

eExam Question Bank

Coursecode:

Choose Coursecode

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<input type="checkbox"/>	Question Type	Question	A	B	C	D	Answer	Remark
<input type="checkbox"/>	FBQ	The <input type="text"/> model is useful for predicting molecular shape and estimating bond angles.	VSEPR					<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	Lewis dot diagram, electron dot diagrams and electron dot structures are generally known as <input type="text"/> structures.	Lewis					<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	An SP hybrid orbital is formed by mixing together the 2S and <input type="text"/> atomic orbitals.	2Px					<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	Hybridization Theory states that a covalent bond is formed by the <input type="text"/> of two singly atomic orbitals.	overlap					<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	Hexaaquaaluminium means <input type="text"/> water molecules is wrapped around an aluminium ion.	six	6				<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	Ions with water molecules attached are described as <input type="text"/> ions.	hydrated					<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	The fact that aluminium chloride sublimes at about 180° shows that <input type="text"/> bond exist between its molecule.	covalent					<input type="button" value="eExam"/>

<input type="checkbox"/>									
<input type="checkbox"/>	FBQ	Aluminium chloride exist as a <input type="text"/> in the vapour state.	dimer						eExam
<input type="checkbox"/>	FBQ	$\{NH_4^+\}$, are formed by the transfer of a $\{H^+\}$ from the hydrogen chloride to the <input type="text"/> pair of electrons on the $\{NH_3\}$.	lone						eExam
<input type="checkbox"/>	FBQ	A dative covalent bond is also called <input type="text"/> __bond.	co-ordinate						eExam
<input type="checkbox"/>	FBQ	Polythene,PVC, nylon, teflon, are all examples of <input type="text"/> __.	polymers						eExam
<input type="checkbox"/>	FBQ	In diamond, carbon atoms are bonded to each other in <input type="text"/> directions.	all						eExam
<input type="checkbox"/>	FBQ	Graphite can be used as a <input type="text"/> because each carbon atom slip over one another.	lubricant						eExam
<input type="checkbox"/>	FBQ	In graphite, one carbon- carbon bond out of the three carbons is a <input type="text"/> __.	double bond						eExam
<input type="checkbox"/>	FBQ	In diamond, all the carbon atoms share one electron with each of their <input type="text"/> neighbouring atoms.	4	four					eExam
<input type="checkbox"/>	FBQ	Graphite is the main component of the <input type="text"/> in pencils.	lead						eExam
<input type="checkbox"/>	FBQ	Carbon atoms are entirely bound together by <input type="text"/> bond to form diamond.	covalent						eExam

<input type="checkbox"/>									
<input type="checkbox"/>	FBQ	The molecular formula for isooctane is <input type="text"/> —.	$C_{18}H_{34}$						eExam
<input type="checkbox"/>	FBQ	Magnesium oxide has a <input type="text"/> melting point than sodium chloride.	higher						eExam
<input type="checkbox"/>	FBQ	Unlike covalent molecules, all ionic compounds are <input type="text"/> solids at room temperature.	crystalline						eExam
<input type="checkbox"/>	FBQ	The most abundant halogen is <input type="text"/> .	chlorine	Cl					eExam
<input type="checkbox"/>	FBQ	The 3p subshell in the ground state of atomic Xenon contains <input type="text"/> electrons.	6	six					eExam
<input type="checkbox"/>	FBQ	<input type="text"/> is the energy required to convert a solid to a gas.	Heat of sublimation						eExam
<input type="checkbox"/>	FBQ	The <input type="text"/> subshell contains only one orbital.	4s						eExam
<input type="checkbox"/>	FBQ	<input type="text"/> is the energy required to convert a liquid to gas .	Heat of vaporization						eExam
<input type="checkbox"/>	FBQ	The lowest energy shell that contains f orbitals is the shell with n= <input type="text"/> —.	4	four					eExam
<input type="checkbox"/>	FBQ	<input type="text"/> is the energy absorbed or released when an electron is added to a gaseous atom	Electron affinity						eExam
<input type="checkbox"/>	FBQ	<input type="text"/> is the energy required to remove one electron from a gaseous atom.	ionization energy						eExam
<input type="checkbox"/>	FBQ	A co-ordinate bond is a covalent bond in which both electrons come from <input type="text"/> atom.	the same						eExam

<input type="checkbox"/>									
<input type="checkbox"/>	FBQ	All ionic compounds are <input type="text"/> in water .	soluble						eExam
<input type="checkbox"/>	FBQ	The law of conservation of energy is the same as the <input type="text"/> law of Thermodynamics.	first	1st					eExam
<input type="checkbox"/>	FBQ	The concept behind the Born-Haber cycle is based on <input type="text"/> law.	Hess'						eExam
<input type="checkbox"/>	FBQ	The <input type="text"/> energy of an ionic crystal is responsible for the formation and stability of ionic crystal structures.	lattice						eExam
<input type="checkbox"/>	FBQ	Heat of formation is virtually <input type="text"/> for ionic compound.	negative						eExam
<input type="checkbox"/>	FBQ	Methane has a <input type="text"/> shape.	tetrahedral						eExam
<input type="checkbox"/>	FBQ	The second electron affinity numbers and beyond is always <input type="text"/> .	positive						eExam
<input type="checkbox"/>	FBQ	Lattice energies are always large <input type="text"/> numbers.	negative						eExam
<input type="checkbox"/>	FBQ	Bond <input type="text"/> energy is the energy required to break a covalent bond.	dissociation						eExam
<input type="checkbox"/>	FBQ	There are <input type="text"/> bond pairs around the central carbon atom in the Lewis structure of methane.	4	four					eExam
<input type="checkbox"/>	FBQ	Heat of vaporization is the <input type="text"/> required to convert a liquid to a gas.	energy						eExam
<input type="checkbox"/>	FBQ	When more electrons are removed from an atom, the ionization energy <input type="text"/> .	increases						eExam

<input type="checkbox"/>									
<input type="checkbox"/>	FBQ	Ionization energy is the energy required to remove one electron from a <input type="text"/> atom.	gaseous						eExam
<input type="checkbox"/>	FBQ	Heat of sublimation are always <input type="text"/> numbers.	positive						eExam
<input type="checkbox"/>	FBQ	Non-metals often form <input type="text"/> molecules.	covalent						eExam
<input type="checkbox"/>	FBQ	All ionic compound adopts a similar <input type="text"/> dimensional structure.	three	3					eExam
<input type="checkbox"/>	FBQ	The stable form of sodium chloride involves a very large number of NaCl units arranged in a <input type="text"/> millions of atoms across.	lattice						eExam
<input type="checkbox"/>	FBQ	Elements in the first few columns of the periodic table have a few more electrons than predicted by the <input type="text"/> rule.	octet						eExam
<input type="checkbox"/>	FBQ	The halogens gains one electron to form <input type="text"/> ions.	mononegative						eExam
<input type="checkbox"/>	FBQ	Alkali metals loses one electron to form <input type="text"/> ions.	monopositive						eExam
<input type="checkbox"/>	FBQ	Charged species <input type="text"/> with each other.	interact						eExam
<input type="checkbox"/>	FBQ	Elements in group II and group VI form <input type="text"/> positive and negative ions respectively.	doubly						eExam
<input type="checkbox"/>	FBQ	<input type="text"/> is formed when nuclei combine with electrons.	atom						eExam
<input type="checkbox"/>	FBQ	Molecules are made from <input type="text"/> —.	atoms						eExam

<input type="checkbox"/>								
<input type="checkbox"/>	FBQ	Sodium ion is <input type="text"/> than sodium atom.	bigger	larger				eExam
<input type="checkbox"/>	FBQ	Using Pauling scale in measuring electron affinity, the highest value assigned is <input type="text"/>	4	four				eExam
<input type="checkbox"/>	FBQ	It is impossible to measure the electronegativity of an <input type="text"/> atom	isolated					eExam
<input type="checkbox"/>	FBQ	Element with low <input type="text"/> are said to be electropositive.	electronegativities					eExam
<input type="checkbox"/>	FBQ	In the Group 2 elements , the filled 2s <input type="text"/> apparently shields the nucleus making electron affinities to be slightly endothermic	orbital					eExam
<input type="checkbox"/>	FBQ	<input type="text"/> becomes more exothermic as we move from left to right across a period.	Electron affinities					eExam
<input type="checkbox"/>	FBQ	Electron affinities tends to be much smaller than <input type="text"/> energies.	ionization					eExam
<input type="checkbox"/>	MCQ	_____ is the energy absorbed or released when an ionic compound is made from its constituents elements.	Heat of formation	Ionization energy	Crystal lattice energy	Heat of vaporization	A	eExam
<input type="checkbox"/>	MCQ	The energy released when gaseous ions are converted into solid ionic compound is called _____.	heat of release	crystal lattice energy	heat of formation	heat of conversion	C	eExam
<input type="checkbox"/>	MCQ	_____ is not a property of ionic compounds.	They are malleable	They arev hard and brittle	The bonding extends throughout an ionic crystal in all directions	They are crystalline solids at room temperature	A	eExam
<input type="checkbox"/>	MCQ	How many Lewis stuctures can be written for sulphur dioxide?	2	3	4	5	A	eExam

<input type="checkbox"/>	MCQ	The valence bond theory states that _____.	a covalent bond is formed by the overlap of two singly occupied atomic orbitals	an ionic bond is formed by the overlap of two singly occupied shells	a covalent bond is formed by the overlap of a single occupied atomic orbitals	a covalent bond is formed by the overlap of three singly occupied shells	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	All are the examples of molecules with dipole-dipole attraction except _____.	CHCl_3	PCl_3	SCl_2	NaCl	D	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Which of the following is not true of London forces?	become stronger as atom or molecule becomes larger	stronger with larger amounts of surface contact	the only attractive molecular force present between neutral atoms	weaker with larger amounts of surface contact	D	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	A weak intermolecular force arising from quantum induced instantaneous polarization multipoles in molecules describes _____.	london dispersion forces	london forces	instantaneous dipole-induced dipole forces	all of the above	D	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	A _____ is formed when a hydrogen atom on one water molecule is attracted to the oxygen of another water molecule.	dimer	aqua	aqueous solution	monomer	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Instantaneous dipole-induced dipole forces are known as _____.	van der Waals forces	dipole-dipole interactions	hydrogen bonds	covalent bond	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Metals are well known to be solids except for _____.	Na	Hg	Au	Pb	B	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	The weak "bond" between the fluorine atom and the hydrogen atom is called _____.	hydrogen bond	fluoride bond	co-ordinate bond	ionic bond	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	In which of the following does electrons move around easily?	metals	ionic solids	covalent solids	plastics	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Which of the following is not true of metals?	high melting and boiling points	good conductors of heat	good insulators	good conductors of electricity	C	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Aluminium chloride is covalent, but when it dissolves in water, _____ are produced.	ions	molecules	electrons	none of the above	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Ions with water molecules attached are described as _____.	anhydrous ions	dehydrate ions	hydrated ions	aqua ions	C	<input type="button" value="eExam"/>

<input type="checkbox"/>	MCQ	The reaction between ammonia and boron trifluoride demonstrates the formation of compound involving _____ bond.	co-ordinate	ionic	hydrogen	metallic	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	The H_3O^+ ion is called _____.	hydroxonium ion	oxonium ion	all of the above	none of the above	C	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	_____ are formed by the transfer of a hydrogen ion from hydrogen chloride to the lone pair of electrons on ammonia molecule.	Ammonium ions	Hydride ions	Nitrite ions	Chloride ions	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	When ammonia and hydrogen chloride reacts, a thick _____ smoke of solid ammonium chloride is formed.	dark	white	yellow	grey	B	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	$\text{C}_9\text{H}_8\text{O}_4$ is the formula of a medicinal molecule called _____.	aspirin	acetaminophen	flagyl	ibuprofen	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	$\text{C}_{27}\text{H}_{46}\text{O}$ is the molecular formula of _____.	glycerol	cholesterol	starch	cellulose	B	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	The compound with the formula C_8H_{18} is called _____.	octane	nonane	dodecane	butane	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	One of the main components of petrol for cars is _____.	isobutane	isooctane	isononane	none of the above	B	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	When a shared pair of electrons come from the same atom, a _____ bond is formed.	co-ordinate	metallic	ionic	intermolecular	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	A _____ bond is formed by two atoms sharing a pair of electrons.	covalent	ionic	intermolecular	intramolecular	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	The following are examples of polymers except _____.	cellulose	teflon	nylon	glucose	D	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	The letter H in the Schrodinger equation is called _____.	Hampton operator	Schrodinger operator	Hamiltonian operator	Plancks operator	C	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	The more accurately the position of a particle wave is known, the less accurately the momentum can be determined and vice versa. This is a summary of which principle?	Einstein's principle	Uncertainty	Particle-wave	Determinacy	B	<input type="checkbox"/> eExam

<input type="checkbox"/>								
<input type="checkbox"/>	MCQ	Electron _____ is an evidence for the wave nature of the electron.	deflection	diffraction	radiation	reflection	B	eExam
<input type="checkbox"/>	MCQ	What accounts for electrons spreading out rather than being located in one particular?	wave properties	light properties	particle properties	none of the above	A	eExam
<input type="checkbox"/>	MCQ	The value 6.62608×10^{-34} Js is equal to _____ in equation 1 above.	h	λ	m	v	A	eExam
<input type="checkbox"/>	MCQ	$\lambda = \frac{h}{mv}$ - equation 1. λ in equation 1, represents _____.	wave length	wave number	wave velocity	wave constant	A	eExam
<input type="checkbox"/>	MCQ	The science which takes into account the dual nature of matter was developed independently by _____.	Loius de Broglie	Werner Heisenberg	Erwin Schrodinger	All of the above	D	eExam
<input type="checkbox"/>	MCQ	The branch of science that deals with the dual behaviour of matter is called _____.	quantum mechanics	dual mechanics	particle mechanics	spectral science	A	eExam
<input type="checkbox"/>	MCQ	Which of these are the limitations of the Bohr's Theory?	It ignores the wave nature of the electron	It does not explain molecular bonds	It does not predict the relative intensities of spectral lines	all of the above	D	eExam
<input type="checkbox"/>	MCQ	Which of the following is the odd one out?	Lyman series	Layman series	Balmer series	Paschen series	B	eExam
<input type="checkbox"/>	MCQ	The Balmer series lies mostly in the _____ region of the spectrum.	ultraviolet	visible	infrared	ultraviolet	B	eExam
<input type="checkbox"/>	MCQ	The value of Rydberg's constant, R is _____.	$1.097 \times 10^7 \text{ m}^{-1}$	$1.079 \times 10^7 \text{ m}^{-1}$	$1.709 \times 10^7 \text{ m}^{-1}$	none of the above	A	eExam
<input type="checkbox"/>	MCQ	According to Coulomb's law, the force of attraction between the nucleus and the electron is _____.	$f = k \frac{e^2}{r^2}$	$f = k^2 \frac{e^2}{r^2}$	$f = k \frac{e^2}{r^3}$	$f = k^2 \frac{e^3}{r^2}$	A	eExam
<input type="checkbox"/>	MCQ	The simplest spectrum is of _____.	hydrogen	carbon	helium	neon	A	eExam
<input type="checkbox"/>	MCQ	If there is a variation in the number of electrons and number of protons in the nucleus of an atom, then the atom is a/an _____.	ion	molecule	protolyte	electrolyte	A	eExam
<input type="checkbox"/>	MCQ	The electrical charge on the neutron is _____.	1	-1	2	nil	D	eExam

<input type="checkbox"/>								
<input type="checkbox"/>	MCQ	The mass of an electron is about _____ times smaller than that of the proton and neutron.	2000	1000	1500	3000	A	eExam
<input type="checkbox"/>	MCQ	_____ was the first to propose the basic structure of the atom.	Thompson	Niels Bohr	Lamor	Rutherford	D	eExam
<input type="checkbox"/>	MCQ	Ionization energies increases with nuclear charge _____.	across the period	down the group	mid group	mid period	A	eExam
<input type="checkbox"/>	MCQ	The addition of one or more electrons to an existing shell _____ electron-electron repulsion.	decreases	increases	does not affect	stops	B	eExam
<input type="checkbox"/>	MCQ	Atomic radius increases _____.	down the group	across the period	none of the above	all of the above	A	eExam
<input type="checkbox"/>	MCQ	Atomic size decreases _____.	down the group	across the period	none of the above	all of the above	B	eExam
<input type="checkbox"/>	MCQ	_____ is the effective radius of adjacent atoms which are not chemically bonded in a solid but are presumably in "contact".	van der Waals radius	covalent radius	metallic radius	none of the above	A	eExam
<input type="checkbox"/>	MCQ	_____ is half the distance between nuclei in a metallic crystal.	metallic diameter	metallic radius	metalloid radius	covalent radius	B	eExam
<input type="checkbox"/>	MCQ	Which group of elements have five valence electrons in their outermost shell?	Group 15	Group 3	Group 7	Group 16	A	eExam
<input type="checkbox"/>	MCQ	Which is the odd one out?	Carbon	Silicon	Ununquadium	Gallium	D	eExam
<input type="checkbox"/>	MCQ	Group IV and V metals can lose either the electrons from the p subshell, or from both the s and p subshells, thus attaining a _____ configuration.	pseudo-noble gas	noble gas	isoelectronic	sub-noble gas	A	eExam
<input type="checkbox"/>	MCQ	Atoms prefer to have a filled outermost shell because this is more _____.	electronically stable	atomizable	shell full	configured	A	eExam
<input type="checkbox"/>	MCQ	The outermost shell of an atom is known as _____.	electron shell	valence shell	atomic shell	not applicable	B	eExam
<input type="checkbox"/>	MCQ	No two electrons in the same atom can have identical values for all four of their quantum numbers. Which principle is this?	Pauli Exclusion	Heisenberg	Afbau	Schrodinger	A	eExam

<input type="checkbox"/>								
<input type="checkbox"/>	MCQ	_____ specifies the orientation in space of an orbital of a given energy and shape.	Azimuthal quantum number	Principal quantum number	Magnetic quantum number	Principle quantum number	C	eExam
<input type="checkbox"/>	MCQ	Which of these quantum numbers specifies the energy of an electron and the size of the orbital?	Azimuthal	Principal	Magnetic	Principle	B	eExam
<input type="checkbox"/>	MCQ	A wave function for an electron in an atom is called an _____.	atomic orbital	electron orbital	quantum orbital	none of the above	A	eExam

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