INORGANIC CHEMISTRY

NEET

CRASH COURSE

s - BLOCK ELEMENTS & HYDROGEN

SMART ACHIEVERS

JEE | NEET | FOUNDATION

587, Nitikhand-1, Indirapuram, Gzb.

7292077839 / 7292047839 | smartachievers.online

A Unit of SMARTACHIEVERS LEARNING Pvt. Ltd., Delhi

SUMMARY

Hydrogen is the lightest atom with only one electron. Loss of this electron results in an elementary particle, the proton. Thus, it is unique in character. It has three isotopes, namely : protium (^1_1H), deuterium (D or ^2_1H) and tritium (T or ^3_1H). Amongst these three, only tritium is radioactive. Inspite of its resemblance both with alkali metals and halogens, it occupies a separate position in the periodic table because of its unique properties.

Hydrogen is the most abundant element in the universe. In the free state it is almost not found in the earth's atmosphere. However, in the combined state, it is the third most abundant element on the earth's surface.

Dihydrogen on the industrial scale is prepared by the **water-gas shift** reaction from petrochemicals. It is obtained as a by product by the electrolysis of brine.

The H–H **bond dissociation enthalpy** of dihydrogen (435.88 kJ mol^{-1}) is the highest for a single bond between two atoms of any elements. This property is made use of in the atomic hydrogen torch which generates a temperature of ~4000K and is ideal for welding of high melting metals.

Though dihydrogen is rather inactive at room temperature because of very high negative dissociation enthalpy, it combines with almost all the elements under appropriate conditions to form **hydrides**. All the type of hydrides can be classified into three categories: ionic or saline hydrides, covalent or molecular hydrides and metallic or non-stoichiometric hydrides. Alkali metal hydrides are good reagents for preparing other hydride compounds. Molecular hydrides (e.g., B_2H_6, CH_4, NH_3, H_2O) are of great importance in day-to-day life. Metallic hydrides are useful for ultrapurification of dihydrogen and as dihydrogen storage media.

Among the other chemical reactions of dihydrogen, **reducing reactions** leading to the formation hydrogen halides, water, ammonia, methanol, vanaspati ghee, etc. are of great importance. In metallurgical process, it is used to reduce metal oxides. In space programmes, it is used as a rocket fuel. In fact, it has promising potential for use as a non-polluting fuel of the near future **(Hydrogen Economy)**.

Water is the most common and abundantly available substance. It is of a great chemical and biological significance. The ease with which water is transformed from liquid to solid and to gaseous state allows it to play a vital role in the **biosphere**. The water molecule is highly polar in nature due to its bent structure. This property leads to hydrogen bonding which is the maximum in ice and least in water vapour. The polar nature of water makes it: (a) a very good solvent for ionic and partially ionic compounds; (b) to act as an amphoteric (acid as well as base) substance; and (c) to form hydrates of different types. Its property to dissolve many salts, particularly in large quantity, makes it hard and hazardous for industrial use. Both temporary and permanent **hardness** can be removed by the use of zeolites, and synthetic ion-exchangers.

Heavy water, D_2O is another important compound which is manufactured by the electrolytic enrichment of normal water. It is essentially used as a moderator in nuclear reactors.

Hydrogen peroxide, H_2O_2 has an interesting non-polar structure and is widely used as an industrial bleach and in pharmaceutical and pollution control treatment of industrial and domestic effluents.

s-BLOCK ELEMENTS & HYDROGEN

Q.1 The correct order of decreasing lattice energy of $BaCO_3$, $MgCO_3$, $CaCO_3$, $SrCO_3$, $BeCO_3$
(1) $BeCO_3 > MgCO_3 > CaCO_3 > SrCO_3 > BaCO_3$
(2) $BaCO_3 > SrCO_3 > CaCO_3 > MgCO_3 > BeCO_3$
(3) $MgCO_3 > BeCO_3 > CaCO_3 > SrCO_3 > BaCO_3$
(4) $BeCO_3 > MgCO_3 > CaCO_3 > BaCO_3 > SrCO_3$

Q.2 The alkali metals which form normal oxide, peroxide as well as super oxides are
(1) Na, Li (2) K, Li (3) Li, Cs (4) K, Rb

Q.3 When chlorine is passed slow over dry slaked lime $Ca(OH)_2$ at room temperature, the main product is
(1) $CaCl_2$ (2) $CaOCl_2$ (3) $Ca(ClO_2)_2$ (4) $Ca(OCl)_2$

Q.4 Which of the following alkali metal oxides is not correctly matched with their hydrolysis products?
(1) $M_2O - M(OH)_2$ (2) $M_2O_2 - M(OH)_2 + H_2O_2$
(3) $MO_2 - M(OH)_2 + H_2O_2$ (4) 1,3

Q.5 Alkali metals salts are -
(1) Diamagnetic and coloured (2) Diamagnetic and colourless
(3) Paramagnetic and coloured (4) Paramagnetic and colourless

Q.6 Which one of the following statements regarding helium is incorrect ?
(1) It is used in gas-cooled nuclear reactors
(2) It is used as a cryogenic agent for carrying out experiments at low temperature
(3) It is used to produce and sustain powerful superconducting magnets
(4) It is used to fill gas balloons instead of hydrogen because it is lighter and noninflammable

Q.7 Which of the following products are obtained in the electrolysis of brine solution (i.e. NaCl solution) in Castner-Kellner cell ?
(1) Na, H_2 (2) Na-amalgam, Cl_2
(3) Na-amalgam, NaOH (4) NaOH, Cl_2, H_2.

Q.8 Which is main constitutent of egg-shell ?
(1) $CaCO_3$ (2) $CaSiO_3$ (3) $CaSO_4.\frac{1}{2}H_2O$ (4) $CaSO_4.2H_2O$

Q.9 Sodium reacts with water more vigorously than lithium because it has -
(1) higher atomic weight (2) less density
(3) low m.p. (4) is more electronegative

Q.10 Sodium amalgam on reaction with water yields :
(1) Hg + NaOH (2) Hg + NaOH + O_2 (3) Hg + NaOH + H_2 (4) HgO + NaOH + H_2

Q.11 The material used in photoelectric cells contains-
(1) Cs (2) Li (3) Be (4) Mg

Q.12 Identify the correct statement.
(1) Gypsum contains a lower percentage of calcium than Plaster of Paris
(2) Gypsum is obtained by heating Plaster of Paris
(3) Plaster of Paris is obtained by hydration of gypsum
(4) Plaster of Paris is obtained by partial oxidation of gypsum

Q.13 Among the following halides, the one which has the least water of crystallisation (i.e. less than six) in hydrated molecule is :
(1) $BaCl_2$ (2) $CaCl_2$ (3) $SrCl_2$ (4) $MgCl_2$

Q.14 Washing soda is -
(1) $Na_2CO_3.7H_2O$ (2) $Na_2CO_3.10H_2O$ (3) $Na_2CO_3.H_2O$ (4) Na_2CO_3

Q.15 Which of the following statements is False ?
(1) Both LiCl and $MgCl_2$ are deliquescent.
(2) Lithium is least reactive but the strongest reducing agent amongst all the alkali metals.
(3) Liquid sodium metal is used as a collant in fast breeder nuclear reactors.
(4) Lithium iodide is the most ionic in nature among alkali metal halides.

Q.16 Baking soda is -
(1) Na_2CO_3 (2) $NaHCO_3$ (3) $Na_2CO_3.H_2O$ (4) K_2CO_3

Q.17 Select the incorrect statement with respect to sodium hydroxide.
(1) It is used in paper industry
(2) Zinc and aluminium liberates hydrogen gas on heating with NaOH.
(3) It is prepared by reaction of sodium carbonate with milk of lime.
(4) It is not hygroscopic in nature.

Q.18 $NaNO_3$ on heating gives -
(1) $O_2 + NaNO_2$ (2) NO_2 (3) $O_2 + NO_2$ (4) None of these

Q.19 Which of the following is present in highest percentage in the portland cement ?
(1) Dicalcium silicate (Ca_2SiO_4). (2) Tricalcium silicate (Ca_3SiO_5).
(3) Tricalcium aluminate ($Ca_3Al_2O_6$). (4) Gypsum ($CaSO_4.2H_2O$).

Q.20 Which does not exists in solid state -
(1) $LiHCO_3$ (2) $CaCO_3$ (3) $NaHCO_3$ (4) Na_2CO_3

Q.21 Which of the following alkali metal carbonate is the least stable and decomposes readily -
(1) Li_2CO_3 (2) Na_2CO_3 (3) K_2CO_3 (4) Cs_2CO_3

Q.22 $LiNO_3$ on heating gives -
(1) $Li_2O + NO_2$ (2) do not decompose
(3) $LiNO_2$ (4) None of these

Q.23 An aqueous solution of an halogen salt of potassium reacts with same halogen X_2 to give KX_3, a brown coloured solution, in which halogen exists as X_3^- ion, X_2 as a Lewis acid and X^- as a Lewis base, halogen X is
(1) chlorine (2) bromine (3) iodine (4) fluorine

Q.24 Which of the following carbonates is least stable
(1) $MgCO_3$ (2) $CaCO_3$ (3) $BaCO_3$ (4) $SrCO_3$

Q.25 Mg is present in -
(1) Chlorophyll (2) Haemoglobin (3) Vitamin–B_{12} (4) Vitamin–B_2

Q.26 Which of the following hydrides is not ionic -
(1) CaH_2 (2) BaH_2 (3) SrH_2 (4) BeH_2

Q.27 Plaster of paris is -
(1) $CaSO_4.H_2O$ (2) $CaSO_4.2H_2O$ (3) $CaSO_4.\frac{1}{2}H_2O$ (4) $CaSO_4.1\frac{1}{2}H_2O$

Q.28 Which of the alkaline earth metal sulphates is the least soluble ?
(1) $BeSO_4$ (2) $CaSO_4$ (3) $SrSO_4$ (4) $BaSO_4$

Q.29 Which of the following is not ionic carbides?
(1) CaC_2 (2) Al_4C_3 (3) SiC (4) Be_2C

Q.30 $MgBr_2$ and MgI_2 are soluble in acetone because of
(1) Their ionic nature (2) Their coordinate nature
(3) Their metallic nature (4) Their covalent nature

Q.31 The reaction of sodium with water is highly exothermic the rate of reaction can be lowered by -
(1) Decreasing the temperature (2) Mixing with alcohol
(3) Mixing with acetic acid (4) Making an amalgam

Q.32 Thermal stability of hydrides of first group elements follows the order -
(1) LiH > NaH > KH > RbH (2) LiH > KH > NaH > RbH
(3) LiH > RbH > KH > NaH (4) LiH > KH > RbH > NaH

Q.33 Compounds of alkaline earth metals are less soluble in water than corresponding alkali metals due to -
(1) Their increased covalent character (2) Their high ionisation potentials
(3) High lattice energies (4) None of the above

Q.34 Which one of the following reactions is not associated with the Solvay process of manufacture of sodium carbonate -

(1) $NH_3 + H_2O + CO_2 \longrightarrow NH_4HCO_3$ (2) $NaCl + NH_4HCO_3 \longrightarrow NaHCO_3 + NH_4Cl$

(3) $2NaHCO_3 \xrightarrow{\Delta} Na_2CO_3 + H_2O + CO_2$ (4) $2NaOH + CO_2 \longrightarrow Na_2CO_3 + H_2O$

Q.35 On prolonged exposure to air,sodium finally changes to -

(1) Na_2CO_3 (2) Na_2O (3) NaOH (4) $NaHCO_3$

Q.36 Which is correct order of ionic mobility in aqueous medium -

(1) $Li^+_{(aq)} < Na^+_{(aq)} < Rb^+_{(aq)}$ (2) $Al^{3+}_{(aq)} < Mg^{2+}_{(aq)} < Na^+_{(aq)}$

(3) $Li^+_{(aq)} > Na^+_{(aq)} > K^+_{(aq)}$ (4) Both (1) & (2)

Q.37 Which of the following is wrong -

(1) Reducing character of alkaline earth metals increases from Be to Ba

(2) $Be(OH)_2$ is amphotoric in nature

(3) The solubilities of sulphates and carbonates decrease with increase in atomic number of alkaline earth metals

(4) $BeCl_2$ has much higher mp and insoluble in organic solvents

Q.38 Melting point of calcium halides decreases in the order -

(1) $CaF_2 > CaCl_2 > CaBr_2 > CaI_2$ (2) $CaI_2 > CaBr_2 > CaCl_2 > CaF_2$

(3) $CaBr_2 > CaI_2 > CaF_2 > CaCl_2$ (4) $CaCl_2 > CaBr_2 > CaI_2 > CaF_2$

Q.39 $Y \xleftarrow{\Delta,205°C} CaSO_4 \cdot 2H_2O \xrightarrow{\Delta,120°C} X$. X and Y are respectively

(1) plaster of paris, dead burnt plaster (2) dead burnt plaster, plaster of paris

(3) CaO and plaster of paris (4) plaster of paris, mixture of gases

Q.40 KO_2 finds use in oxygen cylinders used for space and submarines. The fact(s) related to such use of KO_2 is/are

(1) it produces O_2 (2) it produces O_3 (3) it produces CO_2 (4) it absorbs both CO & CO_2

Q.41 Sodium peroxide in contact with moist air turns white due to the formation of -

(1) Na_2O (2) Na_2CO_3 (3) $NaHCO_3$ (4) NaOH

Q.42 The pair whose both species are used in antacid medicinal preparations is -

(1) $NaHCO_3$ and $Mg(OH)_2$ (2) Na_2CO_3 and $Ca(HCO_3)_2$

(3) $Ca(HCO_3)_2$ and $Mg(OH)_2$ (4) $Ca(OH)_2$ and $NaHCO_3$

Q.43 The following compounds have been arranged in order of their increasing thermal stabilities identify the correct order -

$BaCO_3$ (I) $MgCO_3$ (II) $CaCO_3$ (III) $BeCO_3$ (IV)

(1) I < II < III < IV (2) IV < II < III < I (3) IV < II < I < III (4) II < IV < III < I

Q.44 Soda lime is -
(1) $Na_2CO_3 + CaO$ (2) $NaOH + NaHCO_3$
(3) $NaOH + CaO$ (4) $NaH + Na_2CO_3$

Q.45 In the Down's method for the extraction of sodium, the melting point of the electrolyte is lowered by adding -
(1) Potassium chloride (2) Calcium chloride
(3) Potassium fluoride (4) Cryolite

Q.46 Chemical A is used for water softening to remove temporary hardness. A reacts with Na_2CO_3 to generate caustic soda. When CO_2 is bubbled through A, it turns cloudly. What is the chemical formula of A -
(1) $CaCO_3$ (2) CaO (3) $Ca(OH)_2$ (4) $Ca(HCO_3)_2$

Q.47 Gypsum $CaSO_4.2H_2O$ on heating to about 120ºC forms plaster of pairs which has chemical composition represented by -
(1) $2CaSO_4.3H_2O$ (2) $CaSO_4.H_2O$ (3) $2CaSO_4.H_2O$ (4) $CaSO_4$

Q.48 On passing excess of CO_2 in lime water, its milky appearance disappears because -
(1) Soluble $Ca(OH)_2$ is formed (2) Soluble $Ca(HCO_3)_2$ is formed
(3) Reaction becomes reversible (4) Calcium compound evaporated

Q.49 A pair of substances which gives the same products on reaction with water is
(1) Mg and MgO (2) Sr and SrO (3) Ca and CaH_2 (4) Be and BeO

Q.50 $Be_2C + H_2O \longrightarrow BeO + X$
$CaC_2 + H_2O \longrightarrow Ca(OH)_2 + Y$; then X and Y are respectively
(1) CH_4, CH_4 (2) CH_4, C_2H_6 (3) CH_4, C_2H_2 (4) C_2H_2, CH_4

Q.51 The sum number of neutrons and protons in radioactive isotopes of hydrogen is -
(1) 3 (2) 4 (3) 5 (4) 6

Q.52 Ordinary hydrogen at room temperature is a mixture of -
(1) 75% o-Hydrogen + 25% p-Hydrogen (2) 25% o-Hydrogen + 75% p-Hydrogen
(3) 50% o-Hydrogen + 50% p-Hydrogen (4) 1% o-Hydrogen + 99% p-Hydrogen

Q.53 Para hydrogen is -
(1) Less stable than ortho hydrogen (2) More stable than ortho hydrogen
(3) As stable as ortho hydrogen (4) None of these

Q.54 Atomic hydrogen is obtained by -
(1) Electrolysis of heavy water
(2) Reaction of water with heavy metals
(3) Thermal decomposition of water
(4) By passing ordinary hydrogen through a electric arc.

Q.55 Which of the following statement is correct -
(1) Hydrogen has same ionisation potential as sodium
(2) H has same electronegativity as halogens
(3) It will not be liberated at anode
(4) H has oxidation state +1 and -1

Q.56 Which of the following produces hydrolith with dihydrogen -
(1) Mg (2) Al (3) Cu (4) Ca

Q.57 Both temporary and permanent hardness is removed on boiling water with -
(1) $Ca(OH)_2$ (2) Na_2CO_3
(3) $CaCO_3$ (4) CaO

Q.58 Temporary hardness is caused due to the presence of -
(1) $CaSO_4$ (2) $CaCl_2$
(3) $CaCO_3$ (4) $Ca(HCO_3)_2$

Q.59 High boiling point of water is due to -
(1) Its high specific heat (2) Hydrogen bonding
(3) High dielectric constant (4) Low dissociation constant

Q.60 Density of ice is -
(1) less than water (2) more than water
(3) same as water (4) cannot be said

Q.61 Which of the following is not true-
(1) Hardness of water is shown by its behaviour towards soap
(2) The temporary hardness is due to the presence of Ca and Mg bicarbonates
(3) Permanent hardness is due to the presence of soluble Ca and Mg sulphates and chloride
(4) Permanent hardness can be removed by boiling the water

Q.62 Hydrogen peroxide is not -
(1) A reducing agent (2) An oxidising agent
(3) A dehydrating agent (4) A bleaching agent

Q.63 Hydrogen peroxide has a -
(1) Linear structure (2) Pyramidal structure
(3) Closed book type structure (4) Half open book type structure

Q.64 H_2O_2 is stored in -
(1) Iron container after addition of stabilizer
(2) Glass container after addition of stabilizer
(3) Plastic container after addition of stabilizer
(4) None

Q.65 Zeolites are extensively used in -
(1) Softening of water and catalyst
(2) Preparing heavy water
(3) Increasing the hardness of water
(4) Mond's process

Q.66 Ortho and Para hydrogen differ -
(1) In the number of protons
(2) In the molecule mass
(3) In the nature of spins of protons
(4) In the nature of spins of electrons

Q.67 The gas used in the hydrogenation of oils persence of nickel as a catalyst is -
(1) Methane (2) Ethane (3) Ozone (4) Hydrogen

Q.68 Which statement is wrong -
(1) Ordinary hydrogen is an equilibrium mixture of ortho and para hydrogen
(2) In ortho hydrogen spin of two nuclei is in same direction
(3) Ortho and para forms do not resemble in their chemical properties
(4) In para hydrogen spin of two nuclei is in opposite direction

Q.69 The ratio of electron, proton and neutron in tritium is -
(1) 1 : 1 : 1 (2) 1 : 1 : 2 (3) 2 : 1 : 1 (4) 1 : 2 : 1

Q.70 Water is said to be permanently hard when it contains -
(1) Sulphates of Mg & Ca
(2) Bicarbonates of Mg & Ca
(3) Sulphates of Cu & Hg
(4) Carbonates and Bicarbonates of Mg & Ca

Q.71 A molten ionic hydride on electrolysis gives -
(1) H^+ ions moving towards the cathode
(2) H^+ ion moving towards the anode
(3) H_2 is liberated at anode
(4) H_2 is liberated at cathode

Q.72 Nascent hydrogen consists of -
(1) Hydrogen ions in the excited state
(2) Hydrogen molecules with excess energy
(3) Solvated protons
(4) Hydrogen atoms with excess energy

Q.73 Hydrogen peroxide is now generally prepared on industrial scale by the -
(1) Action of H_2SO_4 on barium peroxide
(2) Action of H_2SO_4 on sodium peroxide
(3) Electrolysis of 50% H_2SO_4
(4) Burning hydrogen in excess of oxygen

Q.74 Among KO_2, NO_2^-, BaO_2 and NO_2^+ unpaired electron is present in
(1) NO_2^+ and BaO_2 (2) KO_2 and BaO_2 (3) KO_2 only (4) BaO_2 only

Q.75 Amongst H_2O, H_2S, H_2Se and H_2Te the one with the highest boiling point is
(1) H_2O because of hydrogen bonding
(2) H_2 Te because of higher molecular weight
(3) H_2S because of hydrogen bonding
(4) H_2Se because of lower molecular weight

Q.76 Which of the following products is formed on boiling tin with an alkali solution
(1) $Sn(OH)_2$ (2) $Sn(OH)_4$ (3) SnO_3^{2-} (4) SnO_2

Q.77 KO_2 (Potassium superoxide) is used in oxygen cylinders in space and submarines because it
(1) Absorbs CO_2 and increases O_2 content (2) Eliminates moisture
(3) Absorbs CO_2 (4) Produces ozone

Q.78 H_2O_2 on reaction with PbS gives
(1) PbO (2) $PbSO_4$ (3) PbO_2 (4) $PbHSO_4$

Q.79 Hydrogen burns in air with a
(1) Light bluish flame (2) Yellow flame (3) Green flame (4) None of these

Q.80 NaOCl is used as a bleaching agent and sterilizing agent. It can be synthesized by the action of
(1) NaCl with H_2O (2) NH_4Cl with NaOH
(3) Cl_2 with cold and dilute NaOH (4) Cl_2 with hot and concentrated NaOH

Q.81 The substance not likely to contain $CaCO_3$ is
(1) A marble statue (2) Calcined gypsum (3) Sea shells (4) Dolomite

Q.82 Glass is a
(1) Microcrystalline solid (2) Supper cooled liquid
(3) Gel (4) Polymeric mixture

ASSERTION AND REASON

Each of the questions given below consist of Assertion and Reason. Use the following Key to choose the appropriate answer.

(1) Both Assertion and Reason are true and Reason is a correct explanation of Assertion
(2) Both Assertion and Reason are ture and Reason is not a correct explanation of Assertion
(3) Assertion is true but Reason is false
(4) Both Assertion and Reason are false

Q.83 **Assertion** : Chlorine and sulphur dioxide both are bleaching agents. **(AIIMS 2000)**
Reason : The bleaching action of chlorine and sulphur dioxide is performed through the process of oxidation.

Q.84 **Assertion** : Potassium and caesium are used in photoelectric cells **(AIIMS 2002)**
Reason : Potassium and caesium emit electrons on exposure to light

Q.85 **Assertion** : Among the alkali metals, lithium salts exhibit the least electrical conductance in aqueous solutions. **(AIIMS 2009)**
Reason : Smaller the radius of the hydrated cation, lower is the electrical conductance in aqueous solutions.

Q.86 **Assertion** : Bleaching powder is a mixed salt. **(AIIMS 2009)**
Reason : In the presence of $CoCl_2$ bleaching powder decomposes to give $CaCl_2$ & O_2.

Q.87 **Assertion** : Temperory hardness can be removed by boiling.
Reason : Bicarbonates are precipated in form of carbonates due to boiling.

Q.88 **Assertion** : BeH_2 and MgH_2 are covalent in nature.
Reason : s-block elements form covalent hydrides.

Q.89 **Assertion** : Diagonal relationship is shown between Be and Al.
Reason : Ionization potential of Be is almost the same as that of Al.

Q.90 **Assertion** : Alkali metals do no occur in native state in nature.
Reason : Alkali metals are highly reactive metals.

Q.91 **Assertion** : Mg does not impart characteristic colours to the Bunsen-burner flame.
Reason : I.E. of Mg is very high.

Q.92 **Assertion** : $BeCl_2$ fumes in moist air.
Reason : $BeCl_2$ reacts with moisture to form HCl gas.

Q.93 **Assertion** : Li_2CO_3 is decomposed at a lower temperature.
Reason : Smaller Li^+ polarises a large CO_3^{2-} leading to the formation of more stable Li_2O and CO_2

Q.94 **Assertion** : When water is mixed with cement, setting of cement takes place to give a hard mass becuase,
Reason : Setting of cement involves the hydration of the molecules of the constituents and their rearrangement.

Q.95 **Assertion** : $KHCO_3$ can not be obtained by solvay process.
Reason : $KHCO_3$ is less soluble than $NaHCO_3$.

Q.96 **Assertion** : Li and Mg shows similar chemical properties.
Reason : Li and Mg belongs to 2^{nd} period.

Q.97 **Assertion** : In Down's process $CaCl_2$ and NaF is added with fused NaCl
Reason : $CaCl_2$ and NaF lower down melting point of NaCl

PREVIOUS YEARS QUESTION

Q.1 A compound of nitrogen which is explosive, is **(AIIMS 1996)**
(1) NCl_3 (2) N_2O_5 (3) NH_3 (4) NF_3

Q.2 Which of the following is not suitable for use in a desicator to dry substances **(AIIMS 1996)**
(1) Conc. H_2SO_4 (2) Na_2SO_4 (3) $CaCl_2$ (4) P_4O_{10}

Q.3 Which of the following alkaline - earth metal hydroxides is the strongest base **(CPMT 1996)**
(1) $Be(OH)_2$ (2) $Mg(OH)_2$ (3) $Ca(OH)_2$ (4) $Ba(OH)_2$

ANSWERKEY

Q.1	1	Q.2	4	Q.3	2	Q.4	4	Q.5	2	Q.6	3	Q.7	2
Q.8	1	Q.9	3	Q.10	3	Q.11	1	Q.12	1	Q.13	1	Q.14	2
Q.15	4	Q.16	2	Q.17	4	Q.18	1	Q.19	2	Q.20	1	Q.21	1
Q.22	1	Q.23	3	Q.24	1	Q.25	1	Q.26	4	Q.27	3	Q.28	4
Q.29	3	Q.30	4	Q.31	4	Q.32	1	Q.33	3	Q.34	4	Q.35	1
Q.36	4	Q.37	4	Q.38	1	Q.39	1	Q.40	1	Q.41	4	Q.42	1
Q.43	2	Q.44	3	Q.45	2	Q.46	3	Q.47	3	Q.48	2	Q.49	3
Q.50	3	Q.51	1	Q.52	1	Q.53	1	Q.54	4	Q.55	4	Q.56	4
Q.57	2	Q.58	4	Q.59	2	Q.60	1	Q.61	4	Q.62	3	Q.63	4
Q.64	3	Q.65	1	Q.66	3	Q.67	4	Q.68	3	Q.69	2	Q.70	1
Q.71	3	Q.72	4	Q.73	3	Q.74	3	Q.75	1	Q.76	3	Q.77	1
Q.78	2	Q.79	1	Q.80	3	Q.81	2	Q.82	2	Q.83	4	Q.84	1
Q.85	3	Q.86	2	Q.87	1	Q.88	3	Q.89	1	Q.90	1	Q.91	1
Q.92	1	Q.93	1	Q.94	1	Q.95	3	Q.96	3	Q.97	1		