

Student's name..... Signature .....

Stream .....

545/1  
CHEMISTRY  
(Theory)  
Paper 1  
JUNE 2023  
2 ½ hours



KABALEGA SEN.SECONDARY SCHOOL  
UGANDA CERTIFICATE OF EDUCATION  
COMPETENCE BASED ASSESSMENT EXAMINATIONS

CHEMISTRY (THEORY)

PAPER 1

SENIOR 3

2Hours: 30 minutes

INSTRUCTIONS:

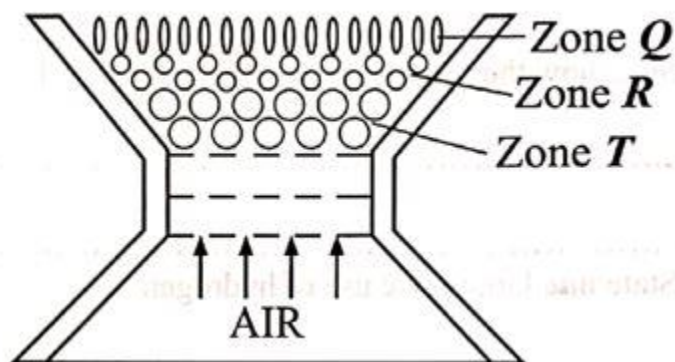
- This paper consists of *ONLY* one section.
- Answer all questions in the spaces provided.
- Illustrations in form of drawings should be made where necessary, with a sharp pencil.

For official use only Indicate question attempted in section B in table below.

Question	Marks/scores	Teacher's comment
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
Total Scores		

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- Obina set up his stove to prepare his morning porridge in a well-ventilated room as shown below.



(a) Write the equation for the reaction (s) that took at each of the following zones

(i) T

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(ii) R

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(iii) Q

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(b) With reason(s) state the gas that would be produced if the burner was placed in a poorly ventilated room.

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- Meko a learner in senior three at Kabalega Secondary School carried out an experiment to investigate the effect of bases on acids. He added dilute hydrochloric acid into wood ash.

(a) State the type of reaction that took place.

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(b) Name the ions present in wood ash.

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(c) Write the equation for the reaction that took place.

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(d) State three roles of wood ash in everyday life.

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3. (a) Charcoal making is associated with good and bad effects. Discuss.

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(b) State four reasons why charcoal briquettes are better than wood charcoal.

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4. Opoka accidentally poured his Mom's salt in sand.

(a) State two methods Opoka may use to recover the salt.

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(b) Briefly describe how the above methods may be used to recover the salt.

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5. Fuels are used in everyday life to provide heat and energy in cooking and automobiles.

(a) State the common examples of fuels used in everyday life.

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(b) State two other uses of fuels in our communities.

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(c) List down the examples of fuels that can be classified as

(i) Renewable

.....

(ii) Non-renewable

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(d) Suggest reasons why the fuels named in (c)(i) and (ii) above are classified as renewable and non-renewable.

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6. Chris a student at Kabalega S.S. used borehole water to wash his clothes but he discovered dirty marks on his clothes.

(a) What led to the formation of dirty marks on his clothes?

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(b) State the ions responsible for the formation of dirty marks on his clothes.

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(c) Write the equation of reaction leading to the formation of the dirty marks.

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(d) State the general name used to describe such waters Chris used.

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(e) State four roles of such waters in everyday life.

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- .....
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7. Most of the imported vehicles into Uganda are second hand vehicles that emit a lot of fumes into the atmosphere. The fumes contain carbon dioxide gas that leads to formation of acid rain.

(a) Suggest three possible dangers of such vehicles to our environment.

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(b) How can the above effects be solved in our communities.

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(c) Write the equation of reaction leading to formation of acid rain.

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8. A student added dilute nitric acid onto a piece of limestone (calcium carbonate) in a test tube.

(a) Write the equation for the reaction that took place.

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(b) How can the gaseous product in (a) above be identified?

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(c) In what ways is the gaseous product in (a) useful to us?

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9. The teacher arranged the following metals for learners; potassium, calcium, magnesium and iron.

(a) Arrange the elements in order of increasing reactivity.

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- (b) Using equations of reactions where possible, state how each of the elements react with water.

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10. Both charcoal and firewood are used in everyday life as fuel for cooking food we eat.

- a) State the main element contained in wood and charcoal.

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- b) State the gaseous product evolved when wood or charcoal is burnt in:

- (i) Open room

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- (ii) Closed room

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- c) Write the equations of reaction which would occur in (b) (i) and (b)(ii) above.

- (i) Open room

.....

- (ii) Closed room

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11. Salts and alkalis are involved in many process in everyday life. Fill in the table below the uses of the different salts provided.

Name of the salt	Use of the salt
Calcium carbonate	
Sodium carbonate	
Ammonium sulphate	

Calcium chloride	
Sodium bicarbonate	

12. For each of the following processes or areas, name the acid and remedy for the problem.

Areas/ process	Acid involved	Remedy
Indigestion		
Bee sting		
Soil treatment		
Factory wastes		

13. Opoko the House Captain Lumumba left the school hoe outside for 3 days, after which he found the whole hoe covered by a brown coating.

(a) State the process which took place and the type of change.

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(b) State two conditions for the above process.

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(c) How can the above process be prevented in our communities.

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***“Only through hard work you can succeed”***

**END**