Experiment 1:

You are provided with substance X, which contains **two cations** and **two anions**. Carryout the following tests to identify them. Identify any gases which may be evolved. Write your observations and deductions in the table below:

Required: Substance X is a mixture of (NH₄)₂SO₄ & ZnCO₃

TESTS	OBSERVATIONS	DEDUCTIONS
a)Heat two spatula		
endfuls of X in a dry		
test tube strongly until		
no further change.		
b)To two spatula		
endfuls of X, add 6cm ³		
of water. Shake well		
and then filter. Keep		
both filtrate and residue		
separate.		
c)To the filtrate, add a		
few drops of dilute		
nitric acid until the	^(
solution is just acidic.		
Divide the acidic		
solution into three parts.	41 V	
(i)To the 1 st portion, add		
dil NaOH soln drop –	A	
wise until in excess and	A +	
warm.		
	.) '	

(ii)To the 2 nd part, add 3		
drops of Pb(NO ₃) ₂ soln	A 4	
and warm		
(iii)Carryout a test of		
your own choice to	* . (* .)	
third part to confirm		
one of the anions		
present in X		
present in A		
•••••••••••••••••••••••••••••••••••••••		
•		
c)Dissolve the residue		
obtained in (b) add		
about 5cm ³ of dil nitric		
acid. Divide the		
resultant solution into 4		
parts.		
(i)To the 1st part, add dil		
NaOH soln drop – wise		
until in excess		
(ii)To the 2 nd part, add		
dil ammonia soln drop -		
wise until in excess		
(iii)To the 3 rd part, add		
2-3 drops of KI soln		
2 3 drops of 141 som		
(iv)To the 4 th part, add		
solid NH ₄ Cl followed		
by 3-4 drops of		
Na ₂ HPO ₄ soln and then		
dil ammonia drop -wise		
until in excess		

d) Cations present in X
and
Anions present in X
and
Experiment 2:

You are provided with substance W, which contains **two cations** and **two anions**. Carryout the following tests to identify them. Identify any gases which may be evolved. Write your observations and deductions in the table below: Write your observations and deductions in the table below:

Required: Substance W is a mixture of PbO, NaCl & $Ba(NO_3)_2$

TESTS	OBSERVATIONS	DEDUCTIONS
a)To two spatula		
endfuls of W in a dry		X
test tube, add conc		
H ₂ SO ₄ acid and warm.		
b)To two spatula		
endfuls of W, add 8cm ³		
of water. Shake well		
and then filter. Keep		
both filtrate and residue	.1 ()	
separate.		
c)Divide the filtrate into		
7 parts.		
(i) To the 1 st part, add		
dil NaOH soln drop –		
wise until in excess		
	,	

(ii) To the 2 nd part, add		
dil ammonia soln drop -	4 4	
wise until in excess		
(iii)To the 3 rd part, add		
Na ₂ SO ₄ soln	*. () '	
(iv)To the 4 th part, add		
K ₂ Cr ₂ O ₇ soln followed))	
by dil HCl and then dil		
H ₂ SO ₄		
(v)To the 5th part, add 1-		
2 drops of Pb(NO ₃) ₂		
soln and warm		
(vi)To the 6th part, add		
AgNO ₃ soln followed		
by dil HNO ₃		
(vii)To the 7 th part, add		
zinc metal powder		
followed by excess		
NaOH soln and then		
warm		
(iv)To the 4 th part, add		
solid NH ₄ Cl followed		
by 3-4 drops of		
Na ₂ HPO ₄ soln and then		
dil ammonia drop -wise		
until in excess		
d)Wash the residue		
obtained in (b) with		
water and dissolve it in		
5cm ³ of dil HNO ₃ and		
warm the mixture.		
Divide it into 4 parts		
after cooling		

(i)To the 1st part, add dil		
NaOH soln drop – wise		
until in excess		
(ii) To the 2 nd part, add		
dil ammonia soln drop -		
wise until in excess		
(iii)To the 3 rd part, add		
Na ₂ SO ₄ soln		
(iv)To the 4 th part,		
carryout a test of your		
own choice to confirm		
the second cations		
present in X		
		10
Cations present in X		
<u>-</u>		
•••••	and	
Anions present in X		
	and	
		7
Experiment3:	1 (7)	
You are provided wit	th substance W, which c	contains two
cations and two anio	ons. Carryout the follow	ing tests to
identify them. Identi	fy any gases which may	be evolved.
=	ons and deductions in th	
	ons and deductions in the	

Required: Substance R is a mixture of Zn(CH₃COO)₂;

TESTS	OBSERVATIONS	DEDUCTIONS
a) Heat 2 spatula endfuls of R in a dry test tube strongly until no further change.		
b)To two spatula endfuls		
of W in a dry test tube, add		
conc H ₂ SO ₄ acid and		
c)To two spatula endfuls		
of W, add 8cm ³ of water.		
Shake well and then filter.		
Keep both filtrate and		
residue separate. Divide		
the filtrate into 8 parts.		
(i) To the 1 st part, add dil		
NaOH soln drop – wise		
until in excess (ii)To the 2 nd part, add 2-3		
drops of KI soln		
(iii) To the 3 rd part, add dil		
ammonia soln drop -wise		
until in excess		
(iv) To the 4 th part,		
carryout a test of your own		
choice to confirm the		
second cations present in R		
K		

Na₂SO₃; CuO

(v)To the 5 th part, add		
neutral FeCl ₃ soln and		
heat		
(vi)To the 6 th part, add 2-3		
drops of Pb(NO ₃) ₂		
followed by dil HNO ₃		
(vii)To the 7 th part, add		
1cm ³ of dil HCl and warm		
(viii)To the 8 th part, add		
acidified KMnO ₄ soln		
d)To the residue obtained		
in (c) wash with water and		
then add 5cm ³ of dil HNO ₃		
and warm gently to		
dissolve. Divide it into 4		A 0
parts after cooling		
(i) (i) To the 1 st part, add		X
dil NaOH soln drop – wise		
until in excess		
(ii)To the 2 nd part, add zinc		
metal powder and warm		
gently.		7
(iii) To the 3 rd part, add 2-3		
drops of KI soln	1	Y
Cations magant in D	Y	
Cations present in R	√ ♦	A 1
	•••••	And

Anions present in R	
	and

Experiment4:

You are provided with substance W, which contains **two cations** and **two anions**. Carryout the following tests to identify them. Identify any gases which may be evolved. Write your observations and deductions in the table below: Write your observations and deductions in the table below:

Required: Substance T is a mixture of KI; Ba(NO₃)₂ and CuO

	TESTS	OBSERVATIONS	DEDUCTIONS
	a)To two spatula endfuls		
	of W in a dry test tube,		
	add conc H2SO4 acid		
,	and warm.		
	b)To 3 spatula endfuls		
	of T, add 8cm ³ of water.		
	Shake well and then		
	filter. Keep both filtrate		
	and residue separate.		
	Divide the filtrate into 8		
	parts.		
	(i) To the 1st part, add		
	dil NaOH soln drop –		
	wise until in excess		
	To the 2 nd part, add dil		
	ammonia soln drop -		
	wise until in excess		
	(iii) To the 3 rd part, dil		
	H ₂ SO ₄ acid		
	(iv) To the 4 th part,		
	carryout a test of your		

1	Ī	1
own choice to confirm		
the second cations		
present in T		
v)To the 5 th part, add		
aluminium metal		
powder followed by		
excess dil NaOH soln		
and warm		
vi)To the 6 th part, add		
Pb(NO ₃) ₂ soln		
vii)To 7 th part, add		
AgNO ₃ soln		
viii)To the 8 th part, add a		A .
spatula endful of		10
bleaching powder or		
soln followed by 1cm ³		
of dil HNO ₃ and 1cm ³		
of chloroform and shake		
gently.		
d)Wash the residue		
obtained in (c) with		
water and then add	4.0	
about 5cm ³ dil HNO ₃	.1 V) "
and warm gently to		
dissolve. Divide the		
resultant soln into 3		
parts, after cooling		
(i)To the 1 st part, add dil		
NaOH soln drop – wise	7	
until in excess		
until III CACCSS		

ii)To the 2 nd part, add
magnesium metal
powder and leave to
stand
iii)To the 3 rd part, add 2-
3 drops of KI soln
followed by Na ₂ S ₂ O ₃
soln
Cations present in T
and
Anions present in T
and
Experiment5:
You are provided with substance W, which contains two
cations and two anions. Carryout the following tests to
identify them. Identify any gases which may be evolved.
Write your observations and deductions in the table below:
•
Write your observations and deductions in the table below:
Required: Substance Q is a mixture of ZnCO ₃ ; PbO; Na ₃ PO ₄

TESTS	OBSERVATIONS	DEDUCTIONS
a)To 2 spatula endfuls of		
Q, add 7cm ² of water		
and shake well to		
dissolve. Filter and keep		
both filtrate and residue		
b)To the filtrate in (a)		
add a few drops of dil		
nitric acid until the soln		

is just acidic. Divide the acidic soln into 4 parts. (i)To the 1 st part, add Pb(NO ₃) ₂ soln and warm (ii)To the 2 nd part, add Ba(NO ₃) ₂ soln		
(iii)To the 3 rd part, add 2-3 drops of AgNO ₃ soln		
(iv)To the 4 th part, add ammonium molybdate soln followed by Conc HNO ₃ and warm		
c) Wash the residue obtained in (a) with water and then add about 5cm³ dil HNO₃ and warm gently to dissolve and then cool. To 4cm³ of the cold soln, add ammonia soln drop-wise until in excess, shake well and then filter. Keep both the filtrate and residue separate.	4	
d)To 4cm³ of the filtrate in (c) add dil HNO₃ drop -wise until the soln is just acidic. Divide the resultant soln into 4 parts (i) To the 1 st part, add dil NaOH soln drop – wise until in excess		

(ii)To the 2 nd part, add		
KÍ soln	A 4	
(iii) To the 3 rd part, add		
dil ammonia soln drop -		
wise until in excess	* . (* .)	
(iv) To the 4 th part,	10	
carryout a test of your		
own choice to confirm))	
the cations present in Q		
·		
•		
e)Wash the residue		
obtained in (c) with dil		
ammonia soln and then		
add 5cm ³ of dil HNO ₃ .		
Divide the resultant soln		
into 4 parts		
(i) To the 1 st part, add dil		
NaOH soln drop – wise		
until in excess		
To the 2 nd part, add dil		
ammonia soln drop -		
wise until in excess		
iii)To the 3 rd part, add		
sodium sulphate soln		
(iv) To the 4 th part,		
carryout a test of your		
own choice to confirm		
the cations present in Q		

Cations present in	Q			1v) 10 the 4" part,		
• • • • • • • • • • • • • • • • • • • •	and	• • • • • • • • • • • • • • • • • • • •		add excess NaOH	44	
Anions present in Q		soln followed by				
•		H ₂ O ₂ soln and warm				
and			then add	* . () '		
Experiment7				amylalcohol		
You are provided v	vith substance U which	n contains two		followed by dil		
cations and two ar	nions. Carryout the fol	lowing tests to		H_2SO_3		
identify them. Rec	ord any gases which m	nav be evolved.		v) To the 5 th part,		
•	e U is a mixture of Ci	<u> </u>		add Ba(NO ₃) ₂ soln		
Required. Substance		12(504)3, MgCO3		followed by dil		
THE CITY OF	ODGEDYN EYOYG	D T D T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T	1	HNO ₃		
TESTS	OBSERVATIONS	DEDUCTIONS		vi)To the 6 th part,		
- \T- 21-				carryout a test of		
a)To 2 spatula				your own choice to		
endfuls of U, add				confirm the anion		
7cm ² of water and				present in U.		
shake well to		A -		····		
dissolve. Filter and						
keep both filtrate						
and residue						
b)Divide the filtrate						
into obtained in (a)				c)Wash the residue		
above into 6 parts				obtained in (a) with		
(i)To the 1 st part, add				water and dissolve it		
dil NaOH soln drop				in about 4cm ³ of dil		
wise until in	1 (HNO ₃ . Divide the		
excess	, 1 V	, ,		resultant soln into 4		
ii)To the 2 nd part,				parts		
add dil ammonia				i)To the 1st part, add		
soln drop -wise until	•			dil NaOH soln drop		
in excess				– wise until in		
iii)To the 3 rd part,				excess		
add Na ₂ CO ₃ soln	7					
drop-wise until in						
excess	Y					

ii) To the 2 nd part,	keep both filtrate and
add dil ammonia	residue
soln drop -wise until	b)Divide the filtrate
in excess	into obtained in (a)
iii)To the 3 rd part,	above into 3 parts
add Na ₂ SO ₄ soln	(i)To the 1 st part, add
	lead (II) nitrate soln
iv)To the 4 th part,	followed by dil HNO ₃
carryout a test of	ii)To the 2 nd part, add
your own choice to	Ba(NO ₃) ₂ soln
confirm the cation	followed by dil HNO ₃
present in U.	iii) To the 3 rd part,
·	carryout a test of your
	own choice to
	confirm the anion
	present in Z.
Cations present in U	
and	
	Y
Anions present in U	c)Wash the residue
and	obtained in (a) with
	water and then add
Experiment8	6cm ³ of dil HNO ₃ and
You are provided with substance Z which contains two	warm to dissolve,
cations and two anions. Carryout the following tests to	allow it to cool down.
	To 4cm ³ of the cold
identify them. Record any gases which may be evolved	resultant soln, add
Required: Substance Z is a mixture of ZnCO ₃ ; MgO; Na ₂ C ₂ O ₄	7cm ³ of NaOH soln
	drop-wise, shake
TESTS OBSERVATIONS DEDUCTIONS	strongly, and then
a)To 2 spatula endfuls	filter. Keep both
of Z, add 7cm ² of	filtrate and residue
water and shake well	<u> </u>

to dissolve. Filter and

i)To the 1st part, add dil NaOH soln drop—wise until in excess ii)To the 2nd part, add Na ₂ CO ₃ soln drop-wise until in excess iii)To the 3nd part, add dil ammonia soln drop—wise until in excess iii)To the 4nd part, add dil ammonia soln drop—wise until in excess iv) To the 4nd part, carryout a test of your own choice to confirm the cation present in Z. c)Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop—wise until in excess ii)To the 2nd part, add dil ammonia soln drop—wise until in excess			
wise until in excess ii) To the 2 nd part, add Na ₂ CO ₃ soln drop- wise until in excess iii) To the 3 rd part, add dil ammonia soln drop -wise until in excess iv) To the 4 th part, carryout a test of your own choice to confirm the cation present in Z. e) Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i) To the 1 st part, add dil NaOH soln drop - wise until in excess ii) To the 2 nd part, add dil ammonia soln drop -wise until in	i)To the 1st part, add		
ii)To the 2nd part, add Na ₂ CO ₃ soln drop- wise until in excess iii)To the 3rd part, add dil ammonia soln drop -wise until in excess iv) To the 4th part, carryout a test of your own choice to confirm the cation present in Z. e)Wash the residue obtained in (c) with NaOH soln and then add 4cm ³ of dil HNO ₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop - wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in	dil NaOH soln drop –		
Na ₂ CO ₃ soln drop- wise until in excess iii) To the 3 rd part, add dil ammonia soln drop -wise until in excess iv) To the 4 th part, carryout a test of your own choice to confirm the cation present in Z.	wise until in excess		
wise until in excess iii) To the 3 rd part, add dil ammonia soln drop -wise until in excess iv) To the 4 th part, carryout a test of your own choice to confirm the cation present in Z	ii)To the 2 nd part, add		
iii)To the 3 rd part, add dil ammonia soln drop -wise until in excess iv) To the 4 th part, carryout a test of your own choice to confirm the cation present in Z.	Na ₂ CO ₃ soln drop-		
add dil ammonia soln drop -wise until in excess iv) To the 4 th part, carryout a test of your own choice to confirm the cation present in Z. e) Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i) To the 1 st part, add dil NaOH soln drop - wise until in excess ii) To the 2 nd part, add dil ammonia soln drop -wise until in	wise until in excess		
add dil ammonia soln drop -wise until in excess iv) To the 4 th part, carryout a test of your own choice to confirm the cation present in Z. e) Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i) To the 1 st part, add dil NaOH soln drop - wise until in excess ii) To the 2 nd part, add dil ammonia soln drop -wise until in	iii)To the 3 rd part,		
excess iv) To the 4 th part, carryout a test of your own choice to confirm the cation present in Z. e) Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i) To the 1 st part, add dil NaOH soln drop — wise until in excess ii) To the 2 nd part, add dil ammonia soln drop -wise until in			
iv) To the 4 th part, carryout a test of your own choice to confirm the cation present in Z. e) Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i) To the 1 st part, add dil NaOH soln drop — wise until in excess ii) To the 2 nd part, add dil ammonia soln drop -wise until in	drop -wise until in		
carryout a test of your own choice to confirm the cation present in Z. e) Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i) To the 1st part, add dil NaOH soln drop—wise until in excess ii) To the 2nd part, add dil ammonia soln drop—wise until in	excess		
carryout a test of your own choice to confirm the cation present in Z. e) Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i) To the 1st part, add dil NaOH soln drop—wise until in excess ii) To the 2nd part, add dil ammonia soln drop—wise until in	iv) To the 4 th part,		
own choice to confirm the cation present in Z. e)Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop – wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in	-		
e)Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop – wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in			
e)Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop—wise until in excess ii)To the 2nd part, add dil ammonia soln drop—wise until in	confirm the cation		
e)Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop – wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in	present in Z.		
e)Wash the residue obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop—wise until in excess ii)To the 2nd part, add dil ammonia soln drop—wise until in			
obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop — wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in			
obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop — wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in			
obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop — wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in			
obtained in (c) with NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop — wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in			
NaOH soln and then add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop—wise until in excess ii)To the 2nd part, add dil ammonia soln drop—wise until in	e)Wash the residue		
add 4cm³ of dil HNO₃ shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop – wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in			
shake well to dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop – wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in			
dissolve. Divide the resultant soln into 4 parts i)To the 1st part, add dil NaOH soln drop – wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in	add 4cm ³ of dil HNO ₃		
resultant soln into 4 parts i)To the 1 st part, add dil NaOH soln drop – wise until in excess ii)To the 2 nd part, add dil ammonia soln drop -wise until in			
parts i)To the 1 st part, add dil NaOH soln drop – wise until in excess ii)To the 2 nd part, add dil ammonia soln drop -wise until in	dissolve. Divide the		
i)To the 1st part, add dil NaOH soln drop – wise until in excess ii)To the 2nd part, add dil ammonia soln drop -wise until in	resultant soln into 4	4 (
dil NaOH soln drop – wise until in excess ii)To the 2 nd part, add dil ammonia soln drop -wise until in	1	X	
dil NaOH soln drop – wise until in excess ii)To the 2 nd part, add dil ammonia soln drop -wise until in	i)To the 1st part, add		
ii)To the 2 nd part, add dil ammonia soln drop -wise until in	dil NaOH soln drop –		
dil ammonia soln drop -wise until in	wise until in excess	7	
dil ammonia soln drop -wise until in	ii)To the 2 nd part, add	_ 4	
excess	drop -wise until in		
	excess		

iii)To the 3 rd part, add		
Na ₂ SO ₄ soln	4.4	
iv)To the 4th part, add		
solid NH ₄ Cl followed	*. () '	
by 3 -4 drops of		
Na ₂ HPO ₄ soln and		
add ammonia soln))	
drop-wise until in		
excess		
Cations present in Z	7 	
		and
Anions present in Z		
*		and
		anu
4		
Experiment9		
±	ith substance G whic	ch contains two
You are provided w	ith substance G whic	
You are provided w cations and two and	ions. Carryout the fo	llowing tests to
You are provided w cations and two and identify them. Reco	ions. Carryout the ford any gases which n	llowing tests to nay be evolved
You are provided w cations and two and identify them. Reco	ions. Carryout the ford any gases which n	llowing tests to nay be evolved
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl TESTS	ions. Carryout the ford any gases which n	llowing tests to nay be evolved
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl TESTS a)To two spatula	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl TESTS a)To two spatula endfuls of G in a	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl TESTS a)To two spatula endfuls of G in a dry test tube, add 5	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl TESTS a)To two spatula endfuls of G in a dry test tube, add 5 drops of Conc	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl TESTS a)To two spatula endfuls of G in a dry test tube, add 5 drops of Conc H ₂ SO ₄ and warm	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl TESTS a)To two spatula endfuls of G in a dry test tube, add 5 drops of Conc H ₂ SO ₄ and warm b)To 2 spatula endfuls	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl TESTS a)To two spatula endfuls of G in a dry test tube, add 5 drops of Conc H ₂ SO ₄ and warm b)To 2 spatula endfuls of G, add 7cm ² of	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reconsequired: Substance Al2(SO4)3; NaCl TESTS a) To two spatula endfuls of G in a dry test tube, add 5 drops of Conc H ₂ SO ₄ and warm b) To 2 spatula endfuls of G, add 7cm ² of water and shake well	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reco Required: Substance Al2(SO4)3; NaCl TESTS a)To two spatula endfuls of G in a dry test tube, add 5 drops of Conc H ₂ SO ₄ and warm b)To 2 spatula endfuls of G, add 7cm ² of water and shake well to dissolve. To the	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;
You are provided w cations and two and identify them. Reconsequired: Substance Al2(SO4)3; NaCl TESTS a) To two spatula endfuls of G in a dry test tube, add 5 drops of Conc H ₂ SO ₄ and warm b) To 2 spatula endfuls of G, add 7cm ² of water and shake well	ions. Carryout the ford any gases which notes is a mixture of F	llowing tests to nay be evolved eSO ₄ .7H ₂ O;

NaOH soln drop-wise		
until in excess. Shake		
well and filter. Keep		
both filtrate and		
residue		
c)Dissolve the residue		
obtained in (b) in		
4cm ³ of dil H ₂ SO ₄ .		
Divide the resultant		
soln into 3 parts.		
i)To the 1st part, add		
dil NaOH soln drop –		
wise until in excess		
ii)To the 2 nd part, add		
dil ammonia soln		
drop -wise until in		
excess		
iii)To the 3 rd part, add		
a few drops of		10
K ₃ Fe(CN) ₆ (III) soln		
d)To the filtrate		
obtained in (b), add		
dil HNO ₃ drop-wise		
until the soln is just		
acidic. Divide the		
resultant soln into 7		
parts.		
i)To the 1st part, add		
dil NaOH soln drop –		
wise until in excess		
ii)To the 2 nd part, add		
dil ammonia soln		
drop -wise until in		
excess	7	
iii)To the 3 rd part, add		
dil H ₂ SO ₄	Y	
dii 112004		

iv) To the 4 th part,		
carryout a test of your	A 4	
own choice to		
confirm the cation		
present in G.	* () '	
))	
v)To the 5 th part, add		
lead (II) nitrate soln		
and warm		
vi) To the 6 th part,		
carryout a test of your		
own choice to		
confirm the anion		
present in G.		
vii)To the 7 th part, add		
AgNO ₃ soln followed		
by excess ammonia		
soln		
Cations present in C	j	
-		and
Aniana progent in C		• • • • • • • • • • • • • • • • • • • •
Anions present in G	ſ	1
		and