 L, can be expected to hold 0.18 mol of air.	A True	B False		
70	A gas cylinder containing 3.88 mol of helium has a pressure of 549 mm Hg at 298 K. If 1.22 mol of neon is added to this cylinder, at constant temperature and volume, the pressure will rise to 1750 mm Hg.	A True	B False		
71	Charles's law can be used to explain the dangerous condition for scuba divers called "the bends", which is caused by the formation of nitrogen gas bubbles in the bloodstream	A True	B False		
72	When the pressure and temperature are held constant, the volume of a gas is proportional to the number of moles present. The law relates to.....	A Charles's law relates	B Boyle's law relates	C Gay-Lussac's law relates	D Avogadro's law
73	The temperature of a gas sample at 25 °C and 1.00 atm is changed to 200 °C. What is the final pressure of the system?	A 15.9 atm	B 1.59 atm	C 16.7 atm	D 1.67 atm
74	A volume (50.0 mL) of gas at 400. °C is cooled to 50. °C. What volume does the gas now occupy?	A 24 ml	B 42 ml	C 5.6 ml	D 6.7 ml
75	Which of the following relation represents the "Combined gas law"?	A $\frac{PT}{V} = k$	B $\frac{VT}{P} = k$	C $\frac{PV}{T} = k$	D $\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$