



CHEMISTRY

BOOKS - ICSE MODEL PAPER

SAMPLE PAPER 2022

Section I Choose The Most Appropriate Answer

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

Which of the following is a common characteristic of a covalent compound?

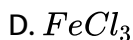
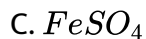
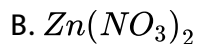
- A. High melting point.
- B. Conducts electricity when it is in the molten state
- C. Consists of molecules
- D. Always soluble in water.

Answer:



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2. Ammonium hydroxide will produce a reddish brown precipitate when added to a solution of :



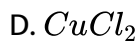
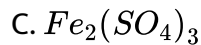
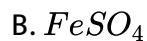
Answer:



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3. The salt which in solution gives a pale green precipitate with sodium hydroxide solution and a white precipitate with barium chloride solution

is



Answer:



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4. The gas law which relates the volume of a gas to moles of the gas is:

A. Avogadro's Law

B. Gay-Lussac's Law

C. Boyle's Law

D. Charle's Law

Answer:



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5. During the electrolysis of acidified water which of the following takes place :

- A. Oxygen is released at cathode.
- B. Oxygen is released at anode.
- C. Hydrogen is released at anode.
- D. Sulphur dioxide is released at anode.

Answer:



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6. Duralumin is an alloy of

- A. Al and Cu
- B. Cu and Sn

C. Al and Ag

D. Al and Fe

Answer:

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7. Hydrogen chloride can be obtained by adding concentrated Sulphuric acid to:

A. NaCl

B. Na_2SO_4

C. Na_2CO_3

D. $NaNO_3$

Answer:

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8. Which of the following reactions gives copper as a product

A. Passing dry ammonia over heated copper oxide.

B. Adding dilute hydrochloric acid to copper oxide

C. Heating copper oxide.

D. Passing oxygen over heated copper oxide?

Answer:



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9. Formation of chloroform from methane and chlorine is an example of -

A. Addition

B. Dehydration

C. Substitution

D. Elimination

Answer:



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10. The element with the highest ionization potential in the periodic table is:

A. He

B. Ne

C. Ar

D. Xe

Answer:



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1. The equation for the action of heat on calcium nitrate is:

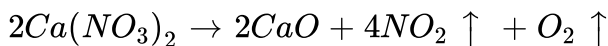


How many moles of NO_2 are produced when 1 mole of $Ca(NO_3)_2$ decomposes ?

(Relative molecular mass of $Ca(NO_3)_2 = 164$ and of $CaO = 56$)

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2. The equation for the action of heat on calcium nitrate is:

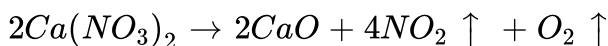


What volume of O_2 at S.T.P. will be produced on heating 65.6 g of $Ca(NO_3)_2$?

(Relative molecular mass of $Ca(NO_3)_2 = 164$ and of $CaO = 56$)

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3. The equation for the action of heat on calcium nitrate is:

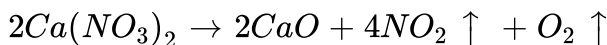


Find out the mass of CaO formed when 65.6 g of $Ca(NO_3)_2$ is heated.

(Relative molecular mass of $Ca(NO_3)_2 = 164$ and of CaO = 56)

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4. The equation for the action of heat on calcium nitrate is:

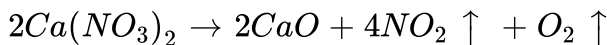


Find out the mass of $Ca(NO_3)_2$, required to produce 5 moles of gaseous products.

(Relative molecular mass of $Ca(NO_3)_2 = 164$ and of CaO = 56)

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5. The equation for the action of heat on calcium nitrate is:



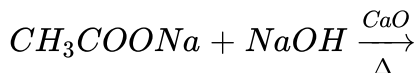
Find out the mass of $Ca(NO_3)_2$ required to produce 44.8 L of NO_2 at S.T.P.

(Relative molecular mass of $Ca(NO_3)_2 = 164$ and of CaO = 56)

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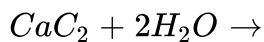
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6. Name the organic compound prepared by each of the following reactions:



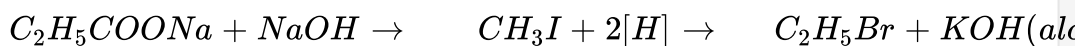
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7. Name the organic compound prepared by the following reactions:



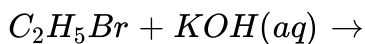
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8. Name the organic compound prepared by each of the following reactions:



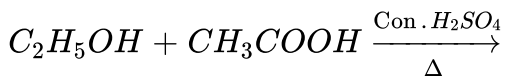
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9. Name the organic compound prepared by each of the following reactions:



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10. Name the organic compound prepared by each of the following reactions:



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11. Identify the following substances:

An acidic gas which gives dense white fumes with NH_3 .

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12. Identify the following substances:

An alkane which can also be called a green house gas.

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13. Identify the following substances:

A solid which when kept in the open, forms a solution after sometime.

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14. Identify the following substances:

An alloy used in electrical fittings.

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15. The metal that gives hydrogen gas upon treatment with both acid as well as base is :



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16. Write equations for the following reactions:

Aluminium oxide and Sodium hydroxide.



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17. Write equations for the following reactions:

Zinc and dilute sulphuric acid.



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18. Write equations for the following reactions:

Nitrogen dioxide and water.



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19. Write the equation for each of the following reactions :

Concentrated sulphuric acid is poured over sugar.

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20. Write the equation for the following reaction :- Between copper & concentrated nitric acid.

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21. Name the following:

Second member of alkene series.

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22. The first member of alkane series is

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23. Name the following:

Third member of aldehyde series.

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24. Name the following:

Second member of carboxylic acid.

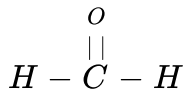
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25. Name the following:

Fourth member of alcohol series.

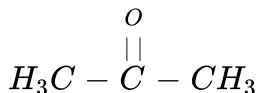
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26. Write the IUPAC name of the following compounds :



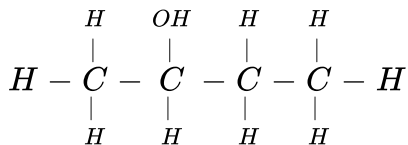
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27. Write the I.U.P.A.C. names of the following compounds:



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28. Write the I.U.P.A.C. names of the following compounds:



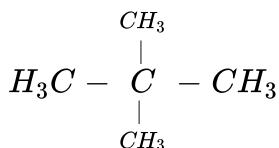
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29. Write the I.U.P.A.C. names of the following compounds:



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30. Write the I.U.P.A.C. names of the following compounds:



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31. The following questions refer to the periodic table:

How many elements are in the second period?

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32. The following questions refer to the periodic table :

Name the element which has the highest electron affinity.

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33. The following questions refer to the periodic table :

Name the element which has the highest electronegativity.

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34. The following questions refer to the periodic table :

Name the element which may be placed in group 1 but is not a metal.

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35. Fill in the blanks using the correct options:

Metals have — ionisation potential. (low/ high)

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36. Fill in the blanks using the correct options:

Group 18 elements have ---- valence electrons (4 / 8) with the exception of --- (He / Ne) with ----- electrons (2 / 8) in valence shell.

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37. Group II metals are called ____ metals. (alkali/alkaline earth).

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38. Draw different isomers having the following molecular formula:

(i) C_5H_{12} (chain)

(ii) C_4H_8 (position)

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39. What is denatured alcohol?

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40. Give two important uses of ethanol.

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41. Write equation for :

Preparation of ethanol by hydration of C_2H_4 .

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42. Write equation for :

Preparation of acetic acid from ethanol.

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43. Name the method by which following compounds can be prepared:

Select the appropriate method from the following list Neutralization, direct combination, precipitation, metal + acid - use a method only once.

Sodium sulphate

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44. Name the method by which following compounds can be prepared:

Select the appropriate method from the following list Neutralization, direct combination, precipitation, metal + acid - use a method only once.

Silver chloride

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45. Name the method by which following compounds can be prepared:

Select the appropriate method from the following list Neutralization, direct combination, precipitation, metal + acid - use a method only once.

Iron sulphide.



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46. How will you distinguish between following pairs of compounds using NH_4OH .

Copper sulphate and iron(II) sulphate.



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47. How will you distinguish between following pairs of compounds using NH_4OH .

Zinc nitrate and lead nitrate.



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48. How will you distinguish between following pairs of compounds using NH_4OH .

Iron(II) sulphate and iron(III) sulphate.



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49. Name:

A greenish yellow gas with pungent smell.

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50. Name:

An oxide which is yellow when hot and white when cold.

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51. Name:

A chemical used to deplete ozone layer.

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52. Name:

A crystalline salt without water of crystallization.



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53. This metal is a liquid at room temperature.



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54. Name one:

non-metal which is a conductor of electricity.



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55. Name one:

neutral oxide.



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56. Name one:

metallic oxide which cannot be reduced by hydrogen.



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57. Name one:

non-metal which has lustre.



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58. Name the chief ore of aluminium. Describe briefly the extraction of aluminium from this ore.



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59. Name the process used to concentrate the cryolite ore



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60. The function of adding cryolite in the electrolytic reduction of alumina by Hall-Heroult process is to :

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61. Give cathode and anode reactions involved in extraction of aluminium from cryolite

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62. Name the process used for the concentration of zinc blende.

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63. Draw a neat and well labelled diagram for the silver plating on an iron spoon.



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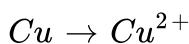
64. Copy and Complete the following table related to electrolysis :

S. No.	Name of electrolyte	Name of Cathode	Name of Anode	Product at Cathode	Product at Anode
(i)	CuSO_4 (aq)	Copper	Copper	—	—
(ii)	PbBr_2 (molten)	Platinum	Platinum	—	—



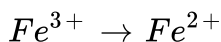
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65. Classify the following as oxidation and reduction reaction, also complete the reaction.



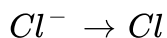
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66. Classify the following as oxidation and reduction reaction, also complete the reaction.



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67. Classify the following as oxidation and reduction reaction, also complete the reaction.



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68. A compound has the following percentage composition by mass :

Carbon = 54.55%, Hydrogen = 9.09% and Oxygen = 36.26%.

Its vapour density is 44. Find the Empirical and molecular formula of the compound.

(H = 1, C = 12, O = 16)

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69. Draw the Lewis dot structure of the following molecules

(i) Methyl alcohol (CH_3OH)

(ii) Ammonia molecule (NH_3)

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70. Give the electron dot structure of the following:



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71. Give the electron dot structure of the following:



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72. Compare the properties of covalent and electrovalent compounds on the following .

(A) solubility .

(B) Structure .



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Section II

1. The following questions refer to the periodic table :

Name the second last element of the period 3.



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