

India's Number 1 Education App

CHEMISTRY

BOOKS - EVERGREEN CHEMISTRY (ENGLISH)

PRACTICAL CHEMISTRY

Questions

1. Sodium hydroxide solution is added first in a small quantity, then in excess to the aqueous

salt solutions of copper [II] sulphate, zinc nitrate, lead nitrate, calcium chloride and iron [III] sulphate. For each of the aqueous salt solutions, state - a] the colour of the precipitate when NaOH is added in a small quantity,b] the nature of precipitate [i.e. soluble or insoluble, when NaOH is added in excess.



2. The questions below refer to the following salt solutions listed A to F:- A: Copper nitrate B: Iron [II] sulphate C: Iron [III] chloride D: Lead nitrate E: Magnesium sulphate F: Zinc chloride. i) Which two solutions will give a white precipitate when treated with dilute hydrochloric acid followed by barium chloride solution. [i.e. white ppt. insoluble in dil. HCI] ii) Which two solutions will give a white ppt. when treated with dil. $HNO_3 \& AgNO_3$ soln. iii) Which soln. will give a white ppt. when either dil. HCl or dil. H_2SO_4 , is added to it.

iv) Which soln. becomes a deep/inky blue colour when excess of ammonium hydroxide is added to it.

v) Which solution gives a white precipitate

with excess ammonium hydroxide solution.

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From the list of substances given Ammonium sulphate, Lead carbonate, Chlorine,
 Copper nitrate, Ferrous sulphate – State: A

substance that turns moist starch iodide

paper blue.



4. What is observed when excess of ammonia

is passed through an aqueous solution of lead nitrate ?



5. Give one test each to distinguish between the following pairs of chemical solutions: i] $Zn(NO_3)_2\&Ca(NO_3)_2$ ii] $NaNO_3$ & NaCl iii]

Iron [III] chloride & copper chloride.



6. Give a reason why carbon dioxide and sulphur dioxide cannot be distinguished by using lime water.

7. Salts A, B, C, D & E undergo reactions i] to v] respectively. Identify the anion present in each salt.i] When $AqNO_3$ solution is added to a soln. of A, a white precipitate, insoluble in dilute nitric acid, is formed. ii] Addition of dil. HCl to B produces a gas which turns lead acetate paper black. iii] When a freshly prepared solution of $FeSO_4$ is added to a soln. of C and conc. H_2SO_4 is gently poured from the side of the test-tube, a brown ring is formed. iv] When dil. H_2SO_4 , is added to D a

gas is produced which turns acidified $K_2Cr_2O_7$ soln. from orange to green v] Addition of dil. HCl to E produced an effervescence. The gas produced turns limewater milky but does not effect acidified $K_2Cr_2O_7$ soln.

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8. How will the addition of barium chloride soln. help to distinguish between dil. HCI & dil. H_2SO_4

9. The salt which in solution gives a pale green ppt. with NaOH soln. & a white ppt. with barium chloride soln is:

A. Iron (III) sulphate

B. Iron (II) sulphate

C. Iron (II) chloride

D. Iron (III) chloride

Answer:



10. $CO_2\&SO_2$ gas can be distinguished using : i] moist blue litmus paper ii] lime water iii]

acidified $K_2 C r_2 O_7$ paper iv]none of above.

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11. Identify the substance 'R' based on the information given below:The pale green solid 'R' turns reddish brown

on heating. Its aqueous solution gives a white

precipitate with barium chloride solution. The

precipitate is insoluble in mineral acids.



12. Give one test each to distinguish between

the following pairs of chemical solutions : -

i] $ZnSO_4\&ZnCl_2$ ii] $FeCl_2\&FeCl_3$ iii]

Calcium nitrate soln. & Calcium chloride soln.



13. Name the compound which is responsible for the green coloration when sulphur dioxide is passed through acidified potassium dichromate solution.

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14. State your observation - i] A piece of moist blue litmus paper ii] paper soaked in potassium permanganate solution - is introduced in each case into a jar of sulphur dioxide.



15. Write the equation for the reaction of magnesium sulphate solution with barium chloride solution.



16. Choose from the list of substances -Acetylene gas, aqua fortis , coke , brass ,barium chloride , bronze, platinum. An

aqueous salt solution used for testing

sulphate radical.



17. Name - The gas which turns acidified

potassium dichromate clear green.

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18. Identify the anion present in the following compounds:

 i] Compound X on heating with copper turnings & conc. sulphuric acid liberates a reddish brown gas.

ii] When a solution of compound Y is treated with silver nitrate solution a white precipitate is obtained which is soluble in excess of ammonium hydroxide solution.

iii] Compound Z which on reacting with dilute
sulphuric acid liberates a gas which turns lime
water milky, but the gas has no effect on
acidified potassium dichromate solution.
iv] Compound L on reacting with barium
chloride solution gives a white precipitate

insoluble in dilute hydrochloric acid or dilute

nitric acid.



19. State one chemical test between each of the following pairs: i] Sodium carbonate & Sodium sulphite ii] Ferrous nitrate & Lead nitrate iii] Manganese dioxide & Copper (II) oxide.



20. State one observation: A zinc granule is

added to copper sulphate solution.



21. Give balanced equation for the reaction : Silver nitrate solution & sodium chloride solution.

22. Give a chemical test to distinguish between the following pairs of chemicals: i] Lead nitrate solution & zinc nitrate solution. ii] Sodium chloride solution & sodium nitrate solution.



23. From $A:CO, B:CO_2, C:NO_2, D:SO_3$ -

State which will not produce an acid on reaction with water.

24. Distinguish between: Sodium nitrate & sodium sulphite [using dilute sulphuric acid]

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25. State your observation: When moist starch

iodide paper is introduced into chlorine gas.

26. The flame test with a salt P gave a brick red

flame. What is the cation in P.

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27. Gas Q turns moist lead acetate paper silvery black. Identify Q. pH of R is 10. What kind of substance is R.

28. Select the gas that has a characteristic rotten egg smell. [ammonia,ethane, hydrogenchloride, hydrogensulphide, ethyne] ·



29. State one relevant observation: When hydrogen sulphide gas is passed through lead acetate solution.



30. Identify the anion present in each of the following compounds - A, B, C:

i] Salt'A' reacts with conc. H_2SO_4 producing a gas which fumes in moist air & gives dense fumes with ammonia.

ii] Salt 'B' reacts with dil. H_2SO_4 producing a gas which turns lime water milky but has no effect on acidified potassium dichromate solution.

iii] When barium chloride soln. is added to salt soln. 'C' a white precipitate insoluble in dil. HCl is obtained.



31. Identify the cation present in each of the following compounds-W,X,Y,Z:

i] To solution, 'W', ammonium hydroxide is added in minimum quantity first and then in excess. A dirty white precipitate is formed which dissolves in excess to form a clear solution.

ii] To solution 'X' ammonium hydroxide is added in minimum quantity first and then in excess. A pale blue precipitate is formed which dissolves in excess to form a clear inky blue solution.

iii] To solution 'Y' a small amount of sodium hydroxide is added slowly and then in excess.A white insoluble precipitate is formed. iv] To salt 'Z' - $Ca(OH)_2$ soln. is added & heated. A pungent smelling gas turningmoist red litmus paper blue is obtained



32. Identify the cations in each of the following cases:

i] NaOH solution when added to the solution

'A' - gives a reddish brown precipitate.

ii] NH_4OH solution when added to the solution 'B' - gives a white ppt which does not dissolve in excess.

jii] NaOH solution when added to the solution

'C' - gives a white ppt which is insoluble in excess.

33. Choose the correct answer from the options - A chloride which forms a precipitate that is soluble in excess of ammonium hydroxide, is: A. Calcium Chloride B. Ferrous chloride C. Ferric chloride D. Copper chloride

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34. Identify the substance underlined, in the

following case :

Cation that does not form a precipitate with

ammonium hydroxide but forms one with

sodium hydroxide.



35. Identify the salts P & Q from the observations given below: i] On performing the flame test salt P produces a lilac coloured flame & its solution gives a white precipitate with silver nitrate solution, which is soluble in ammonium hydroxide solution. ii] When dilute HCl is added to a salt Q, a brisk effervescence is

produced and the gas turns lime water milky. When NH_4OH solution is added to the above mixture [after adding dilute HCI], it produces a white precipitate which is soluble in excess NH_4OH solution.

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36. State one relevant observation - Barium chloride solution is slowly added to sodium sulphate solution.

37. Give a chemical test to distinguish between the following pairs of chemicals: i] Lead nitrate solution & zinc nitrate solution. ii] Sodium chloride solution & sodium nitrate solution.

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38. State one observation for the following:

Lead nitrate is heated strongly in a test tube.

39. Distinguish between the following pairs of compounds using the reagent given in the bracket:

i] Manganese dioxide & copper [II] oxide [using concentrated HCI] Activate Windd ii] Ferrous sulphate solution & ferric sulphate solution. [using sodium hydroxide soln.]

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Additional Questions

1. The following materials are provided solutions of cobalt chloride, ammonia, potassium permanganate, lime water, starchiodide, sodium hydroxide, lead acetate, potassium iodide. Also provided are litmus and filter papers, glowing splinters and glass rods. Using the above how would you distinguish between: a] a neutral, acidic and a basic gas b] oxygen and hydrogen gas. c] carbon dioxide and sulphur dioxide gas d] chlorine and hydrogen chloride gas e) hydrogen sulphide and nitrogen dioxide gas f] ammonia and carbon dioxide gas g] zinc carbonate and

potassium nitrate h] hydrated copper sulphate and anhydrous copper sulphate i] ammonium sulphate and sodium sulphate.

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2. Identify the cation (positive ion) and anion (negative ion) in - 'A','B' & 'C'. Also identify P, Q,
R, S, T, U, V, W.

a] Substance 'A' is water soluble and gives a curdy white precipitate 'P' with silver nitrate solution. 'P' is soluble in ammonium hydroxide but insoluble in dil. HNO_3 . Substance 'A' reacts with ammonium hydroxide solution to give a white precipitate ' soluble in excess of NH_4OH .

b] A solution of substance 'B' is added to barium chloride solution. A white ppt. 'R' is formed, insoluble in dil. HCl or HNO_3 . A dirty green ppt. 'S' is formed on addition of ammonium hydroxide to a solution of 'B' and the precipitate is insoluble in excess of ammonium hydroxide.

c] Substance 'C' is a coloured, crystalline salt which on heating decomposes leaving a black residue 'T'. On addition of copper turnings and conc. H_2SO_4 to 'C' a coloured acidic gas 'U' is evolved on heating. A solution of 'C' is added to NaOH soln. until in excess. A pale blue ppt. 'P' is obtained insoluble in excess of NaOH A solution of 'C' is then added to NH_4OH soln. in excess to give an inky blue solution 'V'. A solution of 'C' is warmed and hydrogen sulphide gas is passed through it. A black ppt. 'W' appears.

1. Match the 'cations' A to F & the solubility of

ppt. G or H with the correct colours from 'X' &

'Y'.

'X'ON ADDITION OF Ca NaOH IN EXCESS		Cation	Solubility of ppt. in excess	Y'ON ADDITION OF NH4OH IN EXCESS	Cation	Solubility of ppt. in excess
1. 2. 3. 4. 5.	Reddish brown ppt. Pale blue ppt. Gelatinous white ppt. Chalky white ppt. Milky white ppt.	A: Ca ²⁺ B: Zn ²⁺ C: Fe ²⁺ D: Cu ²⁺ E: Pb ²⁺	G: Soluble H: Insoluble	 6. Dirty green ppt. 7. No. ppt. formed 8. Gelatinous white ppt. 9. Pale blue ppt. 10. Chalky white ppt. 	A: Ca ²⁺ B: Zn ²⁺ C: Fe ²⁺ D: Cu ²⁺ E: Pb ²⁺	G:Soluble H:Insoluble
		F: Fe ³⁺		,	F: Fe ³⁺	

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2. Select the correct 'anion' of a salt from the

anions given, which matches with description 1

to 5.

A:

 $CO_3^{2-}, B: NO_3^{1-}, C: SO_4^{2-}, D: Cl^-, E: S^2$ 1. The salt soln, reacts with $AgNO_3$ soln. to give a white ppt. insoluble in dil. HNO_3 . 2. The salt soln. reacts with $Ba(NO_3)2$ soln. to give a white ppt. insoluble in dil. HNO_3 . 3. The salt soln. reacts with $Ba(NO_3)_2$ soln. to give a white ppt. soluble in dil. HNO_3 but insoluble in dil. H_2SO_4 . 4. The salt reacts with dil. H_2SO_4 on heating

evolving a gas which turns $KMnO_4$ soln. pink to colourless.
5. The salt reacts with conc. H_2SO_4 on heating

evolving a coloured gas which turns potassium

iodide paper brown.



4. Give balanced equation for the conversions



5. Give balanced equation for the conversions A and B . Metallic salt $A \xrightarrow{BaCl_2}$ White precipitate insoluble in dil .HCl



7. Give balanced equation for the conversions A and B . Metallic salt $A \xrightarrow{BaCl_2}$ White precipitate insoluble in dil .HCl

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8. Complete the table given below :

Heat on		Gas evolved	Colour of gas	Odour of gas	Nature of gas	Solubility of gas in water	Colour of residue if any
1.	KNO3						
2.	(NH ₄) ₂ Cr ₂ O ₇				1/29		Contraction of the
3.	ZnCO ₃				1. 1. 2.	Loss Contact - State	States and
4.	Zn + dil. H ₂ SO ₄		1.1.1.1				
5.	Na ₂ S + dil. H ₂ SO ₄				10 42	the second	A State of the sta
6.	Na2SO3 + dil. H2SO4			10111.00	1984		115 Alt= 20
7.	NaCl + conc. H2SO4					- Andrew Street	a na
8.	NaNO3 + Cu + conc. H2SO4			1 C 1 1 1 1 1		1.12	
9.	MnO ₂ + conc. HCl	1.122			100	Carrow Carlo	State of the second
10.	NH4Ĉl + NaOH	1.2.2%			- 1.22		

5 Select the correct word from the words in bracket



9. Select the correct word from the words in

bracket

The solution which on heating with $CaCO_3$

evolves CO_2 gas. [conc. H_2SO_4 / dil. H_2SO_4 /

dil.HCI]



10. Select the correct word from the words in bracket

The solution which can be used to distinguish

an ammonium salt from a sodium salt.

 $\left[CuCl_2 \mathrm{soln} \, / \, NH_4 OH \, / \, dil. \, H_2 SO_4 \, / \, AgNO_3 \mathrm{soln}
ight]$



11. Select the correct word from the words in bracket

The pH of blood is around 7.4, of saliva is 6.5 and of acid rain is around 4.5. The solution which is slightly alkaline of the three. [saliva / acid rain / blood]

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12. Select the correct word from the words in

bracket

Decomposition

 $\left[\mathit{NaCl} \, / \, \mathit{NaHCO}_3 \, / \, \mathit{NaNO}_3
ight]$ by dil. H_2SO_4 ,

forms an unstable acid.



13. Select the correct word from the words in

bracket

A metal which reacts with an alkali to liberate

hydrogen. [iron/copper / aluminium]

1. The gas which burns with a blue flame and

gets extinguished with a pop sound.



2. The gas which rekindles a glowing splinter.



3. This gas turns lime water milky.



5. A gas which gives dense white fumes with rod dipped in HCl.





6. A gas which turns acidified potassium dichromate green.

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7. A gas which turns lead acetate solution black.

8. A covalent gas which behaves as good

conductor in aqueous solution.



10. A gas which is formed during lightning.

1. Match the colour of the salts with their ions :

1.	Calcium	(a)	Green
2.	Ferrous	(b)	Gelatinous white
3.	Ferric	(c)	Blue
4.	Lead	(d)	White
5.	Zinc	(e)	Reddish brown
6.	Copper	(f)	Cherry white



Worksheet Tick The Correct Options

1. Ring test is carried out for

(a)Sulphates

(b)Nitrates

(c)Chlorides

(d)None of these

A. Sulphates

B. Nitrates

C. Chlorides

D. None of these

Answer:



2. Category of compounds which liberate ammonia from ammonium salts :

A. Acid

B. Alkali

C. Salt

D. Water

Answer:





- B. Sulphur trioxide
- C. Sulphur monoxide
- D. None of these

Answer:

4. The solution formed when black CuO reacts

with HCl is

A. Black

B. Brown

C. Green

D. Blue

Answer:

5. Universal indicator produces ____

colour in neutral solution

a.Red

b.Yellow

c.Green

d.Blue

A. Red

B. Yellow

C. Green

D. Blue



Additional Questions For Practice

1. Salts A, B, C, D and E undergo reactions (i) to (v) respectively. Identify the anion present in these salts on the basis of these reactions. Tabulate your answers in the format given below:

(i) When silver nitrate solution is added to a

solution of A, a white precipitate, insoluble in dilute nitric acid, is formed.

(ii) Addition of dilute hydrochloric acid to B produces a gas which turns lead acetate paper black.

(iii) When a freshly prepared solution of ferrous sulphate is added to a solution of C and concentrated sulphuric acid is gently poured from the side of the test-tube, a brown ring is formed.

(iv) When dilute sulphuric acid is added to D a gas is produced which turns acidified potassium dichromate solution from orange to green.

(v) Addition of dilute hydrochloric acid to E produces an effervescence. The gas produced turns lime water milky but does not affect acidified potassium dichromate solution.





2. Salts P, Q,R,S,T,U and V undergo reactions (i) to (vii) respectively. Identify the cation present in these salts on the basis of these reactions. Tabulate your answer in the formate given below.

(i) When the salt Pis heated with sodium hydroxide solution a vigorous reaction takes place and a colourless gas is evolved with a pungent and suffocating smell that brings tears in our eyes. The evolved gas gives dense white fumes with a moist glass rod depped with hydrochloric acid.

(ii) Addition of sodium hydroxide solution to a solution of salt Q gives a thick white precipitae which is soluble in excess of sodium hydroxide solution to form a clear solution. (iii) Addition of ammonium hydroxide solution to a solution of salt R gives a dark blue precipitate which is soluble is excess of ammonium hydroxide solution to form an intense deep blue solution.

(iv) Addition of ammonium hydroxide solution to a solution of 5 gives a dirty green [bottle green] precipitate which is insoluble even in the excess of ammonium hydroxide solution.

(v) Addition of ammonium hydroxide solution to a solution of T gives a reddish brown (rust precipitate] precipitate which is insoluble even in the excess of ammonium hydroxide solution. (vi) Addition of ammonium hydroxide solution to a solution of V gives a geletaneous white precipitate which is soluble in excess of ammonium hydroxide solution to form a clear solution.

(vii) Addition of ammonium hydroxide solution to a solution of V gives no precipitate but it gives a chalky white precipitate with sodium hydroxide solution which is insoluble even in

the excess of sodium hydroxide solution.



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3. Salts K, L, M, N and O undergo reaction (i) to (v) respectively with different reagents given below. Identify the cation present in these salts on the basis of these reaction. Tabulate your answer in the format given below:

(i) Addition of potassium chromate solution to
 a solution of salt K gives a golden yellow
 precipitate.

(ii) Addition of potassium ferrocyanide
 solution to a solution of slat L gives a
 chocolate brown precipitate.

(iii) Addition of potassium ferricyanide solution to a solution of salt M gives an intese deep blue solution.

(iv) Addition of potassium ferrocyanide solution to a solution of O gives a bluish white

precipitate.





4. How will you distinguish between the

following pairs of gases:

Sulphur dioxide and Ammonia.



5. How will you distinguish between the

following pairs of gases:

Hydrogen sulphide and Hydrogen chloride.



6. How will you distinguish between the following pairs of gases:

Hydrogen chloride and Nitrogen dioxide.



7. How will you distinguish between the

following pairs of gases:

Hydrogen and Oxygen.

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8. The metallic ions (the cations) can be identify by performing flame test which is describe below.

"Make a paste of the given salt in concentrated hydrochloric acid. Load the paste on a clean platinum wire and introduce it in a nonluminous bunsen burner flame. Note the colour of the flame imparted by the flame. Tabulate your answer in the formate given below. The salt x imparts golden yellow flame. The salt y imparts lilac flame and the salt z imparts bright red flame.

SALT	COLOUR OF THE	METALLIC IONS	
	FLAME Colden Vellere	[CATION]	
x	Golden Yellow	a	
y	Liac	6	
z	Bright Red	3	

9. Match the following:

Column I	Chibithe gas is passed over hot from a din		
1. Acid salt	A. Ferrous ammonium sulphate		
2. Double salt	B. Sodium hydrogen sulphate		

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10. Describe all that you would observe when

the following compounds are heated.

Lead nitrate.

11. Describe all that you would observe when

the following compounds are heated.

Zinc carbonate.



12. Describe all that you would observe when

the following compounds are heated.

Copper carbonate.

13. Describe all that you would observe when

the following compounds are heated.

Lead nitrate crystals

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14. Describe all that you would observe when

the following compounds are heated.

Mercuric oxide.

15. Describe all that you would observe when

the following compounds are heated.

Ammonium chloride.



16. Describe all that you would observe when

the following compounds are heated.

Ammonium dichromate.

17. What happens when ammonium hydroxide and sodium hydroxide solutions are added one by one in turns to the solutions of:

Silver nitrate.



18. What happens when ammonium hydroxide

and sodium hydroxide solutions are added one

by one in turns to the solutions of :

Lead nitrate.

19. What happens when ammonium hydroxide and sodium hydroxide solutions are added one by one in turns to the solutions of :

Copper nitrate.



20. What happens when ammonium hydroxide and sodium hydroxide solutions are added one

by one in turns to the solutions of :

Zinc nitrate.



21. What happens when ammonium hydroxide

and sodium hydroxide solutions are added one

by one in turns to the solutions of :

Calcium nitrate.
22. What happens when ammonium hydroxide

and sodium hydroxide solutions are added one

by one in turns to the solutions of :

Ammonium chloride



23. What happens when ammonium hydroxide and sodium hydroxide solutions are added one by one in turns to the solutions of :

Ammonium dichromate.

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Questions From Previous Icse Board Papers 2007

1. Salts M, N, O, P and Q undergo reactiom (i) to (v) respectively.

Identify the cation present in these salts on the basis of these reaction. Tabulate your answer in the format given below.

1. When sodium hydroxide solution is added to the salt M, and heated strongly a colourless gas with a pungent smell is evolved which turm red litmus paper blue and gives dense white fumes with a moist glass rod with hydrochloric acid.

2. Addition of dilute hydrochloric acid to a solution of N gives a thick white precipitate which is soluble in hot water.

3. When ammonium hydroxide solution is added to the solution of 0 a light blue precipitate is obtained which is soluble in excess of ammonium hydroxide to form an inteme deep blue solution.

4. When ammonium hydroxide solution is added to the solution of P reddish brown

(mustard colour) precipitate is obtained which ,is insoluble even in the excess of ammonium hydroxide solution.

5. When sodium hydroxide solution is added to the solution of Q a which coloured gelatinous precipitate is obtained which is soluble in excess of sodium hydroxide to form a clear solution

Salt	Cation	out the set
М	1	
N	2	
0	2	
Р	2	
Q	2	



Questions From Previous Icse Board Papers 2008

1. Identify the following substances :

An alkaline gas which gives dense white fumes

with hydrogen chloride.

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2. Identify the following substances :

A dilute acid B which does not normally give

hydrogen when reacted with metals but does

give a gas when it reacts with copper.



3. Identify the following substances :

Gas C has an offensive smell like rotten eggs.

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4. Identify the following substances :

Gas D is a colourless gas which can be used as



5. Identify the following substances :

Liquid E can be dehydrated to produce ethene

gas.

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Questions From Previous Icse Board Papers 2009

1. A white solid P, on strong heating, decomposes to give reddish brown gas R and a residue Q. The residue R is yellow when hot and white when cold. The solution of white solid P in water gives white precipitate S, with concentrated sodium hydroxide. The white precipitate S dissolves in excess of sodium hydroxide solution to form colourless solution. Another sample of the solid P in water is mixed with ferrous sulphate solution and then to this solution are added a few drops of conc. sulphuric acid. A brown ring is formed at the

junction of liquids. Answer the following

questions:

Identify the solid P.

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2. A white solid P, on strong heating, decomposes to give reddish brown gas R and a residue Q. The residue R is yellow when hot and white when cold. The solution of white solid P in water gives white precipitate S, with concentrated sodium hydroxide. The white

precipitate S dissolves in excess of sodium hydroxide solution to form colourless solution. Another sample of the solid P in water is mixed with ferrous sulphate solution and then to this solution are added a few drops of conc. sulphuric acid. A brown ring is formed at the junction of liquids. Answer the following questions:

Name the residue Q.

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3. A white solid P, on strong heating, decomposes to give reddish brown gas R and a residue Q. The residue R is yellow when hot and white when cold. The solution of white solid P in water gives white precipitate S, with concentrated sodium hydroxide. The white precipitate S dissolves in excess of sodium hydroxide solution to form colourless solution. Another sample of the solid P in water is mixed with ferrous sulphate solution and then to this solution are added a few drops of conc. sulphuric acid. A brown ring is formed at the

junction of liquids. Answer the following

questions:

Name the coloured gas R.

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4. A white solid P, on strong heating, decomposes to give reddish brown gas R and a residue Q. The residue Q is yellow when hot and white when cold. The solution of white solid P in water gives white precipitate S, with concentrated sodium hydroxide. The white

precipitate S dissolves in excess of sodium hydroxide solution to form colourless solution. Another sample of the solid P in water is mixed with ferrous sulphate solution and then to this solution are added a few drops of conc. sulphuric acid. A brown ring is formed at the junction of liquids. Answer the following questions:

Name the white precipitate S.



5. A white solid P, on strong heating, decomposes to give reddish brown gas R and a residue Q. The residue R is yellow when hot and white when cold. The solution of white solid P in water gives white precipitate S, with concentrated sodium hydroxide. The white precipitate S dissolves in excess of sodium hydroxide solution to form colourless solution. Another sample of the solid P in water is mixed with ferrous sulphate solution and then to this solution are added a few drops of conc. sulphuric acid. A brown ring is formed at the

junction of liquids. Answer the following questions:

Name the salt formed when S dissolves in

excess of sodium hydroxide.

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Questions From Previous Icse Board Papers 2010

1. The action of heat on the blue crystalline solid L gives a reddish brown gas M, a gas which re-lights a glowing splint and leaves a black residue. When gas N, which has a rotten egg smell, is passed through a solution of La black precipitate is formed.

Identify L, M and N (Name of formula)



2. The action of heat on the blue crystalline solid L gives a reddish brown gas M, a gas which re-lights a glowing splint and leaves a black residue. When gas N, which has a rotten egg smell, is passed through a solution of La black precipitate is formed.

Write the equation for the action of heat on L.



3. The action of heat on the blue crystalline solid L gives a reddish brown gas M, a gas which re-lights a glowing splint and leaves a black residue. When gas N, which has a rotten egg smell, is passed through a solution of La black precipitate is formed. Write the equation for the reaction between

the solution of L and the gas N.



Questions From Previous Icse Board Papers 2012

1. Identify the anion present in the following compounds : Compound Z which on reacting with dilute sulphuric acid liberates a gas which turns lime water milky, but the gas has no effect on acidified potassium dichromate

solution.



Questions From Previous Icse Board Papers 2013

1. Give a chemical test to distinguish between

the following pair of compounds:

Carbon dioxide gas and sulphur dioxide gas.



 State your observation in the following case :
When moist starch iodide paper is introduced into chlorine gas.

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2. State the inference drawn from the following observations :

On carrying out the flame test with a salt P, a

brick red flame was obtained. What is the

cation in P?



3. State the inference drawn from the

following observations :

A gas Q turns moist lead acetate paper silvery

black. Identify the gas Q.



4. State the inference drawn from the following observations :

pH of liquid R is 10. What kind of substance is R

?



5. State the inference drawn from the following observations :

Salt S is prepared by reacting dilute sulphuric

acid with copper oxide. Identify S.

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Questions From Previous Icse Board Papers 2015

1. Identify the anion present in each of the following compounds :

A salt M on treatment with concentrated sulphuric acid produces a gas which fumes in moist air and gives dense fumes with ammonia.



2. Identify the anion present in each of the following compounds :

A salt D on treatment with dilute sulphuric acid produces a gas which turns lime water milky but has no effect on acidified potassium dichromate solution.



3. Identify the anion present in each of the

following compounds :

When barium chloride solution is added to salt

solution E a white precipitate insoluble in

dilute hydrochloric acid is obtained



4. The following table shows the tests a student performed on four different aqueous solutions which are X, Y, Z and W. Based on the observations provided, identify the cation present :

Chemical test	Observation	Conclusion
To solution X, ammonium hydroxide is added in minimum quantity first and then in excess.	A dirty white precipitate is formed which dissolves in excess to form a clear solution.	(1)
To solution Y, ammonium hydroxide is added in minimum quantity first and then in excess.	A pale blue precipitate is formed which dissolves in excess to form a clear inky blue solution.	(ii)
To solution W, a small quantity of sodium hydroxide solution is added and then in excess.	A white precipitate is formed which remains insoluble.	(111)
To a salt Z, calcium hydroxide solution is added and then heated.	A pungent smelling gas turning moist red litmus paper blue is obtained.	(iv)



Questions From Previous Icse Board Papers 2016

1. State your observation when :

Barium chloride solution is mixed with Sodium

Sulphate Solution.



Questions From Previous Icse Board Papers 2017

1. Identify the salts P from the observations given below:

On performing the flame test salt P produces a lilac coloured flame and its solution gives a white precipitate with silver nitrate solution, which is soluble in Ammonium hydroxide solution.

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2. Identify the salts Q from the observations given below:

When dilute HCl is added to a salt Q, a brisk effervescence is produced and the gas turns lime water milky. When NH_4OH solution is added to the above mixture (after adding dilute HCl), it produces a white precipitate which is soluble in excess NH_4OH solution.

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