



# CHEMISTRY

## BOOKS - EVERGREEN CHEMISTRY (ENGLISH)

### SAMPLE QUESTION PAPER 02

#### Section L

1. A strong electrolyte from the following is :

(a) Acetic acid

(b) Oxalic acid

(c) Ammonium hydroxide

(d) Sodium hydroxide

A. Acetic acid

B. Oxalic acid

C. Ammonium hydroxide

D. Sodium hydroxide

**Answer: D**



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2. Electron affinity is maximum in:

A. Alkali metals

B. Alkaline earth metals

C. Halogens

D. Inert gases

**Answer: C**



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3. The main component of brass are:

A. Copper and zinc

B. Copper and lead

C. Copper and tin

D. Copper and iron

**Answer: A**



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**4.** The drying agent used to dry  $NH_3$  is:

A.  $P_2O_5$

B. *conc.*  $H_2SO_4$

C.  $CaCl_2$

D.  $CaO$

**Answer: D**

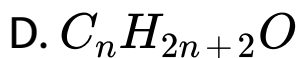


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**5. The general formula of alkynes is:**

A.  $C_nH_{2n-2}$

B.  $C_nH_{2n+2}$



**Answer: A**



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6. Give a balanced chemical equation for each of the following -  
i] Catalytic oxidation of ammonia.  
ii] Reaction of ammonia with nitric acid.



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7. Give a balanced chemical equation for each of the following:

Action of conc. Nitric acid on Sulphur.



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8. Write balanced chemical equation for each of the

Action of concentrated sodium hydroxide on Zinc oxide.





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9. Write a fully balanced equation for the following case :

Acetic acid is warmed with ethanol in the presence of concentrated sulphuric acid.



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10. Write balanced chemical equation for each of the

Action of dilute hydrochloric acid on iron.





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**11.** State any one observation for each of the  
Dilute Hydrochloric acid is added to Silver  
Nitrate solution. (i



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**12.** State any one observation for each of the  
Concentrated Nitric acid is added to Copper  
turnings.



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**13.** State any one observation for each of the Mixture of Ammonium chloride and Sodium hydroxide is heated.



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**14.** State any one observation for each of the Ammonium hydroxide solution is added in excess to copper sulphate solution.



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**15.** State any one observation for each of the  
NaOH solution is added to calcium nitrate  
solution.



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**16.** Some word/words are missing in the  
following statement. You are required to  
rewrite the statement in the correct form  
using the appropriate word/words:

Magnesium nitride reacts with water to liberate ammonia.



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17. Rewrite the following by inserting appropriate word / words:

Lead bromide conducts electricity.



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**18.** Rewrite the following by inserting appropriate word / words:

Starch iodide paper turns blue black in the presence of Chlorine.



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**19.** Give reason - Hydrogen chloride can be termed as a polar covalent compound.



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**20.** Give a suitable word or phrase for the following:

The compound formed by partial or complete replacement of the hydrogen ion [ $H^+$ ] aq. of an acid by a basic radical [metallic ion or ammonium ion].



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**21.** Given  $2C_2H_6 + 7O_2 \rightarrow 4CO_2 + 6H_2O$

200 cc of  $O_2$  was burnt with 400 cc of ethane,

Calculate the volume of  $CO_2$  formed and unused  $O_2$ .



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**22.** Find the number of moles and molecules present in 7.1g of  $Cl_2$ . (AtWt.  $Cl = 35.5$ )



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**23.** Calculate the vapour density of ethene. (C = 12, H = 1).



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**24.** Fill in the blank from the choices given in brackets :

The energy required to remove an electron from a neutral isolated gaseous atom and convert it into a positively charged gaseous ion is called ..... (electron affinity, ionisation potential, electronegativity)



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**25.** Why is the froth flotation method selected for the concentration of Sulphide ores ?



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**26.** Name of the following

The property of elements by virtue of which atoms of the element can link to each other in the form of a long chain or ring structure



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**27.** A chemical term for. A bond formed by a shared pair of electrons with both electrons coming from the same atom.



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**28.** Identify the terms:

A substance that conducts electricity in molten or aqueous state.



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**29.** Arrange the as per he instruction given in the bracket:

Li, F, N [increasing order of ionization potential]



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**30.** Arrange the as per he instruction given in the bracket:

Na, Al, Cl [increasing order of ionization potential]



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**31.** Arrange the following

Li, K, Na, H [In the decreasing order of their ionization potential].



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**32.** Arrange the as per the instruction given in the bracket:

$Zn^{2+}$ ,  $Na^{+}$ ,  $Cu^{2+}$  [order of preference of discharge at the cathode]



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**33.** Arrange the as per he instruction given in the bracket:

*Br, F, Cl* [decreasing order of atomic radius]



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**34.** Draaw the structural formula for each the  
But-1-ene



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**35.** Draw the structural formula for Pentanoic acid



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**36.** Draw the structural formula for Hexan-3-ol



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**37.** Draw the structural isomers of  $C_4H_{10}$ .



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38. Write balanced equation for following conversions



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## Section LI

1. Show the formation of  $H_3O^+$  using the electron dot diagram.



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2. Distinguish between the following pairs of compounds using the test given within the brackets.

Calcium sulphite and calcium carbonate (using dil. HCl)



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3. Distinguish between the following pairs of compounds using the test given within the brackets.



Calcium nitrate and potassium nitrate (using a flame test)



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4. Distinguish between the following pairs of compounds using the test given within the brackets.

Lead nitrate solution and Zinc nitrate solution  
(using an alkali)



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5. Study the table and answer the question :

Atom	Atomic No.
A	11
B	17

Compare the positions of A and B in the Periodic Table.



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6. Study the table and answer the question :

Atom	Atomic No.
A	11
B	17

Which is more metallic ?



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7.



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8. Study the table and answer the question :

Atom	Atomic No.
A	11
B	17

What type of bond is formed between A and B ?



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9. Identify the gas evolved in each of the cases:

A colourless gas liberated on decomposition of nitric acid.



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**10.** Identify the gas evolved in each of the cases:

Water is added to calcium carbide.



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**11.** Identify the gas evolved in each of the cases:

Dilute hydrochloric acid is added to Zinc sulphide.



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**12.** Identify the gas evolved in each of the cases:

Dilute nitric acid is added to copper.



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**13.** Name the organic compound prepared by the following reactions:



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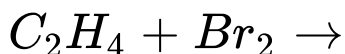
**14.** Write balanced chemical equations for the following:

A mixture of soda lime and sodium acetate is heated.



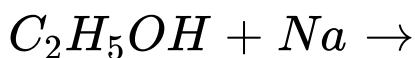
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**15.** Write a balanced equation for the



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**16.** Write a balanced equation for the



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**17.** State how the following conversions can be carried out:

Ethyl chloride to ethyl alcohol.



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**18.** State how the following conversions can be carried out:

Ethyl alcohol to ethene.



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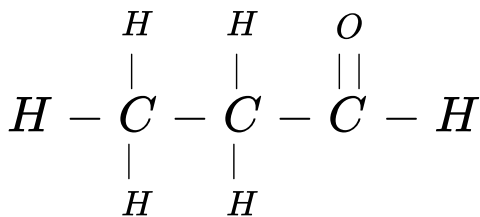
19. State how the conversions can be carried out.

Ethyl bromide to ethane.



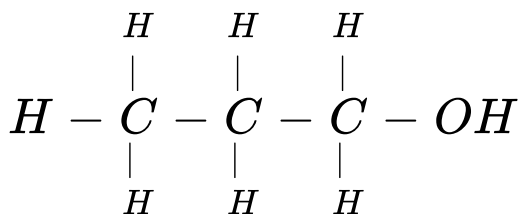
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20. Give the correct IUPAC name for each of the compound whose structural formulae are given below:



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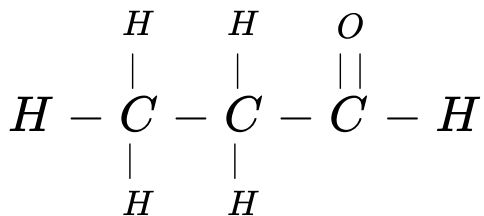
21. Give the correct IUPAC name and the functional group for each of the compounds whose structural formulae are given below :



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22. Give the correct IUPAC name for each of the compound whose structural formulae are given

below:



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**23.** Name the chief ore of Aluminium and the process of concentration of the ore.



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24. In the extraction of aluminium from bauxite the first step is the dressing of the ore by Baeyer's process. Give balanced equations for the conversion of impure bauxite to pure alumina using a concentrated solution of  $\text{NaOH}$ .



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25. Name one alloy of Aluminium.



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**26.** A compound gave the following data:

$C = 57.82\%$  ,  $O = 38.58\%$  and the rest hydrogen. Its relative molecular mass is 166.  
Find its empirical formula and molecular formula.

$$[C = 12, O = 16, H = 1]$$



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**27.** Copy and complete the following table.

Name of the process	Catalyst	Temperature	Equation for the reaction
Haber's Process			



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**28.** How is Ammonia separated from unreacted Nitrogen and Hydrogen ?



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**29.** Give appropriate scientific reasons for the following statements :

Electrolysis of molten lead bromide is considered to be a redox reaction.



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**30.** Give reasons why :

Although copper is a good conductor of electricity, it is a non-electrolyte.



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**31.** The electrical conductivity of acetic acid is less than of sulphuric acid of the same concentration .Give reason .



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**32.** Mention the property of conc.  $H_2SO_4$

exhibited in each of the reactions with:

sugar



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**33.** Mention the property of conc.  $H_2SO_4$

exhibited in the reactions with metallic

chloride



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**34.** Mention the property of conc.  $\text{H}_2\text{SO}_4$  exhibited in each of the reactions with:  
non-metal such as carbon.



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**35.** Answer the question pertaining to laboratory preparation of Hydrogen chloride:  
Write an equation for the laboratory preparation of Hydrogen chloride.





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**36.** The following questions are pertaining to the laboratory preparation of hydrogen chloride gas :

Name the drying agent used and justify your choice.



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**37.** Of the two gases, ammonia and hydrogen chloride, which is more dense ? Name the

method of collection of this gas.



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**38.** Answer the question pertaining to laboratory preparation of Hydrogen chloride:

Write an equation for the laboratory preparation of Hydrogen chloride.



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**39.** For the preparation of hydrochloric acid in the laboratory :

Why is direct absorption of hydrogen chloride gas in water not feasible ?



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**40.** All glass apparatus is used in the laboratory preparation of nitric acid. Explain ?



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**41.** Give reasons for each of

NaCl has a high melting point.



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**42.** Give one point of difference between the pairs of terms given:

Calcination and Roasting.



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**43.** Give one point of difference between the pairs of terms given:

Polar and Non Polar covalent compounds.



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**44.** Give one point of difference between the pairs of terms given:

Strong electrolyte and weak electrolyte.



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