MDCAT Chemistry Online Test

Sr	Questions	Answers Choice
1	At what temperature, would N_2molecules have the same average speed as He-molecules at 300 k?	A. 1100 K B. 2100 K C. 420 K D. None
2	By increasing pressure two times and decreasing temp. two times the volume of gas	A. Volume increases 4 times B. Volume decreases 4 times C. Volume increases 2 times D. Volume decreases 2 times
3	What will be the ratio of volume of equal masses of O_2, $H_2$and CH_4kept in same container under same conditions	A. 2 : 16 : 2 B. 1 : 16 : 2 C. 2 : 16 : 1 D. 1 : 2 : 1
4	What are the S.I. units of excluded volume "b" in Vander Waal's equation	A. dm³mol⁻¹ B. m³mol⁻¹ C. mol dm⁻³ D. mol m⁻³
5	How many balloons of 0.25 dm^3capacity at I atmospheric pressure can be filled from a hydrogen gas cylinder of 5 dm^3capacity at 10 atmospheric pressure	A. 50 B. 90 C. 180 D. 200
6	Which volume of gas has minimum value	A. Apparent volume B. Actual volume C. Excluded volume D. All have equal value
7	At higher temperature isotherm moves away from both the axes because of increase in	A. Pressure B. Volume C. Number of moles D. All
8	The volume of 2.8 g of CO at 27°C and 0.0821 atm is	A. 30 dm³ B. 3 dm³ C. 0.3 dm³ D. 1.5 dm³
9	Gases are good conductor of electricity at	A. Low temperature B. Low pressure C. High pressure D. Low temperature and high pressure
10	Which of the following gases have lowest density at room temperature	A. CO B. N₂ C. Ne D. NH₃
11	For gases obeying Boyle's law, if pressure is quadrupled, the volume becomes	A. Double B. One half C. One fourth D. Remains constant
12	which chlorine compound has bonding that can be described as ionic with some convalent character?	A. NaCl B. MgCl₂ C. AlCl₃ D. SiCl₄
13	Which element is expected to show the greatest tendency to form some covalent compounds?	A. aluminium B. calcium C. magnesium D. sodium
14	The gecko a small lizard can up a smooth glass window the gecko has millions of microscopic hairs on its toes and each hair has thousand of pads at its tip the result is that the molecules in the pad are extremely close to the glass surface on which the gecko is climbing. What is the attraction between the gecko is climbing.	A. co-ordinate bonds B. covalent bonds C. ionic bonds D. van der Waals forces
		A. magnesium oxide

15	Which of the following solids has a simple molecular lattice?	B. sodium C. silicon(IV) oxide D. sulphur
16	Which ion is most polarising?	A. Al³⁺ B. Ba²⁺ C. Mg²⁺ D. Na⁺
17	Which statement explains why the boiling point of methane is higher than that of neon? [A_r:H.1:c,12:Ne,20]	A. A molecule of methane has a greater mass than a molecule of neon B. Molecules of methane form hydrogen bonds but those of neon do not C. Molecule of methane have strongel intermolecular forces than those of neon D. The molecule of methane is polar, but that of neon is not
18	SiO_2 is an example of:	A. metallic crystals B. Ionic crystals C. a crystal whose structure depending upon the temperature D. covalent crystals
19	All of the following have cleavage planes except:	A. molecular crystals B. metallic crystals C. covanent crystals D. ionic crystals
20	In a crystal the atoms are locate at the position of:	A. infinite potential energy B. minimum potential energy C. Zero potential energy D. maximum potential
21	All of the following substances are crystalline except:	A. carbon B. ice C. plastic D. sucrose
22	Keeping in view different factors which affect the melting point of a substance.the compound having melting point among the following is:	A. LiCl B. NaCl C. CsCl D. RbCl
23	Some substance are good conductors of electricity in both the solid and liquid states. These substance are generally:	A. molecular solids B. ionic substances C. metallic substances D. covalent network solids
24	coordination number of N^a+ in NaC is:	A. 1 B. 2 C. 4 D. 6
25	Meniscus is the shape of the surface of a liquid in a cylindrical container:	A. meniscus may be convex B. meniscus is concave C. meniscus may be convex or concave depending upon the nature of metal D. meniscus is plane
26	Someone is saying that glass must be a super cooled liquid. The reason that he might have in his mind is that glass has :	A. definite shape B. definite-volume C. crystalline structure D. no crystalline structure
27	Keeping in view the charge density select the compound amoung the following having highest lattic energy:	A. LiBr B. KCl C. MgO D. NaF
28	There are three different substances argon hydroiodic acid and hydroiodic acid. the correct sequence in which the boiling point increases is:	A. HI > Ar > HCl B. Ar < HCl < HI C. HI > HCl > Ar D. HCl < HI < Ar
29	An example of ion-dipole force is the solution of:	A. bromine inbenzene B. ethanol is water C. NaCl in water D. glucose in water
30	The boding which covalent molecules containing hydrogen and one of the small electronegative element such as O, For Mis called:	A. ionic bonding B. bridge bonding C. H-bonding D. metalic bonding

31	What is the reason of ionic solids for not conducting electricity?	A. free electrons are less B. ions don't have translatory mention. C. ions don't have translatory mention D. the coordination number of the ion is very high.
32	The existing property of an element in to more than are crystalline state is termed as:	A. isomorphism B. polymorphism C. isotropy D. allotropy
33	Allotropic forms of carbon are:	A. five B. three C. four D. two
34	Choose the example having hexagonal system:	A. graphite B. sugar C. sulphur D. diamond
35	Which of the following may be called as London dispersion forces?	A. instantaneous dipole-induced dipole forces B. dipole-dipole forces C. ion-dipole forces D. dipole-dipole forces
36	Dipole-dipole forces are present between:	A. non-polar molecules B. polar molecules C. both polar and non-polar D. none pf above
37	NH_3 shows maximum boiling among the hydrides of group V elements. The is due to:	A. pyramidal structure of NH₃ B. H-bonding between its molecules C. enhanced electronegative character D. very small size of nitrogen
38	The boiling point of radon (211k)id higher than boiling point of helium (4.4k). This is due to the reason that:	A. the atomic mass Rn is larger than that of He B. the atomic mass Rn is larger than that of He C. the dispersion forces between Rn atoms are more prominent than between he atoms D. rn atomic number of Rn is larger than that of He
39	The typical range of the H-bonding is:	A. 1-2 kj/mol of bonds B. 5-25 kj/mol of bonds C. 5-25 kj/mol of bonds D. 500 kj/mol of bonds
40	Which is the correct order of boiling points	A. structure of ice B. solution of ethanol in water C. solution o fNaCl in benzene D. linking of helix protein molecule
41	When two ice cubes are pressed together they unite to form one cube. which of the following forces is responsible for holding them together?	A. H-bonding B. Covalent bonding C. van der waal's forces D. dipole-dipole interaction
42	Kerosene is liquid at room temperature.This is due to:	A. organic nature B. H-bonding C. molecular size D. dipole-dipole forces
43	covalent network of crystals has:	A. lower melting point than molecular crystals B. higher melting point than molecular crystals C. higher melting point than molecular crystals D. H-bonding
44	Which one of following statement about three about three states of matter is incorrect?	A. in solids the particles vibrate about fixed positions B. energy is released when a gas turns back to a liquid C. particles in gases move in a random manner D. the closer particles are together, smaller the force of attraction

		between them
45	Which one of the following statements about melting point of metals is true?	A. sodium has a lower melting point than potassium B. sodium has a higher melting point than magnesium C. potassium has a higher melting point rubidium D. lithium has a lower melting point than sodium
46	Which one of the following is not true of metallic bonding?	A. it gives rise to excellent electrical conductivity B. electrons are following to move throughout the structure C. the strength of metallic bonds increases down a group D. the strength of metallic bonding affects the boiling point of metals
47	Evaporation of liquid takes place at every temperature. What when temperature becomes constant?	A. the rate of condensation is greater than teh rate of condensation B. it depends upon the nature of the liquid C. rate of evaporation is greater than the rate of condensation D. the rate of condensation and evaporation become equal
48	The maximum hydrogen bonding is in:	A. diethyl ether B. ethanol C. water D. benzene
49	Air can be distilled fractionally because the constiltuents of the air:	A. have different densities B. can be liquefied C. are gases at room temperature D. have different boiling points
50	The question vapour cause by heating a liquid is due to:	A. increase of intermolecular interactions B. increase of K.E of molecules C. decrease of surface tension D. increase in potential energy of molecules
51	The maximum possible number of hydrogen bonds in which a H_2O molecule can participate is:	A. 1 B. 2 C. 3 D. 4
52	Water has high boiling point which is due to:	A. high electric constant B. weak dissociation C. high specific heat D. H-bonding between its molecules
53	All the following have crystals except:	A. potassium bromide B. diamond C. cadmium sulphide D. sodium chloride
54	In which of the following molecules, strongest H-bond is shown?	A. hydrogen fluoride B. water C. hydrogen sulphide D. ammonia
55	NaCl is completely ionized in water due to the presence of:	A. dipole-dipole forces B. ion- dipole forces C. H-bonding D. London dispersimforces
56	In which of the following compounds H-binding is not present?	A. ethanol B. ether C. water D. ammonia
57	In which of the following a re dipole-dipole interaction present?	A. molecules of CCL₄ B. molecules of solid iodine C. molecules of NH₃ D. atoms of the helium gas
58	The forces present between the ions and water molecules are called:	A. dipole-dipole forces B. dipole-induced dipole forces C. London dispersion forces D. ion-dipole forces
		A. it has a tight structure B. it has a high density

59	Diamond is a bad conductor of electricity because:	B. it has a high density C. there are no free electrons D. none of the above
60	Which of the following pairs of not form a dative covalent bond to each other?	A. NH₃ and H⁺ B. H₂O and H⁺ C. NH₃ and BF₃ D. CH₄ and AlCl₃