FBQ1: When two hydrogen atoms combine to form a molecule and the two nuclei spin in the same direction, parallel spins, to give the form known as_____Â
Answer: Ortho Hydrogen

FBQ2: The two hydrogen nuclei spin in opposite directions to give _____Â
Answer: Para Hydrogen

FBQ3: Hydrogen can be produced by the reaction of methane with _____in the presence of nickel catalystÂ
Answer: Steam

FBQ4: Metals are very powerful ____ agent
Answer: Reducing

FBQ5: Sulphur reacts with _____ to form hydrogen sulphide
Answer: Hydrogen

FBQ6: Carbon monoxide is reduced strongly by hydrogen to yield a product appropriately described as ____
Answer: Formaldehyde

FBQ7: In a fuel cell, electrical energy is generated by the reaction of hydrogen leaf, a process which is called ___Â
Answer: Cold combustion

FBQ8: Fuel cells have efficiencies approaching 75% whereas power plants that burn fuels have efficiencies of only about _____
Answer: 40%

FBQ9: _____ are soft have low melting points and are poor conductors ofelectricity.
Answer: covalent hydrides

FBQ10: _____ hydrogen bond is formed between two atoms of the samemolecule
Answer: Intramolecular

FBQ11: Half-life period of tritium is ___ years
Answer: 12.3

FBQ12: Melting point and boiling point increases in group 14 elements because of ___
Answer: Hydrogen bonding

FBQ13: Solubility of a substance increases markedly when ____ is possible between the solvent and the solute molecules
Answer: Hydrogen bonding

FBQ14: How many types of hydrogen bonding do we have?
Answer: Two

FBQ15: What percentage of rubidium chloride is contained in Carmallite?

Answer: 0.94%

FBQ16: The hydrides of lithium and sodium are used as _____agents in synthetic organic chemistry
Answer: Reducing

FBQ17: the alkali metals are very useful, some of their uses include beingused as ____conductors.
Answer: Electrical

FBQ18: Normal oxide and peroxide of alkaline metals are colourless and _____
Answer: Diamagnetic

FBQ19: Super oxides of alkaline metals are usually Coloured and _____ in nature
Answer: Paramagnetic

FBQ20: All the Group 1 metal oxides are strongly _____ and react vigorously to give hydroxide
Answer: Basic

FBQ21: polysulphides of sodium have a _____ chain structure
Answer: zig-zag

FBQ22: The density of gallium was ___ kg as predicted by Mendeleev
Answer: 5.8 x103

FBQ23: The works of Lars Fredrick Nilson led to discovered one very important element known as _____Â
Answer: Scandium

FBQ24: _____ is the scientist who first discovered germanium as an element
Answer: Winkler

FBQ25: The maximum number of electrons that can be contained by d-orbital in opposite spin is _____
Answer: Ten

FBQ26: F-orbital can hold maximally _____ number of electrons
Answer: Fourteen

FBQ27: The maximum number of electrons that can be contained by p-orbital in opposite spin is _____
Answer: Six

FBQ28: How many sub orbitals has f-orbital?
Answer: Seven

FBQ29: The electronic configuration of _____ is 1s2 2s2 2p6 3s2 3p6 3d10 4s2
Answer: Zinc

FBQ30: Period 1 of the modern periodic table consists of how many elements _____
Answer: Two

FBQ31: The metallic radius depends to some extent on _____ structure ofthe metal.
Answer: Crystal

FBQ32: Hydrogen may not be advantageous as a fuel because it is a secondary _____
Answer: Source of energy

FBQ33: Elements of the periodic table have been divided into how many blocks?
Answer: Four

FBQ34: Lanthanides and actinides are collectively known as _____ element.
Answer: F-block

FBQ35: A periodic element that behaves both as a metal in group 1A and also as a halogen is most likely to be
Answer: Hydrogen

MCQ1: Second ionisation energy is greater than the first because
Answer: Electron is removed from the positively charged cation that is held firmly due to nuclear forces.

MCQ2: The valence shell electron of _____ are more stable and requires very great energy to remove them
Answer: Noble gases

MCQ3: Ionisation energy of an element depends on all of the following except;
Answer: Crystal lattices of the atom of element

MCQ4: Which of the following element has the lowest ionisation energies?
Answer: Ne

MCQ5: The energy required to remove the least strongly bond electrons from an isolated gaseous atom on ground state is appropriately described as
Answer: Ionisation energy

MCQ6: The energy released or absorbed when an electron is added to the gaseous atom in its ground state is described as
Answer: Electron affinity

MCQ7: Which of these elements shows the highest reluctance to form an anion?
Answer: K

MCQ8: Which of these factors would not affect electron affinity?
Answer: Steric effect

MCQ9: _____is the tendency of an atom to attract toward itself the shared electron pair of a bond in which it is involved
Answer: Electronegativity

MCQ10: One of these is not an isotope of hydrogen
Answer: Polonium

MCQ11: Which of these isotopes of hydrogen is radioactive?
Answer: Tritium

MCQ12: The tendency of an atom to attract toward itself the shared electron pair of a bond in which it is involved can be measured by all these scale except;
Answer: Lothar Meyer electronegativity scale

MCQ13: How would you effectively separate a mixture of carbon (iv) oxide and Hydrogen gas?
Answer: Pass the mixture through water which absorbs CO2 and hydrogen gas remains insoluble

MCQ14: Â Mixture of CO and H2 is known as
Answer: water gas

MCQ15: It is not advisable to prepared hydrogen gas by one of these methods
Answer: Reaction of potassium metal with warm water

MCQ16: Which of these is used in metallurgy to reduce metal oxides to metals in cases where carbon cannot be used because the metal can form carbide?
Answer: Hydrogen

MCQ17: Stability of the alkali metal complexes decrease as you go down the group one of these order
Answer: Li >Na>K>Rb>Cs

MCQ18: The following metallic elements are most likely to be extracted by electrolysis of their fused chloride except
Answer: Magnesium

MCQ19: One of these is used as a window materials in x-ray apparatus and also in making atomic fuel containers
Answer: Beryllium

MCQ20: The process by which metal ion is surrounded by solvent molecules is appropriately described as
Answer: Solvation

MCQ21: All are the three types of oxides which are formed by the alkali metals except
Answer: Amphoteric oxide

MCQ22: One of these elements in its stearate form may be used as grease

Answer: Li

MCQ23: One of these metal element is obtained by the reduction of its chloride with sodium vapour
Answer: Potassium

MCQ24: Sodium occur naturally in combine state due to its reactivity. Sodium does not occur in one of these ores
Answer: Kainite

MCQ25: One of these is not a hydride
Answer: Stoichiometric hydrides.

MCQ26: The attractive force which binds hydrogen atom of one molecule with electronegative atom of another molecule, generally of the same compound is known as Â
Answer: Hydrogen bonding

MCQ27: One of these is not a property of metals
Answer: They form acidic oxides

MCQ28: The concept of atomic number was essentially discovered in 1913 by one of these scientists
Answer: Henry Moseley

MCQ29: _____ states that as far as possible in a given atom in the ground state, electrons in the same sub shell will occupy different orbitals and will have parallel spins
Answer: Hund's rule

MCQ30: There exist a set of empty hydrogen like orbitals into which electrons can be added. This assumption was made by___
Answer: Aufbau principle

MCQ31: Which of these is the electronic configuration of scandium?
Answer: [Ar] 3d14s2

MCQ32: The electronic configuration of nickel is _____
Answer: [Ar] 3d74s2

MCQ33: Â Metal halides may be obtained by the direct combination of a metal and _____
Answer: Halogen

MCQ34: One of these is the electronic configuration of copper?
Answer: 1s2 2s2 2p6 3s2 3p6 3d10 4s1

MCQ35: Identify the element that has this electronic configuration:
1s2Â 2s2Â 2p6Â 3s2Â 3p6Â 4s2.
Answer: Ca