

NALANDA COLLEGE - COLOMBO 10

Unit Test

Grade 09

Science

Unit 10 – Electrolysis

Part I

❖ **Underline the most corrected answer.**

01. Electrolytes only,

- (1). Sodium Chloride, Copper Sulphate, distilled water
- (2). Kerosene oil, distilled water, acidulated water
- (3). Copper Sulphate solution, Sodium Chloride solution, acidulated water
- (4). Copper Sulphate, Kerosene oil, acidulated water

02. Select the correct statement,

- (1). There are mobile ions in solid ionic compounds.
- (2). There are no mobile ions in non electrolytes.
- (3). Ionic compounds can conduct electricity in any physical states.
- (4). Fused or molten form of ionic compounds do not contain mobile ions.

03. Positive electrode, negative electrode and electrolyte related to electroplating copper on the iron nail,

- (1). Copper plate, iron nail, Copper Sulphate solution
- (2). Iron nail, Copper plate, Copper Sulphate solution
- (3). Silver jewellery, Copper plate, silver nitrate solution
- (4). Copper plate, iron nail, any electrolyte

04. Fused solution can be made by

- | | |
|---------------------------------------------|------------------------------------------|
| (1). heating solid sodium chloride crystals | (3). dissolving salt in water |
| (2). dissolving sugar in water | (4). dissolving Copper Sulphate in water |

05. Consider the following statements about electrolysis.

- (a) An electric current is passed in to an electrolyte.
- (b) An object that is plated should be used as the negative electrode.
- (c) The electrolyte used needs to be a solution of the salt of the metal used in the negative terminal.

Correct statements,

- | | |
|-----------------------|---------------------------|
| (1). only “a” and “c” | (3). only “a” and “b” |
| (2). only “b” and “c” | (4). all “a”, “b” and “c” |

06. Non electrolyte out of the followings

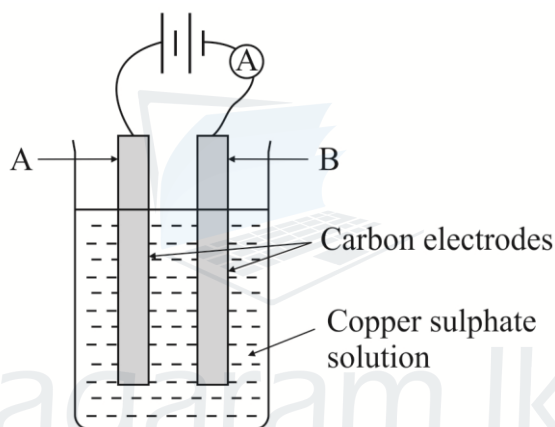
- | | |
|------------------------------|-------------------------------|
| (1). Acidulated water | (3). Distilled water |
| (2). Aqueous Copper Sulphate | (4). Dilute hydrochloric acid |

07. Not an application of electrolysis,

- (1). Extraction of aluminium
- (2). Industrial manufacture of sodium hydroxide
- (3). Electroplating
- (4). Extraction of gold

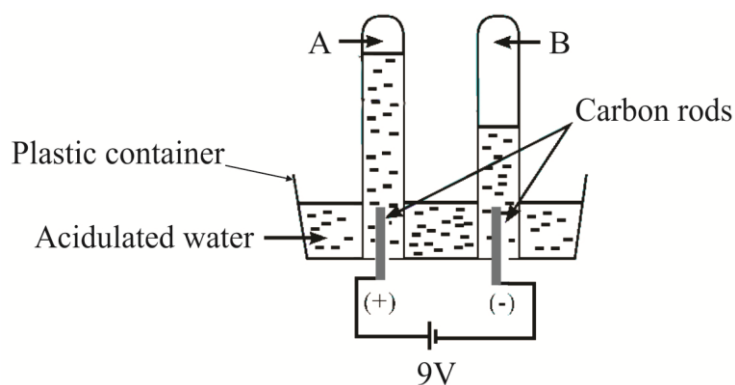
Part II

01. Consider the following set up related to the electrolysis,



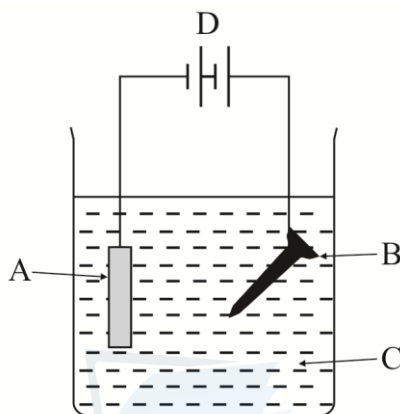
- i. Name positive and negative electrodes of the above set up.
- ii. What is an electrolyte used in the above set up?
- iii. Which type of electrodes are used in the above set up? Give reason for your answer.
- iv. State observation related to the above activity.
- v. Name 02 non electrolytes.
- vi. What is the function of instrument (A) in the above set up?

02. Consider the following set up.



- i. What is the use of above set up?
- ii. How can you prepare an acidulated water solution?
- iii. Name A and B gases separately.
- iv. Explain how can you identified A and B gases separately.
- v. State the ratio between volumes of gases collected in the above set up.
- vi. What is the conclusion of above activity?

03. Following set up is used do demonstrate electroplating process.



- i. Name A, B, C and D.
- ii. What is the mistake in the above set up?
- iii. Draw the correct set up.
- iv. Mention 02 observations that can obtain from the correct set up.
- v. State 03 characteristics of a high quality electro plating.

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