	Question 32	2010 HSC Chemistry - 1 -	Sample 1
Trine is purpled into the cell a the CI reach sathruffer at the anode (I = 1/2 CI 2 cgst e forming chilorine gas) The Na forms an amadyam with the mercury Ma (H/g) a is carried to the decomposer - at the decomposer the Na react with the water 2 Na cgst 2 Hz O(c) > 2 Na O H (rest + Hz) forming the decimal product Na OH as leaght also hydrogen gas. - the nemery is then purped around again to repeat the process D) molton Na CI forms (I complete around again to repeat the process Na tagst e = 1/2 Na cs; Na tagst e = 1/2 Na cs; when molton there is high enough consustration for both the Na a the CI to neact, which means that the Na cannot form Na OH with the the	Start here.		
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The Na forms an analyam with the mercury Me (Hg) A is carried to the olecomposer - at the decomposer the Na recets with the water 2Na cyt 2Hz O(e) > 2Na OH(e) + Hz forwing the desired product Na OH at texplote also hydrogen gas. - the nevery is then purpled around again to repeat the process Dimother Na CI forms CI (a) + e = Na (s) Na cyt + 2CI (a) = CI 2cy + Na (s) when notion there is high enough concentration for both the Na a the CI to recet, which means that the Na cannot form Na OH with the the egrees Na CI forms CI (e) = to CI 2cy + e = Hz O ot e = to the to the	reacts with	for at the anode	
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- the nervy is then purped around again to repeat the process b) mother NaCl forms (1 acr 2 /2 Cl. 12, + e - Na togs + e - = Na (5) Na togs + 2Cl (12) + Na (5) when noten there is high enough consumtration for both the Na a the Cl to next, which means that the Na cannot form Na OH with the the egrees Na Cl forms Cl (12) + e - Hz Og + e - =	for-ing fre desire	ed product NaOH & Kapter also hy	dozen gas.
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Na '(ag) + 2Cl '(g) = Cl z(g) + Na (s) when notion there is high enough concentration for both the Na a the Cl to nexet, which means that the Na cannot form Na OH with the the agrees Na Cl forms Cl '(g) = 1/2 Cl z(g) + e - Hz Og + e - 2 /2 Hz(g) + OH -	b) molten Nacl form	5 (1 ac) /2 Clig, + e-	
when notten there is high enough concentration for both the Na a the Na cannot form Na OH with the Macanust form Na OH with the Macanust form Na OH with the Macanust form Na OH egreon Na CI forms CI = 1/2 CI 2 (2) + e - Hz Ogste = 1/2 Hz (3) + OH-	·		
when notten there is high enough concentration for both the Na a the Na cannot form Na OH with the Macanust form Na OH with the Macanust form Na OH with the Macanust form Na OH egreon Na CI forms CI = 1/2 CI 2 (2) + e - Hz Ogste = 1/2 Hz (3) + OH-	Na + 20	() C 2 (g) + Na (s)	
the CI to neact, which means that the Na cannot form Na BH with the the agrees Na CI forms CI - 2 CI 2 (2) + e - Hz O e + e - 2 Hz (3) + OH-	when notten there	is high enough concentration for both	the Va a
agrees Na CI fors CI - 2 CI 2 (3) + e - 12 CI 2 (3) + OH-	the CI to react, a	hich means that the Na cannot form	- N- OH
agrees Na CI forms CI - 12 CI 2 (g) +e- Hz O e+e- = 12 Hz (g) + OH-	with the the		
Hzonte- = 7 Hz(g) + OH-			
Hzonte- = 7 Hz(g) + OH-	agreon Na CI form	CITE 2 Clary +e-	
- because general it is agreed here is less Na the Es value	l	Hzore = 2 +2(9) + OH-	
	- because guesario	it is agreed there is less Na I	re Eo value

is Covered to H20, which forms an 6H 1000s

2C1 (ag) + 2H2 Oce, = 42 C12 (y) + 42 H2 (y) + 20H
allowing for Na OH a form: ZNaclast 2Hz Ores > ZNa Othrust Clzgst Hz (9)

-molten	Na Cl for Clz (g) & Na & because there is one a high
	combation for both to reget, however re de not get the
	product
- egreaus	Na Cl for Clary, & Harry, & OHT ions, became frere
	lover conc. of Na in solution & it is more difficult to react :
	reacts instead. This enables the desired the product
	to form.

ii) the change in the graph is a change of temperature

2 SO2(9,† Ozcy, = 2503(9) is an enathermix neartism

therefore the temperature gracewood decreased as re see a rise in

SO3 which means the = is possing to the right to try a motore

itself by creating me heat.

by doing so it ministers the impact of the drop in temperature

A a second is reofored.

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Start here. a32) d) i) reaction type - saponification reactant A - Na OH ii) carried out in a school Cabratory: 1) assisse place prejetable oil in a bealter 2) place 100-L of NaOH into beater as well 3) place on a hot plate a stir d) a wife / yellowsh seven forms as the product or the soap safter precartions - new ylones & goggles -> NaOH can be irritating to the skin & -> contents of the bester can occassionally spit - near heat gloves when handling bot plate a ensure the hot place is well before for ching to ensure you don't bum yourself. - in a school laboratory high quality oits , encess NaOH is soon used. There is often lage amount of NaOH left unreached a there is no attempt to remove ofte gly corol.

e) Limes fore is an integral part of stre solvery process. Limes fone is used both the markon in the car bonafor of the solvey prous & in the recovery of armonia. the livestone is broken printe kiln to CaO x Coz Ca Cozen Cabat Coza, The Oz is then seed in the carbonator to form NaH Cos H20c, + (Ozg) = H203(19) He Coscepy + NH3.00 - H CO3 - + 4 NH4 tag, H& COsart NHAir, + Na Clay, NHA Clast Na H Cosar, The NaHCO, is her could no Naz Con -> Surthernore the linestone Ca O is ned to comment NH4C1 back to NHz in the amounta recovery (a Ocent Hrows - Ca (OH) zones Ca (OH) east NH & Clays (from corbondor) -> NH3 (9 to Ca Classet Hz Ore) -> limesfore is sherefore a highly important part of the Solvey procen. - yet it has significant detrimental environmental impacts. The Ca C/2 formed in the ammonia reconny from the limestone is a most product. It can be used to de-ice roads however is most offen druged. However it must be diposed of in large bodies of water or in the ocean, because it can cause & a build up of Ca Clz in waterways forming a solid precipitate. This can lead to excess Ca' is a increased hardness of Additional writing space on back page.

water in waterways. Furthermore Comes fore must	be
min wived in large amounts for use in the solvay	procest
This mining comos is very damying to the en	viron ment.
It danges & destroy, ecosystems & com.	conse
land subsadies with are potentially danger	s.
Mining comes the destruction of Condscape of of	r ster
significant resources such as cand to grow crop	830
Jagile eeosy stems.	
The young process	
yet it has highly detrinantal environmental of	orien,
yet it has highly detrinantal environmental of	Hent.
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	V.
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You may ask for an extra Writing Booklet if you need	more space.