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Name	8

(Do not write your school/Centre Name or Number anywhere on this booklet)

545/3 CHEMSITRY (PRACTICAL) Paper 3 Jul/Aug 2023 2 hours



BUSOGA REGION JOINT EXAMINATION BOARD

Uganda Certificate of Education

CHEMISTRY PRACTICAL

Paper 3

INSTRUCTIONS TO CANDIDATES

Answer both questions. Answers are to be written in the spaces provided in this booklet All your working must be in blue or black ink. Any work done in pencil except drawings will not be marked

You are **not** allowed to use any reference books (i.e. text books, booklets on qualitative analysis etc.)

All working must be clearly shown

Mathematical tables and silent non-programmable calculators may be used

Q.1		
Q.2	, .	
Total		

TURN OVER

1.	You are provided with the following;				
E	BA1, which is a solution made solution. BA2 which is a 0.1M hydrochle You are required to determine the Procedure	oric acid. he relative formu	ıla mass of X i	n the salt.	
	Pipette 25cm ³ (or 20cm ³)of BA orange indicator and titrate with Repeat the titration until you ob Record your result in the table l	n BA2 from the botain consistent re	ourette.		
	Volume of pipette used		cm ³	(0 ½mark)	
	Final burette reading (cm ³)				
	Initial burette reading (cm ³)				
	Volume of BA2 used (cm ³)				
	Titre values of BA2 used for a	verage		(01	₂ mrks) mrk)
	Average volume of BA2 used.	e operation		$(2^{1}/_{2}m$	narks)
	right - 18 - 1 - 1				
	Questions (a) Calculate				
	(i) Number of moles of hydronic (ii) Number of moles of hydronic (iii) Number of moles (ii			(1 ¹ / ₂ mrk
		17.6		<u> </u>	
			······································	· · · · · · · · · · · · · · · · · · ·	••••••
		=	-	••••••••••••••••••••••••••••••••••••••	
	. *				

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2. You are provided with substances Q, which contains two cations and one anion. Carry out the following tests to identify the cations and anion present in Q. Identify any gas(es) that may be evolved.

Record your observations and deductions in the table below (27 marks)

79-95	TESTS	OBSERVATIONS	DEDUCTIONS
a)	Heat a spatula and full of		rii a rai argan ann as a
	Q in a dry test tube strongly until no further	exercise control of the second	**************************************
	change	· · · · · · · · · · · · · · · · · · ·	
(ks)	(03 mat	IA990 Company	
		of KHX in 250cm of EA1	(Hi) Number of moles
a			

	in the second second		
b)	To two spatula end full of Q add about 5cm ³ of		
	water and shake to		
arks	dissolve. Add sodium hydroxide solution drop	XFD in X to easie which of S is	
. 1	wise until no further change and filter, keep	Some statistical and	Mar Sitt entirible (197)
	both the filtrate and residue		
(c)	To the filtrate, add dilute nitric acid until the		
(-)	solution is just acidic.		
•	Divide the solution into five portions.		
(i)	To the first portion of the acidified solution, add		
	sodium hydroxide drop wise until in excess		
	w CACCSS	the second of	***************************************
		The state of the s	

	To second portion of	egit to men tent and and and and
ii)	acidified solution, add	se'utien add sodium
	ammonia solution drop	hydroxide solution drop
	wise until in excess.	. Twise until in excess
	-	
	To third portion of	
(iii)	acidified solution, add	To the second part of
	potassium iodide	(1) solution, add agraints
	solution.	ammonia solution (109
1		wise entit in excess
	-	
	To the fourth portion of	1 h
(iv)	the acidified solution,	To the third part of the
	add lead (II)nitrate	(i) solured add magnesiun
	solution	the son and leave of stand
1	Use the fifth portion of	
(v)	the acidified solution to	
	carry out test of your	
	own to confirm the anion	safe (1) the carrens in () are
	in Q	and the second second second
	Test	** ********* *
	1	· · · · · · · · · · · · · · · · · · ·
		(ii) The enion in Olis
	I to the second	
	Dissolve the residue in	
(d)	minimum amount of	
(4)	minimum amount of	
	dilute sulphuric acid and	CMS
	divide the resultant solution into three parts	
	solution into unce parts	
	501010	A

		To a property
de la	To the first part of the	14 1161
i)	solution add sodium	To second pertion of
1-4	hydroxide solution drop	acidified, solution, add
4	wise until in excess.	ammonia solution diop
	Wise and in class	wise until in excess.
		outilities, all on a
	A	outilities, at on
8	To the second part of	To third particulation
ii)	solution, add aqueous	i acidific.l _s salution, add
	ammonia solution drop	; potassium iodide
	wise until in excess.	solution.
	A COMMON TO A STATE OF THE STAT	
	4	
T. I Commonweal		
ii)	To the third part of the	To the lough portion of the acids of the acids of the second of the seco
11)	solution add magnesium	7) the acidiff of solutions is and a distributed (il) are the control of the cont
	ribbon and leave to stand	1 1 32
	•	solution " Fest
	f and	
		a seathe fifth roofing of
		the acidified solution to
		TUDY To ket few with
(e)(i) The cations in Q are	own to scaffer the ration
	c /(1) The cations in & are	***
		Touth Higher to the first of the control of the con
	A.	ing ing
×	al and the second	A The same that the control of
	(ii) The anion in Q is	tiree; say, daw L
	(II) The amon in Q is	ार्गाक अस्तु अस्त सावश ्चे
•		
		* **Anna Anna Anna Anna Anna Anna Anna A
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		is the companies of the
	1	END Describe of the brief pourity
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	i	thing open new arched