MDCAT Chemistry Online Test

Sr	Questions	Answers Choice
1	The reason that diamond and graphite have different physical properties is	A. density B. color C. bonding D. hardness
2	Diamond and graphite are	A. isomorphous B. polymorphous C. allotropes D. none of these
3	The amount of energy released when gaseous ions of opposite charges combine to give one mole of a crystalline ionic compound is called	A. bond energy B. heat of formation C. lattice energy D. ionization energy
4	The system in which two out of three axes are of equal length and angles are all 90°	A. cubic system B. hexagonal system C. trigonal system D. tetragonal system
5	The system in which all the three axes are unequal and are at righ angle to each other is called	A. cubic B. hexagonal C. orthorhombic D. tetragonal
6	If a = b = c and x = y = z 90° then crystal structure is	A. Cubic B. Tetragonal C. Orthorhombic D. Triclinic
7	Two substances that have the same crystal structure are said to be	A. isomorphous B. anisotropic C. isotropic D. polymorphous
8	A temperature at which two cyrstalline forms of a substances coexist in equilibrium is called	A. standard temperature B. critical temperature C. transition temperature D. absolute temperature
9	Diamond is a bad conductor because	A. it has light structure B. it has a high density C. there are no free electron present in the crystal of diamond to conduct electricity D. it transparent to light
10	The molecules of $CO_2$is dry ice form the	A. ionic crystals B. covalent crystals C. molecular crystals D. any type of crystal
11	Amorphous solids	A. have sharp melting points B. undergo clean cleavage when cut with knife C. have perfect arrangement of atoms D. can possesses small regions of orderly arrangements of atoms
12	Ionic solids are characterized by	A. low melting points B. good conductivity in solid state C. high vapour pressure D. solubility in polar solvents
13	Intermolecular forces are _____ than binding forces	A. stronger B. Equal C. Weaker D. None
14	On the basis of intermolecular forces diamond is a	A. ionic solid B. covalent solid C. metallic solid D. molecular solid

15	Which of the following is not a property of crystalline solid	A. geometric shape B. cleavage plane C. anisotropy D. isomerism
16	Dipole-dipole forces and London forces are collectively called	A. hydrogen bonding B. Vander Waals forces C. Covalent bonding D. Ionic bonding
17	Which forms metallic cyrstals	A. Cu B. NaCl C. Diamond D. None
18	If there are weak intermolecular forces in a liquid, it will be	A. more volatile B. less volatile C. more dense D. less heavy
19	At room temperature, the vapour pressure of water and ether will be	A. equal B. different C. zero D. almost same
20	Which of the following liquid has high vapour pressure?	A. H₂O B. ether C. CH₃OH D. C₂H₅OH
21	Which of the following liquid has higher boiling point?	A. HCl B. HBr C. H₂O D. Br₂
22	Which liquid is more volatile?	A. water B. mercury C. benzene D. honey
23	When vapour pressure is equal to atmospheric pressure than it is called	A. Evaporation B. M.P C. B.P D. Freezing point
24	Which does not affect vapour pressure	A. Nature of liquid B. intermolecular forces C. Temp D. None of these
25	The pressure exerted by the vapours in equilibrium with its pure liquid at given temperature is called the	A. equilibrium pressure B. atmospheric pressure C. vapour pressure D. external pressure
26	The amount of heat required to vaporize one mole of liquid at its boiling point without change in temperature is called	A. molar heat of vaporization B. molar heat of sublimation C. molar heat of fusion D. none of these
27	Vapour pressure of a liquid	A. increasing with increase of temperature B. increases with decrease of temperature C. increases with size of container D. increases with volume of liquid
28	Which order of vapour pressure in the following liquids is correct	A. water > ethanol > acetone > ether B. ether > acetone > ethanol > water C. ether > ethanol > acetone > water D. water > ether > acetone > ethanol
29	Vapour pressure of a liquid is more if	A. the intermolecular forces between the molecules of the liquid are strong B. the intermolecular forces between the molecules of the liquid are weak C. more liquid is present in a container D. liquid has more surface area to evaporate
30	NH_3can form only one hydrogen bond per molecule though it has three partially positively charged hydrogens	A. nitrogen in NH₃has only one ions pair of electrons which can make one H-bond B. ammonia is a base C. ammonia is a weak acid

		C. ammonia is a weak acid D. it ionizes to give one H⁺
31	H_2O is liquid at room temperature whereas H_2S is a gas because	A. H₂O used as drinking water, but H₂S has rotten egg smell B. H₂O is neutral. H₂S is a weak acid C. stronger hydrogen bonding in H₂O than in H₂S D. H₂O occurs abundantly than H₂S
32	Boiling point of H_2O is higher than that of HF although F is more electronegative than O. It is due to	A. stronger dipole dipole forces in H₂O B. H₂O is neutral HF is acidic C. H₂O is angular, but HF is linear D. number of hydrogen bonds more in H₂Othan in HF
33	NaCl is completely ionized in water due to presence of	A. hydrogen bonding B. dipole dipole forces C. ion dipole forces D. London dispersion forces
34	The attractive forces which exist between ionic compounds and water molecules are	A. dipole-dipole forces B. ion diopole forces C. istantaneous dipole-induced dipole forces D. dipole-induced dipole forces
35	The attractive forces which are created due to repulsion of electronic cloud of the molecules are	A. dipole-dipole forces B. ion dipole forces C. instantaneous dipole-induced dipole forces D. dipole-induced dipole forces
36	The boiling point of Kr is higher (-152.23°C) than that of helium (-268.6°C) due to	A. Kr forms greater number of covalent bonds B. greater polarizability of Kr than He C. Kr has lowest freezing point D. Kr is in liquid state at ordinary temperature
37	CO_2gas is dissolved in water due	A. dipole-dipole interactions B. higher molecular mass of CO₂ C. ion dipole attractive forces D. hydrogen bonding
38	For the purpose of interacts which one of the following arrangements represents the correct of increasing stability?	A. covalent < hydrogen bonding < London forces < dipole-dipole B. London forces < hydrogen bonding < dipole-dipole < covalent C. London forces < dipole-dipole < hydrogen bonding < covalent D. Dipole-dipole < London forces < hydrogen bonding < covalent
39	In which of the following molecules strongest hydrogen bond is shown	A. water B. ammonia C. hydrogen fluoride D. hydrogen sulphide
40	Which one of the following molecules show maximum hydrogen bonding?	A. H₂O B. H₂Se C. H₂S D. HF
41	The maximum possible number of hydrogen bonds in which a H_2O molecule can participate is	A. 1 B. 2 C. 3 D. 4
42	In which of the following compounds hydrogen bonding is not present	A. water B. ethanol C. ether D. ammonia
43	Water has high boiling point which is due to	A. weak dissociation B. hydrogen bonding C. high specific heat D. high dielectric constant

44	When two ice cubes are pressed together they unite to form one cube. Which of the following forces is responsibles for holding them together	A. Van der Waal's B. covalent bonding C. hydrogen bonding D. dipole-dipole interaction
45	London forces are more affective at	A. low temperature B. high temperature C. low pressure D. low temperature and high pressure
46	The bonding which occurs among polar covalent molecules containing H and one of the small electronegative element such as O, F or N is called	A. bridge bonding B. metallic bonding C. hydrogen bonding D. Ionic bonding
47	When water freezes at 0°C, its density decreases due to	A. cubic structure of ice B. empty spaces present in the structure of ice C. change of bond lengths D. change of bond angles
48	NH_3shows a maximum boiling point among the hydrides of Vth group elements due to	A. very small size of nitrogen B. hydrogen bonding between its molecules C. enhanced electronegative character of nitrogen D. pyramidal structure of NH₃
49	Acetone and Chloroform are soluble in each other due to	A. intermolecular hydrogen bonding B. ion-dipole interaction C. instantaneous dipoles D. dipole-induced dipole interaction
50	In which system hydrogen bonding is not present	A. solution of ethanol in water B. linking of helix in protein molecule C. structure of ice D. solution of NaCl in benzene
51	The boiling point of radon (211 K) is higher than boiling point of Helium (4.4 K) because	A. the atomic number of Rn is larger than that of the He B. the atomic mass of Rn is larger than that of He C. the dispersion forces between Rn atoms are more prominent that between He atoms D. Rn atoms are joined by dipole-dipole force whereas He atoms are joined by hydrogen bonding
52	An example of ion-dipole force is solution of	A. NaCl in water B. Glucose in water C. Bromine in benzene D. Ethanol in water
53	Which of the following molecules have a permanent dipole	A. CH₄ B. CHCl₃ C. CCl₄ D. CO₂
54	Which of the following may be called London dispersion forces	A. dipole-dipole forces B. ion-dipole forces C. dipole-induced dipole forces D. instantaneous dipole-induced dipole forces
55	Diffusion of different species is due to difference of	A. potential energy B. temperature C. density D. all the above
56	Which one the following gases is ideal at -200°C?	A. N₂ B. He C. both D. none
57	Real gases deviate from the ideal behaviour at very	A. high pressure B. low temperature C. low pressure D. both a and b
58	The phenomenon in which sudden expansion of a gas causes cooling is called	A. evaporation B. cooling C. Joule Thomson effect D. sublimation
59	Joule is a unit of energy which is defied as	A. Kgm⁻²s⁻² B. Kgm²s⁻¹ C. Kgms⁻²

		C. Kgm²s⁻² D. Kgm²</sup>s⁻²
60	Equal volumes of all gases at STP contain equal no of molecules is called	A. Dalton's law of partial pressure B. Graham'a law of diffusion C. Avogadro's law D. None