



# CHEMISTRY

**BOOKS - MCGROW HILL EDUCATION**

**CHEMISTRY (HINGLISH)**

**SELECTED BANK OF QUESTIONS**

**Mcq**

1. Which of the following statement is correct?

A. both MgO and  $SO_2$  are acidic oxides

B. MgO is acidic and  $SO_2$  is basic oxide

C. MgO is basic and  $SO_2$  is acidic oxide

D. both MgO and  $SO_2$  are basic oxide

**Answer:**



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2. Which pair of solution of salts is acidic in nature?

A.  $MgSO_4$  and  $Na_2SO_4$

B.  $CuSO_4$  and  $(NH_4)_2SO_4$

C.  $CH_3COONa$  and  $CH_3COONH_4$

D.  $BaCl_2$  and  $NH_4Cl$

**Answer:**



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**3.** Aluminium does not react with water at room temperature because

A. it is above hydrogen in the activity series

B. it is below hydrogen in the activity series

C. it is covered with a thin film of AlN

D. it is covered with thin film of  $Al_2O_3$

**Answer:**



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4. Nylon-6,6 is a \_\_\_\_\_

A. natural polymer

B. synthetic polymer

C. mixed polymer

D. polyester

**Answer:**



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5. The nature of the chemical bond in  $MgO$  is

A. electrovalent

B. covalent

C. dative

D. polar covalent

**Answer:**



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6. The number of molecules in 1 L of oxygen and 1 L of nitrogen at STP will be

A. equal

B. greater for  $N_2$

C. greater for  $O_2$

D. equal to Avogadro's number

**Answer:**



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7. The molecular formula of common salt is

A. KCl

B.  $CaCl_2$

C.  $NaHCO_3$

D. NaCl

**Answer:**



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**8.** The correct statement is

A.  $H_2O$  is angular and  $CO_2$  is linear in shape

B.  $H_2O$  is linear and  $CO_2$  is angular in shape



C.  $H_2O$  and  $CO_2$  both are angular

D.  $H_2O$  and  $CO_2$  both are linear

**Answer:**



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9. 6.4g of oxygen will contain \_\_\_\_\_ number of oxygen molecules.

A.  $6.023 \times 10^{23}$

B.  $6.023 \times 10^{22}$

C.  $1.2046 \times 10^{23}$

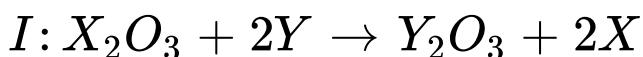
D.  $1.2046 \times 10^{22}$

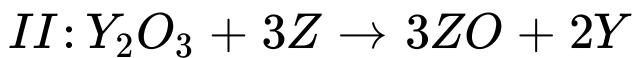
**Answer:**



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**10.** X, Y, Z are three elements, which undergo chemical changes according to the following equation:





The order of increasing reactivity is

A.  $X < Y < Z$

B.  $Y < X < Z$

C.  $Z < X < Y$

D.  $Z < Y < X$

**Answer:**



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11. Temporary hardness of water is due to \_\_\_\_\_ salts of calcium and magnesium.

A. carbonates and hydrogen carbonates

B. bicarbonates only

C. chloride and bicarbonates

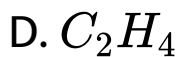
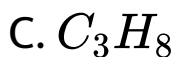
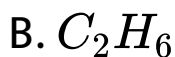
D. chlorides and sulphates

**Answer:**



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12. Sodium acetate on heating with soda lime produce

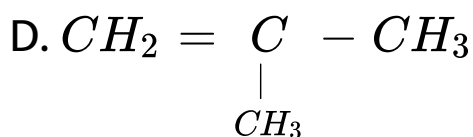
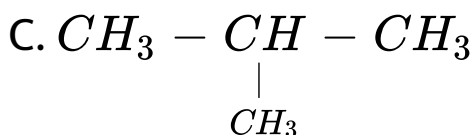
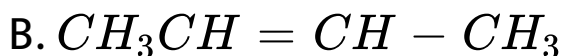
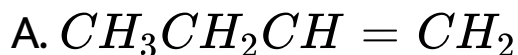


**Answer:**



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13. The structural formula of iso-butene is



**Answer:**



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14. The maximum possible number of hydrogen bonds a water molecule can form is

A. one

B. two

C. three

D. four

**Answer:**



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15. The chemical bond in diamond is

A. ionic

B. metallic

C. covalent

D. electrovalent

**Answer:**



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16. The number of unpaired electron(s) in

$Mg^{2+}$  ion is

A. zero

B. one

C. two

D. three

**Answer:**



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17. Oxygen ( $O_2$ ) and ozone ( $O_3$ ) are

A. allotropes

B. isotopes

C. isomers

D. isobars

**Answer:**



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**18.** The metallic element present in chlorophyll is

A. Hg

B. Fe

C. Mg

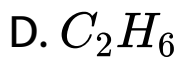
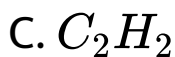
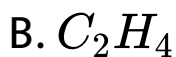
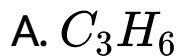
D. Ni

**Answer:**



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19. In which of the following are all carbon atoms only triple bonded?



**Answer:**



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20. How many isomers are possible for an alkane with molecular formula  $C_4H_{10}$  ?

A. Two

B. Three

C. Four

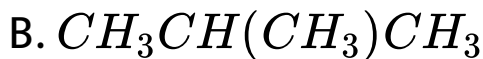
D. Five

**Answer:**



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21. Which of the following compound has three  $1^\circ$ , one  $2^\circ$  and one  $3^\circ$  carbon?

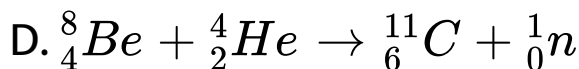
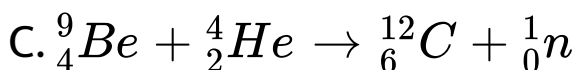
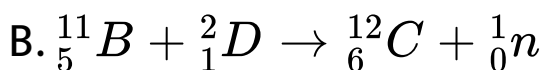
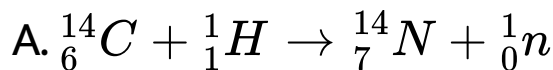


**Answer:**



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22. Which of the following reactions led to the discovery of neutron?



**Answer:**



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23. The oxidation number of hydrogen varies from

A.  $-1$  to  $+1$

B.  $0$  to  $+1$

C.  $-1$  to  $0$

D.  $0$  to  $+2$

**Answer:**



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24. The highest ionization energy is exhibited by

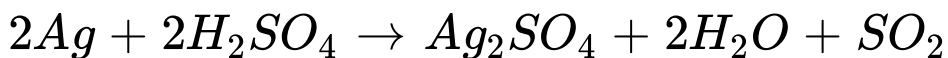
- A. alkalimetals
- B. alkaline earth metals
- C. halogens
- D. noble gases

**Answer:**



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25. In the reaction:



Sulphuric acid acts as:

- A. an oxidising agent
- B. a reducing agent
- C. a catalyst
- D. an acid as well as oxidant

**Answer:**



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**26.** A bottle of dry ammonia and a bottle of dry hydrogen chloride connected through a long tube are opened simultaneously at both ends. The white ammonium chloride ring first formed will be

- A. at the centre of the tube
- B. near the hydrogen chloride bottle
- C. near the ammonia bottle
- D. throughout the length of the tube

**Answer:**

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27. In the equation of state of an ideal gas  $PV = nRT$ , the value of universal gas constant would depend only on :

- A. nature of gas
- B. pressure of gas
- C. temperature of the gas
- D. units of the measurement

**Answer:**



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28. Which of the following is not a reducing agent?



**Answer:**



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29. The atomic number of an element which shows a valency of  $+3$  is

A. 13

B. 32

C. 33

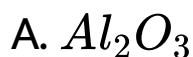
D. 17

**Answer:**



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30. Which of the following is true acid anhydride?



**Answer:**



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31. In blast furnace, the iron oxide is reduced by

A. silica

B. CO

C.  $CO_2$

D. lime stone

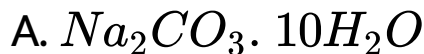
**Answer:**



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32. The formula of sodium sesquicarbonate, which is used for wool washing is



**Answer:**



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33. The  $p^H$  of neutral solution at  $25^\circ C$  is

A. 7

B.  $< 7$

C.  $> 7$

D. zero

**Answer:**



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34. The two elements X and Y have 5 and 7 valence electron respectively, what will be the formula of the compound formed by them?

A. XY

B.  $X_2Y$

C.  $X_3Y$

D.  $XY_3$

**Answer:**



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35. Which pair of substance is said to be isomorphous?

- A. white vitriol and blue vitriol
- B. epsom salt and glauber's salt
- C. white vitriol and epsom salt
- D. blue vitriol and glauber's salt

**Answer:**



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36. Which of the following can not show isomerism?

A. ethane

B. butane

C. but-2-ene

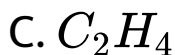
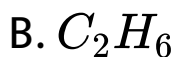
D. pentane

**Answer:**



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37. Which of the following reacts with metal by displacing H-atom?



**Answer:**



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38. The octane number has zero value for

A. Iso-octane

B. n-octane

C. n-heptane

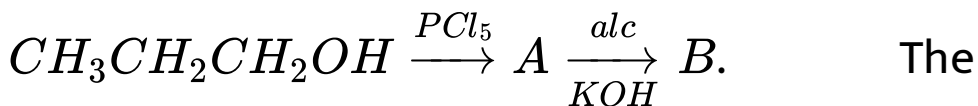
D. Tetra ethyl lead

**Answer:**



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39. Consider the reaction



compound 'B' is

A. propene

B. propyne

C. propane

D. propanol

**Answer:**



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**40.** When 1 mole of the substance present in 1 L of solution is known as

A. normal solution

B. molar solution

C. molal solution

D. none of these

**Answer:**



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41. The  $p^H$  of lemon juice is

A. 4

B. 10

C. 7

D. 2.2 to 2.4

**Answer:**



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42. When crystals of washing soda are left open in air, they lose

A. nine molecules of water of crystallisation

B. five molecules of water of crystallisation

C. three molecules of water of crystallisation

D. ten molecules of water of crystallisation

**Answer:**



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**43.** The energy released by complete fission of one kilogram of  $^{235}\text{U}$  is equal to that released by complete burning of

- A. 25 tonnes of coal
- B. 250 tonnes of coal
- C. 2500 tonnes of coal
- D. 5000 tonnes of coal

**Answer:**



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44. The aqueous solution of  $Na_2SO_4$  will have  $p^H$

- A. equals to 7
- B. less than 7
- C. greater than 7
- D. zero

**Answer:**



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45. Aluminium oxide,  $Al_2O_3$  is

A. basic oxide

B. acidic oxide

C. amphoteric oxide

D. neutral oxide

**Answer:**



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**46.** The metals present in brass are

A. iron and zinc

B. copper and tin

C. copper and zinc

D. aluminium and magnesium

**Answer:**



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47. Ammonia is dried over

A. slaked lime

B. conc.  $H_2SO_4$

C. quick lime

D.  $BaCl_2$

**Answer:**



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48. Addition of Conc.  $H_2SO_4$  to water is

- A. an exothermic reaction
- B. an endothermic reaction
- C. a redox reaction
- D. neutralisation reaction

**Answer:**



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49. Copper can be displaced from aqueous solution of copper sulphate by adding

A. Ag

B. Au

C. Hg

D. Fe

**Answer:**



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50. Polythene is a polymer. The monomer of this is

A. propene

B. isoprene

C. chloroprene

D. ethene

**Answer:**



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51. n-Propyl alcohol and isopropyl alcohol are examples of

A. position isomerism

B. chain isomerism

C. tautomerism

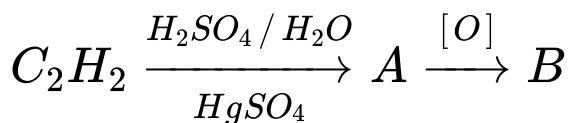
D. geometrical isomerism

**Answer:**



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52. In the sequence of reaction



The compound B is

A. ethanoic acid

B. propanone

C. ethanol

D. methanal

**Answer:**



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53. The volume of 8 g  $O_2$  at STP is

A. 22.4 L

B. 11.2 L

C. 5.6 L

D. 2.24 L

**Answer:**



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54. Which of the following has the highest electron affinity?

A. F

B. Cl

C. Br

D. I

**Answer:**



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55. Sodium is stored by keeping it immersed in

A. air

B. water

C. ammonia

D. kerosene oil

**Answer:**



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56. Formalin is the other name for



A. formic acid

B. 4 % solution of formaldehyde

C. chloroform

D. iodoform

**Answer:**



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**57.** Oxidation number of Mn in  $K_2MnO_4$  is

A. +5

B. +4

C. +7

D. +6

**Answer:**



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**58.** Which of the following contains a double bond?

A. carbon dioxide

B. chlorine

C. ethyne

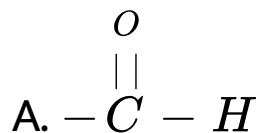
D. water

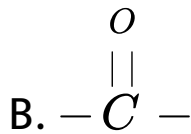
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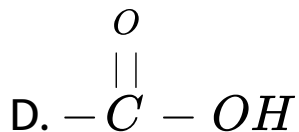
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**59.** The aldehyde functional group is





C. both (a) and (b)



**Answer:**



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**60.** Which of the following symbol is used to show precipitate?

A. ↓

B. ↑

C. ⇌

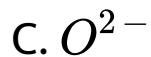
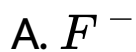
D. none of these

**Answer:**



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**61.** Which of the following has more electrons than neutrons?



**Answer:**



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**62.** The structure of toluene is



B. 

C. 

D. 

**Answer:**



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**63.** In acetylene, there are \_\_\_\_\_ covalent bonds.

A. three

B. four

C. five

D. six

**Answer:**

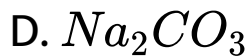
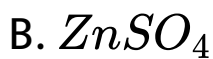


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**64.** Which of the following is not an acidic salt solution in aqueous medium?

A.  $CuSO_4$



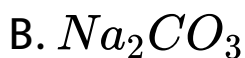
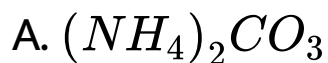


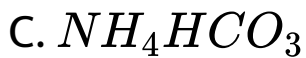
**Answer:**



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**65.** The chemical formula of baking soda is





**Answer:**



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**66.** Purest form of iron is

A. cast iron

B. pig iron

C. steel

D. wrought iron

**Answer:**



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**67.** In the gaseous state, the particles can move

A. only in one direction

B. only in the fixed path

C. randomly in all directions

D. upwards and downwards only

**Answer:**



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**68.** Which one of the following is a compound  
?

A. the black residue left when sugar is  
charred

B. nitrogen gas

C. air

D. carbon dioxide

**Answer:**



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**69.** Glass can be classified as

A. anisotropic solid

B. a unique crystal

C. poly crystalline solid

D. a super cooled liquid

**Answer:**



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**70.** Annealing of glass is done to

A. make it brittle

B. make it opaque

C. make it transparent

D. none of the above

**Answer:**



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71. In the manufacture of glass , the addition of  $MnO_2$  gives ,

A. yellow colour

B. red colour

C. violet colour

D. pink colour

**Answer:**



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**72.** Sodium metal should be stored in

- A. kerosene oil
- B. alcohol
- C. water
- D. hydrochloric acid

**Answer:**





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73. Which of the following metal is used for making boats because it does not corrode by sea water?

A. Cu

B. Ni

C. W

D. Ti

**Answer:**



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74. Lightest alkaline earth metal is

A. Be

B. Mg

C. Ca

D. Ba

**Answer:**



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75. The most poisonous form of phosphorous is

A. white

B. red

C. black

D. violet

**Answer:**



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76. The strong smelling substance added to LPG is

A. ethyl mercaptan

B. ethanol

C. ethanal

D. ethyl butane

**Answer:**



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77. Asphalt is used for/as

- A. aviation fuel
- B. making road surface
- C. running water pumps
- D. dry-cleaning of clothes

**Answer:**



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78. Which of the following is a combustible substance?

A. cement

B. glass

C. stone

D. cow-dung cake

**Answer:**



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79. Kajal' is the form of

A. coke

B. charcoal

C. carbon black

D. asphalt

**Answer:**



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**80.** The substance used to reduce iron ore to iron in the lower part of the blast furnace is

A. coke

B. charcoal

C. carbon monoxide

D. carbon black

**Answer:**



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**81.** Fossils are mostly present in which of the following rocks?

- A. igneous rocks
- B. sedimentary rocks
- C. metamorphic rocks
- D. coarse-grained rocks

**Answer:**



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**82.** Most of the metals which occurs in native state in nature

A. are very reactive

B. do not form ionic compound

C. are not reactive

D. have low density

**Answer:**



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**83.** Pick the correct statements:

A. all ores are minerals

B. all minerals are ores

C. a mineral cannot be an ore

D. an ore cannot be a mineral

**Answer:**



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**84.** A voltaic cell converts

- A. electrical energy into chemical energy
- B. chemical energy into electrical energy
- C. light energy into electrical energy
- D. mechanical energy into electrical energy

**Answer:**



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**85.** The positive electrode of a Leclanche cell is made of

A. carbon

B. copper

C. zinc

D. iron

**Answer:**



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**86.** Liquid ammonia is a fuel for

A. motorcar

B. aeroplane

C. monorail

D. rocket

**Answer:**



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