MDCAT Chemistry Online Test

Sr	Questions	Answers Choice
1	Which one of the following will behave least like an ideal gas at high temperature and low pressure?	A. hydrogen fluoride B. helium C. oxygen D. carbon dioxide
2	Which pair of elements will have the same type of bonds between their atoms in the solid state?	A. carbon and calcium B. lithium and boron C. aluminium and phosphorus D. nitrogen and carbon
3	Which pair of elements have bonds of the same type between their molecules in the solid state?	A. phosphorous and nitrogen B. sulphur and magnesium C. carbon and sodium D. hydrogen and sodium
4	What types of bonds are broken when water turns into steam on heating?	A. covalent B. permanent dipole interactions C. hydrogen bonds D. induced dipole interactions
5	Which of the following tends to approach ideal gas like behavior at R.T.P	A. ammonia B. neon C. carbon dioxide D. chlorine
6	A substances has M_r74.5, a melting point of 772°C and a boiling point of 1407°C. It conducts electricity only when in the liquid state.What is the bonding present in this substances?	A. covalent B. ionic C. metallic D. hydrogen bonding
7	Which of the following is a reason why real gases do not behave as ideal gases do?	A. real gases have intermolecular forces between the molecules B. real gases do not have intermolecular forces between the molecules C. real gases exist as molecules D. molecules of real gases attract each other more strongly than molecules of ideal gases
8	Intermolecular forces exist between molecules of group 7 elements which of the following sequence represents the strength of the intermolecular forces?	A. Cl₂> Br₂> I₂ B. Br₂> Cl₂> I₂ C. Cl₂> Br₂> I₂ D. I₂> Br₂> Cl₂
9	What does no happen when an ideal gas is heated?	A. an increase in the average energy of the gas particles B. an expansion in the range of kinetic energies possessed by particles C. an increase in the number of molecules with lower energies D. a drop in the number of molecules with lower energies
10	Under what conditions do real gases show close to ideal gas behavior?	A. low pressure, low temperature B. high pressure, low temperature C. low pressure, high temperature D. high pressure, high temperature
11	The volume of an ideal gas is decreased to half, What will happen to the force exerted on the walls of the container by the gas particles?	A. the force is halved B. the force increases by a factor of 4 C. the force remains constant D. the force increased by a factory of 2
12	Which of the following is not a postulate of the kinetic theory of gases?	A. when gas particles collide, their total kinetic energy increases B. gases consist of molecules in a constant state of random motion C. when gas particles collide their total kinetic energy does not change at all

		D. The gas particles travel in straight lines unit they collide with one another or with the walls of the container
13	A gas is heated in a closed vessel. Which of the following statement is not true for the gas?	A. the intermolecular forces between particles weaken B. the kinetic energy of particles increases C. the total internal energy of the gas remains constant D. the total internal energy of the gas increases
14	The forces of attraction between the solid atoms of helium are	A. hydrogen boding B. coordinate covalent bond C. covalent bond D. London dispersion force
15	The crystal system are of	A. 7 types B. 10 types C. 5 types D. 8 types
16	Lattice energy is also termed as	A. ionization B. crystal energy C. dissociation D. bond energy
17	There are _____ types of solids	A. 1 B. 2 C. 3 D. 4
18	Crystal lattice of the substances can be categorized into	A. five types B. seven types C. six types D. none of these
19	The amount of heat required to convert one mole of solid into liquid is called	A. molar heat of fusion B. heat of fusion C. heat of vaporization D. heat of liquefaction
20	The process in which solid is directly coverted into gaseous state is called	A. evaporation B. boiling C. sublimation D. transformation
21	Which is trigonal cyrstal	A. BaSO₄. 4H₂O B. FeSO₄ C. NaNO₃ D. None
22	Glycerin boil at 290°C under normal atmospheric pressure. If the pressure is reduced to 50 mm of Hg, it will boil	A. above the given temperature B. below the given temperature C. at the same temperature D. at 25°C
23	Stalagmometer is used to measure	A. the resistance to flow of a liquid B. capillary action of a liquid C. Meniscus of the liquid D. surface tension of the liquid
24	Viscosity of a liquid is measured by	A. barometer B. thermometer C. viscometer D. manometer
25	Surface tension is measured by	A. viscometer B. barometer C. stalagmometer D. manometer
26	The compound that has zero dipole moment is	A. HCl B. H₂S C. NH₃ D. CH₄
27	The spreading of ink on blotting paper is due to	A. capillary action B. hydrogen bonding C. intermolecular forces of the ink D. intermolecular forces of the ink and paper
		A. repulsion B. weak cohesive force

28	Mercury does not wet the glass because of	B. weak cohesive force C. high viscosity D. capillary action
29	Which of the following has isomorphous structure with MgO	A. NaF B. S C. Sn D. N
30	London forces are	A. stronger than dipole-dipole interactions B. weaker than dipole-dipole interactions C. equal to dipole-dipole interactions D. sometimes stronger and sometimes weaker than dipole-dipole interactions
31	The forces of attraction between ions and water molecules are known as	A. dipole-dipole forces B. London forces C. dipole- induced dipole forces D. ion-dipole forces
32	When stress is applied to the metals, the metals are malleable and ductile because	A. their layers slip pass each other B. atoms lose electrons C. mobility of electrons increased D. none of the above
33	Freshly cut metals have a shining surface because	A. electrons excited, then excited electrons release energy as light B. metals have brittle nature C. metals conductivity increases D. metals are malleable and ductile
34	Metals are good conductor of electricity, but their conductivity decreases by increase in temperature because	A. electrons attracted strongly by the nuclei which resists their free motion B. atoms form ionic bond and no free electrons C. electrons go to the iocalized orbital not free D. positive metal ions begin to oscillate and their motion hinders the free movement of electrons
35	In metallic crystals the atomic orbitals combine to produce a large number of closely bands of energy according to	A. electron pool theory B. molecular orbital theory C. valence bond theory D. electrostatic force of attraction
36	One statement of isomorphism is incorrect	A. they have different chemical properties B. they have same physical properties C. they have same atomic ratio D. they have definite geometric shape
37	Which of the following is pseudosolid?	A. CaF₂ B. Glass C. NaCl D. All
38	Diamond and silicon carbide are insoluble in all solvents because	A. they have high melting and boiling points B. absence of three electrons C. they are huge giant three dimensional molecules (macromolecules) D. their unit cells have tetrahedral geometry
39	Ionic crystals are brittle because	A. they have cubic geometry B. they are bad conductors of electricity C. coordination number of cations and anions is same D. cations and anions are arranged in alternate positions in layers
40	$CuSO_45H_2O$ crystals belong to	A. triclinic B. cubic C. tetragonal D. orthorhombic
41	Sugar crystals belong to the system	A. cubic B. monoclinic C. triclinic D. orthorhombic
42	The crystal system which has all cell angles equal, but not 90°and less than 120° , the system is	A. orthorhombic B. monoclinic C. hexagonal

		D. rhombohedral
43	Grey tin crystals belong to	A. tetragonal B. cubic C. orthorhombic D. rhomtrohedral
44	A crystal system in which the unit cell has different all cell lengths but all angles equal to 90° it is called as	A. orthorhombic B. triclinic C. monoclinic D. cubic
45	$NaNO_3$and $CaCO_3$crystals are Rhombohedral isomrophism is due to	A. both soluble in water B. their cations belong to S block element C. same shape of NO₃⁻¹and CO₃⁻²ions which is triangular planar D. same number of O atoms
46	The crystal of $K_2SO_4$and $K_2CrO_4$are orthorhombic. These are isomrophs due to	A. same physical properties B. their cations identical C. number of O atms is equal D. same shape of SO₄⁻²and CrO₄⁻²tetrahedral
47	$AgNO_3$ is a polymorphic having two different crystalline forms which are	A. cubic, tetragonal B. monoclinic, hexagonal C. cubic, orthorhombic D. orthorhombic, rhombohedral
48	In the formation of NaCl crystals from its aqueous solution, its cubic shape is changed to needle like when 10% urea is present as impurity, this phenomenon is called as	A. habit of crystal B. polymorphism C. anisotropy D. cleavage
49	Which of these are isomrophous to one another NaCl, NH_4Br, K_2CrO_4, K_2SO_4	A. NaCl and NH₄Br both cubic B. NH₄Br and K₂SO_{4 both tetragonal} C. K₂CrO_{4 and}K₂SO₄orthorhombic D. NaCl and K₂SO₄both rhobohedral
50	Which of the following solid is amorphous	A. NaCl B. diamond C. glass D. MgO
51	Solids in which atoms, ions or molecules are not regularly arranged are	A. crystalline solid B. amorphous solids C. liquid crystals D. low melting points
52	Rise in vapour pressure of water from 30 to 60°C is only 32 torr to 149.4 torr (117.4 torr) but from 60 to 90°C is 149.4 to 527.8 torr (378.4 torr).it is due to	A. change in geometry of H₂O molecules at higher temperature B. decrease in volume takes place at higher temperature C. vapour pressure of liquids increases rapidly closer to their boiling points D. boiling starts
53	Boiling point of water remains 100°C although heat is continuous supplied. it is because	A. decomposition of water takes place B. hydrogen bonding is increased C. external atmospheric pressure is not changing D. kinetic energy of H₂O molecules is increasing
54	Liquid crystals are used for the early diagnosis of breast cancer by	A. injecting liquid crystals B. taking liquid crystals as diet C. painting liquid crystals on the surface of breast D. inhaling the smell of liquid crystals
55	It is very much difficult to cook food at Mount Everest, because	A. temperature of atmosphere is very low B. the boiling point of water is 69<span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font-size:

		small; > C C. water becomes heavier D. the boiling point of water is increased
56	Boiling point of water is higher (100°C) than that of ethanol (78.5°C) although both have hydrogen bonding. This is because	A. water molecules are closely packed B. water is more acidic than ethanol C. ethanol is an organic liquid D. number of hydrogen bonds are more in H₂O
57	$Cl_2$is a gas while iodine is a solid due to	A. stronger London forces with high polarizability B. greater electro negativity of Cl than iodine C. stronger dipole dipole forces D. iodine is colored while chlorine is colourless
58	The smallest unit of a crystal that shows all the characteristic properties of its pattern is called	A. cell B. electrolyte C. unit cell D. crystal
59	In NaCl cyrstal Na^+ion is surrounded by how many ions of Cl^-	A. 4 B. 6 C. 8 D. 10
60	The particles in solids are	A. widely separated and moving randomly B. widely separated not moving C. moving randomly but not separated D. close together and vibrating slightly