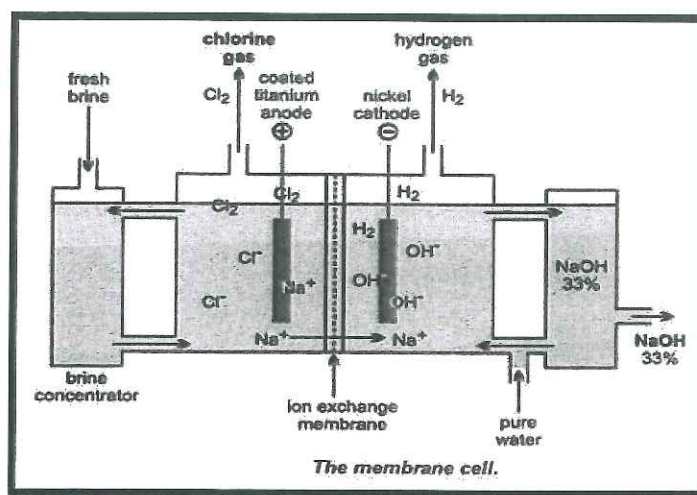


6. This table summarizes the reaction of a number of pairs of solution

Reacting solution	Sodium chloride	Sodium sulphate	Sodium carbonate
Silver nitrate	<b>I</b>	A white precipitate of silver sulphate forms	A white precipitate of silver carbonate forms
Barium chloride	No reaction	<b>II</b>	A white precipitate of barium carbonate forms
Copper chloride	<b>III</b>	No reaction	<b>IV</b>

Several of the spaces have been filled with descriptions of what happens when the solutions are mixed. Give similar statements for the spaces I to IV to describe the reactions which occur. **(4 marks)**

7. The diagram below shows industrial preparation of chlorine gas



- Write the balanced chemical equation which occurs at the anode and cathode during electrolysis of sodium chloride solution. **(2 marks)**
- What purpose does chlorine and sodium hypochlorite serve in the paper and pulp industry? **(2 marks)**

8. Complete the diagrams for this reaction.



**(2 marks)**

9. The formula for ethanoic acid is  $\text{CH}_3\text{COOH}$ . Draw a diagram of it in the space provided in the answer booklet and label the functional group. (2 marks)

10. Propan-1-ol is warmed with ethanoic acid to which a few drops of concentrated sulphuric acid has been added.

a) Write an equation for the reaction that occurs. (1 mark)

b) To what group of organic compounds does the organic product belong? (1 mark)

c) Why is it necessary to add the concentrated sulphuric acid? (1 mark)

11. Complete the following equation by naming the compound formed.



12. Write an equation for the dehydration of ethanol. (2 marks)

13. How does a breathalyzer work? (2 marks)

## STRAND 5 CONSUMER CHEMISTRY

[15 marks]

- This strand has **8 Questions**.
- **Circle** the letter of the **best** answer in the **Answer Booklet** for **Questions 1 – 3**.
- Write the answer for **Questions 4 – 8** in the space provided in the **Answer Booklet**.

1. Penicillin is an example of

- A. Antibiotics
- B. Antacids
- C. Antipyretics
- D. Analgesics

(1 mark)

2. The basic steps for extraction and processing of fats and oil in correct order.

- A. Extraction , Refining , Bleaching , Deodorization
- B. Extraction , Refining, Deodorization, Bleaching
- C. Extraction, Bleaching, Refining, Deodorization
- D. Extraction , Deodorization, Refining , Bleaching

(1 mark)

3. What is the general formula of amino acids?

A. CHON

B.  $\text{NH}_2\text{RCCOOH}$

C.  $\text{NH}_2\text{RCOOH}$

D. CHO

**(1 mark)**

4. Ammonium sulphate is a common soil fertilizer.

i. What is the formula of ammonium sulphate?

**(1 mark)**

ii. What nutrient does this fertilizer supply to the soil?

**(1 mark)**

iii. Ammonium sulphate increases soil acidity. Name a common agricultural chemical which can reduce soil acidity.

**(1 mark)**

5. Give the main components of dried rootstocks of kava.

**(1 mark)**

6. Amino acids can act as both an acid and a base. Briefly account for this statement.

**(2 marks)**

7. Classify the following illegal drugs as a depressant, stimulant or both.

i. Heroin

ii. Marijuana

iii. Cocaine

iv. Amphetamines

**(4 marks)**

8. Describe the cleaning actions of soaps and briefly explain why soap cannot lather in hard water.

**(2 marks)**

THE END

