

545/1

CHEMISTRY

Nov/Dec 2023

2 Hours: 30 Mins



# MEBU EXAMINATIONS BOARD

*Uganda Certificate of Lower Secondary Education*

## S.1 END OF YEAR ASSESSMENT 2023

CHEMISTRY

TIME: 2:30 MIN

### INSTRUCTIONS

- This paper consists of section A and section B. Attempt all questions from section A and any 2 questions in Section B
- Answers for section A must be written in the spaces provided and those of section B must be written on the answer scripts given. Present your work neatly.

**SECTION A (50MARKS)**

1. (a) (i) What is meant by the term water pollution? (1 mark)

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(b).Industries usually use water as a coolant or a solvent to clean and dissolve some chemicals. The waste fluids are usually poured into the nearby water bodies

Give two ways in which such fluids affect the water bodies (2 marks)

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(c ).Briefly advise how such wastes can be deposited with less harm (3 marks)

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2. Charity is a senior 1 student who was asked by her chemistry teacher to heat a sample of 10gramms of magnesium which she was given by her laboratory attendant. After the heating, Charity measured her sample that had remained and found out that the mass had increased to 14gramms.

(i) Identify the change that took place on the magnesium that Charity had during the heating process (1 mark)

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(ii)What characteristic of the change you have mentioned was tested during the heating process? (1mark)

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iii) Suggest some other three characteristics of the change you have mentioned in (i) above. (3marks)

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3. In a certain survey done to the residents around the sewage treatment plant, it's observed that people around the plant are complaining about the smell that comes out of the plant and the smell becomes much more on the hot day.

(i) Explain briefly how the smell molecule is able to move from the sewage treatment plant to the people around it. (1mark)

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(ii) Explain why the smell from the sewage treatment plant becomes more during the hot day. (3marks)

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(iii) Identify the process through which the smell from the sewage treatment plant reaches the residents. (1mark)

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(iv) Identify any one way in which the smell can be curbed down (1mark)

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4. a) What is meant by the term an element? (2mark)

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b) Write the symbols that represent the following elements: (5marks)

- a) Iron.....
- b) Nitrogen.....
- c) Potassium.....
- d) Aluminium.....
- e) Fluorine.....

5. Using the idea of particles, explain why;

(i) It is easy to pour liquid (1 mark)

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(ii) A gas will completely fill any container. (1 mark)

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(iii) A solid expand when heated (1 mark)

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6. a) The substances we commonly use are either compounds, mixtures or molecules.  
What do you understand by the terms (1 mark each)

i) a Molecule

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ii) An Atom

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iii) A compound

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iv) a Mixture

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b) The table below some common substances that we use, classify the following substances as either elements, compounds or elements (5marks )

Substance	Classifications
Table salt	
Aluminium source pans	
Paracetamol	
Porridge	
Steel	

7. The table below shows some of the examples of the changes that occur in everyday life. Classify them as either physical change or chemical change. (5marks)

Changes	Classifications
Rusting of iron sheet	
Burning of wood	
Evaporation of water	
Dissolving of salt in water	
Burning of a candle	

8. a) Define the term vulcanized rubber. (1 ½ mark)

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b) State any two uses of vulcanized rubber (2 marks)

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a) Why isn't it advisable to dispose off rubber anyhow to the environment?( 1 ½ marks)

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Uganda is regarded as pearl of Africa for it is rich with a number of things that include minerals, water bodies, vegetation and climate. What do you understand by the term a mineral? (1 mark)

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Give the minerals from which the following substances are obtained(3 marks)

Substance	Mineral
Glass	
Cement	
Petrol	

**SECTION B (ATTEMPT ANY TWO QUESTION)**

10 a) iron, aluminium and copper are among the many elements found in the periodic table and they are categorized as metals. Give the properties of copper which make it suitable for:

- (i) making electric cables (02marks)
- (ii) making coins (01mark)
- (iii) making utensils. (01mark)

b) Apart from the above functions, given any two other uses of copper. (2marks)

c) Name the process by which copper can be strengthened to serve these purposes (1 marks)

d) state any three uses of iron (3 marks)

e) which of the elements would not be suitable to make utensils. Give a reason for your answer (5 marks)

11. a) Discuss the importance of common salts in our daily lives. (06marks)

b) Common salt from Lake Katwe is obtained by fractional crystallization. Explain the term;

- (i) Fractional crystallization (02marks)
- (ii) Crystal (01mark)



- c) Describe what happens during fractional crystallization of salt. (04marks) d) Identify two crystalline substances at home. (02marks)
12. a) Mention any four Earth resources you know. (02marks)
- b) State one function of each resource. (04marks)
- c) How are the above resources misused by man? (05marks)
- d) In which ways can we preserve the Earth resources? (04marks)

END