



YESMARK TUITION SERVICES

FORM2 CHEMISTRY CAT

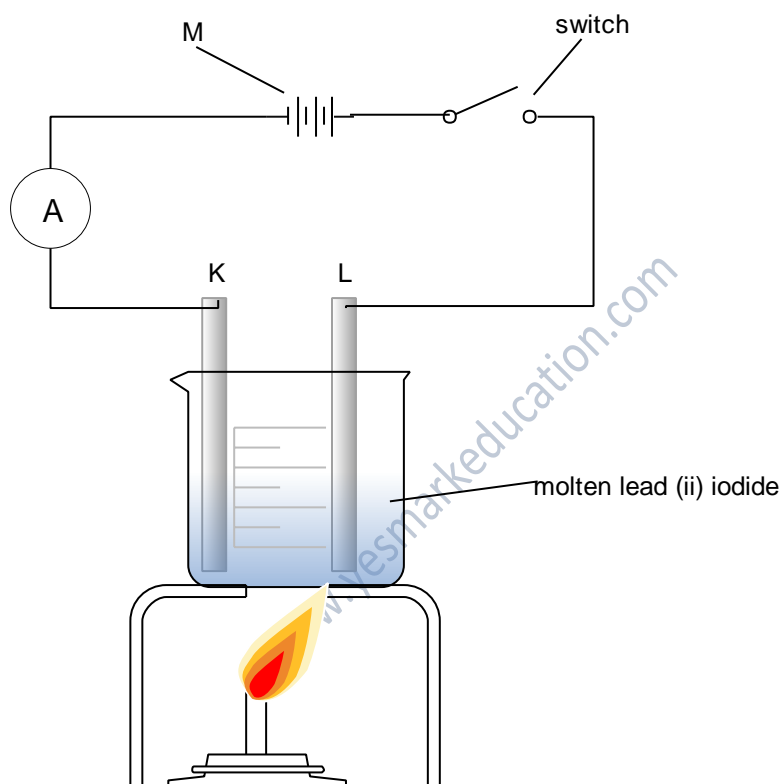
TOPIC: EFFECT OF PASSING ELECTRIC CURRENT THROUGH SUBSTANCES

MARKS: 60 MARKS

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TIME: 1 HOUR

1. The diagram below shows electrolysis of lead iodide using inert electrodes. Study it and answer the questions that follow.



- i. State the observations made at both electrodes when the switch is closed. (2marks)

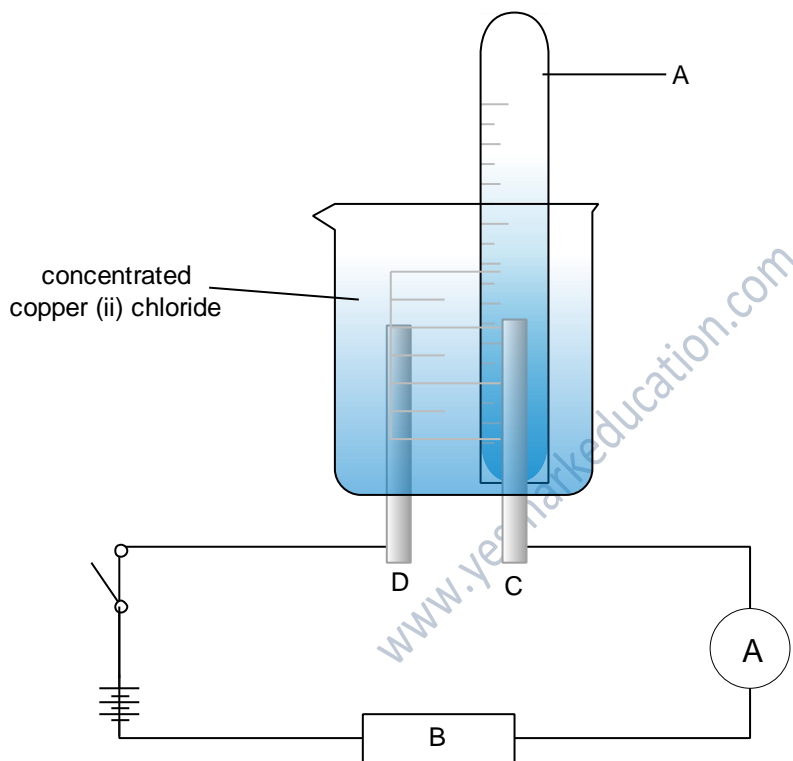
- ii. Write equations for reactions on the electrodes. (2marks)

- iii. State three observations made when source of heat is withdrawn (2marks)

iv. On the diagram show the direction of electrons. (1mark)

v. Name electrodes K and L (2marks)

2. Study the diagram below shows electrolysis of concentrated copper (ii) chloride using inert electrodes and answer the questions that follow.



i. Name electrodes C and D (2marks)

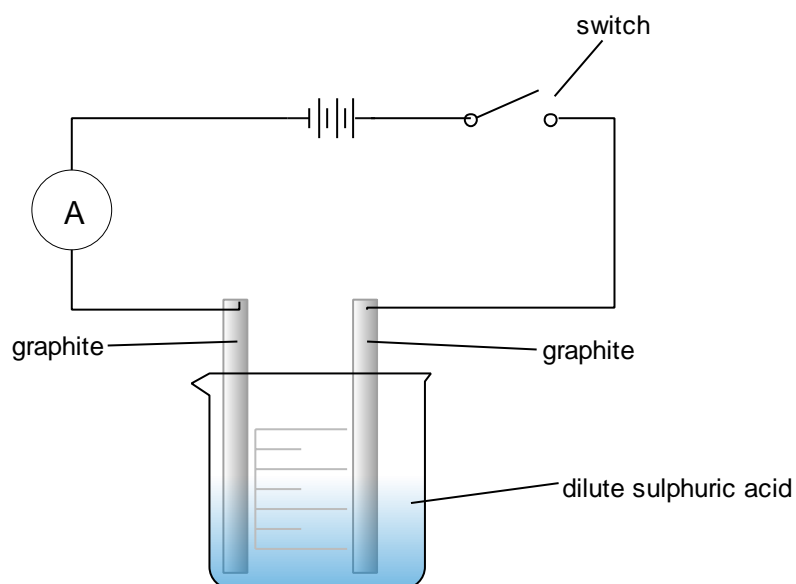
C

D

ii. Name gas A (1mark)

iii. Write down all the ions in the solution. (4marks)

- iv. Write the equations for reactions the anodes (2marks)
- v. State all the observations made when the switch is closed. (4marks)
3. State the three factors which affect discharge of an ion during electrolysis. (3marks)
4. Write the electrochemical series of the common cations, starting with the most readily discharged. (2marks)
5. Write the electrochemical series of the common anions, starting with the most readily discharged. (2marks)
6. Study the diagram below and answer the questions that follow.



i. What is observed at the electrodes? (2marks)

ii. Write equations for reactions at the electrodes. (2marks)

iii. What happens to the concentration of sulphuric acid after sometime? (1mark)

7. Fill the table below by writing equations for reactions at the anode and cathode for each of the electrolysis of solutions in the table. (12marks)

Solution	electrodes	equation for reaction at cathode	equation for reaction at anode
AgNO ₃	silver		
AgNO ₃	carbon		
CuSO ₄	copper		
CuSO ₄	platinum		
concentrated CuCl ₂	carbon		
CuCl ₂	carbon		

8. Describe how a solution of dilute hydrochloric acid conducts electricity. (3marks)

9. State how the pH of each of the following solution is affected by electrolysis. (5marks)

Solution	electrode	pH change
NaCl	inert	
Concentrated NaCl	inert	
CuSO ₄	inert	
CuSO ₄	copper	

MgSO ₄	inert	
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10. Write the cations and anions in each of the following substances. (5marks)

substance	cations present	Anions present
NaH		
Fe ₂ (NH ₄) ₂ (SO ₄) ₄ · 12H ₂ O		
Fe ₂ O ₃ · 2H ₂ O		
CaSO ₃		

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