



CHEMISTRY

BOOKS - EVERGREEN CHEMISTRY (ENGLISH)

SAMPLE PAPER 2018

Section I

1. Choose the correct answer from the options given below :

The salt solution which does not react with ammonium hydroxide is :

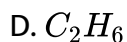
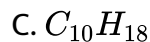
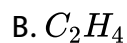
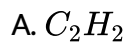
- A. Calcium nitrate
- B. Zinc nitrate
- C. Lead nitrate
- D. Copper nitrate

Answer: A

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2. Choose the correct answer from the options given below :

(i) The organic compound which undergoes substitution reaction is :



Answer: D

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3. The electrolysis of acidified water is an example of:

- A. Reduction
- B. Oxidation
- C. Redox reaction
- D. Synthesis

Answer: C

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4. Choose the correct answer from the options given below :

The IUPAC name of dimethyl ether is :

- A. Ethoxy methane
- B. Methoxy methane
- C. Methoxy ethane
- D. Ethoxy ethane

Answer: B



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5. Choose the correct answer from the options given below: The catalyst used in the Contact Process is :

A. Copper

B. Iron

C. Vanadium pentoxide

D. Manganese dioxide

Answer: C



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6. Give one word or a phrase for the following statement:

The energy released when an electron is added to a neutral gaseous isolated atom to form a negatively charged ion.



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7. Give one word or a phrase for the following statement : Process of formation of ions from molecules which are not in ionic state.



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8. Give one word or a phrase for the following statement :
The tendency of an element to form chains of identical atoms.



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9. Give one word or a phrase for the statement: The property by which certain hydrated salts when left exposed to the atmosphere, lose their water of crystallization & crumble into powder



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10. Give one word or a phrase for the following statement: The process by which sulphide ore is concentrated.

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11. Write a balanced chemical equation for the following: Action of concentrated sulphuric acid on carbon.

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12. Write a balanced chemical equation for each of the following:
Reaction of sodium hydroxide solution with iron (III) chloride solution.

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13. Write a balanced chemical equation for each of the following:
Action of heat on aluminium hydroxide

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14. Write a balanced chemical equation for each of the following:

Reaction of zinc with potassium hydroxide solution.

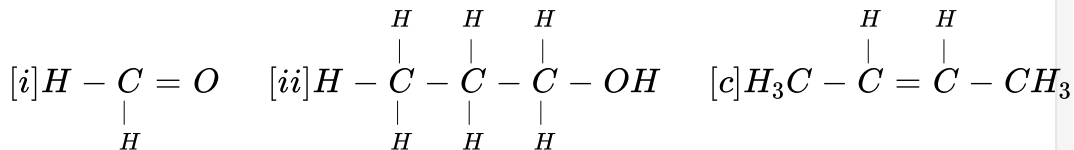
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15. Write a balanced chemical equation for the following:

of dilute hydrochloric acid on magnesium sulphite.

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16. Give IUPAC names of:



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17. Write the structural formula of ethanol.

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18. State one relevant observation for the following :

Lead nitrate solution is treated with sodium hydroxide solution drop wise till it is in excess

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19. State one relevant observation for the following: At the anode, when molten lead bromide is electrolyzed using graphite electrodes.

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20. State one relevant observation for the following:

Lead nitrate solution is mixed with dilute hydrochloric acid and heated.

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21. State one relevant observation for each of the following :

Anhydrous calcium chloride is exposed to air for sometime

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22. State one relevant observation for each of the following :

Barium chloride solution is slowly added to sodium sulphate solution.

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23. Give a reason for each of the following:

Ionic compounds have a high melting point.

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24. Give a reason for each of the following:

Inert gases do not form ions.

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25. Give a reason for the following:

Ionisation potential increases across a period, from left to right.

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26. Give reasons for the following:

Alkali metals are good reducing agents.

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27. Give a reason for the following :

Conductivity of dilute hydrochloric acid is greater than that of acetic

acid.

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28. Name the gas that is produced in the following case: Sulphur is oxidized by concentrated nitric acid.

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29. Name the gas that is produced in the following case :

Action of dilute hydrochloric acid on sodium sulphide.

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30. Name the gas that is produced in the following case:

Action of cold and dilute nitric acid on copper.

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31. Name the gas that is produced in the following case : At the anode during the electrolysis of acidified water.

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32. Name the gas that is produced in the following case: Reaction of ethanol and sodium.

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33. Fill up the blank with the correct choice given in bracket.

Ionic or electrovalent compounds do not conduct electricity in their state. (fused/solid)

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34. Fill up the blank with the correct choice given in bracket. Electrolysis of aqueous sodium chloride solution will form _____ at the cathode.
(hydrogen gas/sodium metal)

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35. Fill up the blank with the correct choice given in bracket.

Dry hydrogen chloride gas can be collected by _____ displacement of air. (downward/upward)

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36. Fill up the blank with the correct choice given in bracket. The most common ore of iron is (Calamine / haematite)

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37. Fill up the blank with the correct choice given in bracket. The salt prepared by the method of direct combination is _____

(iron (II) chloride/ iron (III) chloride)

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Section II

1. What do you understand by a lone pair of electrons ?

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2. Draw the electron dot diagram of Hydronium ion. (H = 1, O = 8)

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3. In Period 3 of the Periodic Table, element B is placed to the left of element A.

On the basis of this information, choose the correct word from the brackets to complete the following statements :

The element B would have (lower/higher) metallic character than A.

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4. In Period 3 of the Periodic Table, element B is placed to the left of element A. On the basis of this information, choose the correct word from the brackets - to complete the following statements.

The element A would probably have [lesser/higher] electron affinity than B.

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5. In Period 3 of the Periodic Table, element B is placed to the left of element A.

On the basis of this information, choose the correct word from the brackets to complete the following statements :

The element A would have (greater/smaller) atomic size than B.

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6. Complete the following table which refers to the conversion of ions to neutral particles.

Conversion	Ionic Equation	Oxidation/ Reduction
Chloride ion to chlorine molecule	(i) _____	(ii) _____
Lead (II) ion to lead	(iii) _____	(iv) _____

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7. Write the balanced chemical equation to prepare ammonia gas in the laboratory by using an alkali.

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8. State why concentrated sulphuric acid is not used for drying ammonia gas

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9. Why is ammonia gas not collected over water?

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10. Name the acid used for the preparation of hydrogen chloride gas in the laboratory. Why is this particular acid preferred to other acids?

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11. Write the balanced chemical equation for the laboratory preparation of hydrogen chloride gas.

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12. 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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13. For the preparation of hydrochloric acid in the laboratory :

What arrangement is done to dissolve hydrogen chloride gas in water ?

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14. For the electro-refining of copper

What is the cathode made-up of ?

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15. For the electro-refining of copper

Write the reaction that takes place at the anode.

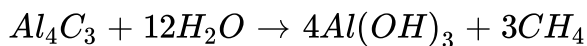
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16. The percentage composition of a gas is : Nitrogen 82.35%, Hydrogen 17.64%. Find the empirical formula of the gas.

[N = 14, H = 1]

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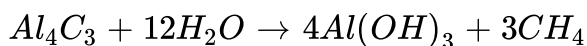
17. Aluminium carbide reacts with water according to the following equation :



What mass of aluminium hydroxide is formed from 12 g of aluminium carbide ?

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18. Aluminium carbide reacts with water according to the following equation :



What volume of methane at S.T.P. is obtained from 12 g of aluminium carbide ?

[Relative molecular weight of $Al_4C_3 = 144$, $Al(OH)_3 = 78$]

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19. If 150 cc of gas A contains X molecules, how many molecules of gas B will be present in 75 cc of B? The gases A and B are under the same condition of temperature and pressure.

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20. If 150 cc of gas A contains X molecules, how many molecules of gas B will be present in 75 cc of B? The gases A and B are under the same condition of temperature and pressure.

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21. Name the main component of the following alloy :

Brass

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22. Name the main component of the following alloy :

Duralumin

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23. Complete the following table which relates to the homologous series of hydrocarbons :

<i>General formula</i>	<i>IUPAC name of the homologous series</i>	<i>Characteristic bond type</i>	<i>IUPAC name of the first member of the series</i>
C_nH_{2n-2}	(A)	(B)	(C)
C_nH_{2n+2}	(D)	(E)	(F)

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24. The chemical name - of the main ore of aluminium.

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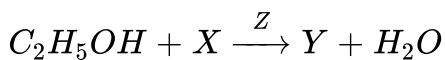
25. Name the process by which impure ore of aluminium gets purified by using concentrated solution of an alkali.

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26. Write a balanced chemical equation for - (i) The formation of aluminium at the cathode, during the electrolysis of alumina. (ii) Action of heat on aluminium hydroxide.

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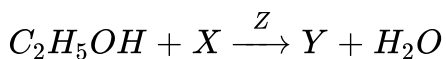
27. A compound X (having vinegar like smell) when treated with ethanol in the presence of the acid Z, gives a compound Y which has a fruity smell. The reaction is :



Identify Y and Z.

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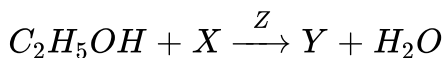
28. A compound X (having vinegar like smell) when treated with ethanol in the presence of the acid Z, gives a compound Y which has a fruity smell. The reaction is :



Write the structural formula of X.

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29. A compound X (having vinegar like smell) when treated with ethanol in the presence of the acid Z, gives a compound Y which has a fruity smell. The reaction is :



Name the above reaction.

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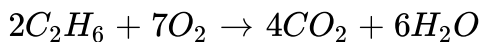


200 cc of O_2 was burnt with 400 cc of ethane,

Calculate the volume of CO_2 formed and unused O_2 .

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31. Ethane burns in oxygen to form CO_2 and H_2O according to the equation :



If 1250 cc of oxygen is burnt with 300 cc of ethane. Calculate :

the volume of unused O_2 .

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32. Three solutions P, Q and R have pH value of 3.5, 5.2 and 12.2 respectively.

Which one of these is a :

Weak acid ?

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33. Three solutions P, Q and R have pH value of 3.5, 5.2 and 12.2 respectively.

Which one of these is a :

Strong alkali ?

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34. Give a chemical test to distinguish between the following pairs of chemicals:

Lead nitrate solution and Zinc nitrate solution

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35. Give a chemical test to distinguish between the following pairs of chemicals:

Sodium chloride solution and Sodium nitrate solution.

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36. Write a balanced equation for the preparation of each of the following salts:

Copper sulphate from Copper carbonate

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37. Write a balanced equation for the preparation of the following salt:

Zinc carbonate from Zinc sulphate

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38. What is the type of salt formed when the reactants are heated at a suitable temperature for the preparation of Nitric acid ?

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39. State why for the preparation of Nitric acid, the complete apparatus is made up of glass.

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40. Which property of sulphuric acid is shown by the reaction of concentrated sulphuric acid with :

(i) Ethanol

(ii) Carbon

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41. Which property of sulphuric acid is shown by the reaction of concentrated sulphuric acid with :

(i) Ethanol

(ii) Carbon



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