



TANZANIA HEADS OF ISLAMIC SCHOOLS COUNCIL

FORM TWO INTER ISLAMIC MOCK EXAMINATION

032

CHEMISTRY

TIME: 2:30 Hours

Thursday, 24th July 2025 a.m.**Instructions**

1. This paper consists of sections A, B, and C, with a total of **ten (10)** questions.
2. Answer **all** questions in each section.
3. Section A and C carry fifteen (15) marks each, and section B carries seventy (70) marks.
4. All writings must be in blue or black ink, except drawings, which must be in pencil.
5. All communication devices and unauthorized materials are **not** allowed in the examination room.
6. Write your **Assessment Number** at the top right corner of every page.
7. The following constants may be used:

Atomic masses: H=1, C = 12, O=16, Na=23, Cl=35.5, Mg=24, Al=27, P = 31, Pb=207, Fe=56, S=32.

FOR ASSESSOR'S USE ONLY		
QUESTION NUMBER	SCORE	ASSESSOR'S INITIAL
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
TOTAL		
CHECKER'S INITIAL		

SECTION A (15 Marks)

Answer **all** questions in this section

1. For each of the items (i) – (x), choose the correct answer from among the given alternatives and write its letter in the table provided.

(i) The Bunsen burner is a very important tool based on its ability to give different types of flames by adjusting the air holes. Suggest the name of the flame formed when air holes are closed.

- A. Non-luminous flame
- B. Hot flame
- C. Luminous flame
- D. Coloured flame

(ii) Ashura was told to prepare tea, but accidentally, she put salt in the tea instead of sugar. As a form two student, name a suitable method that Ashura can use to separate the salt from that mixture.

- A. Filtration
- B. Decantation
- C. Sedimentation
- D. Evaporation

(iii) Coke is obtained by the process called a destructive distillation of coal. What is the main aim of the process?

- A. To remove volatile matters
- B. To add volatile matters
- C. To add oxygen to the furnace
- D. To remove oxygen from the furnace

(iv) In an experiment, a student was required to measure 25cm^3 of a particular solution by sucking it and then transfer it to the conical flask. Advise her/him on the laboratory apparatus to use.

- A. Beaker
- B. Test tube
- C. Pipette
- D. Burette

(v) A small amount of Sulphur was taken and then heated in a plentiful supply of air (oxygen). Give the name of the possible product which was obtained.

- A. Sulphur oxide
- B. Sulphur trioxide
- C. Sulphur dioxide
- D. Disulphide monoxide

- (vi) A chemist went to the laboratory to prepare a gas that could be used to manufacture margarine. Which reagents among the following can be used by the chemist?
- Hydrogen peroxide and Manganese (IV) oxide
 - Hydrogen peroxide and Hydrochloric acid
 - Zinc granules and Manganese (IV) oxide
 - Zinc granules and Hydrochloric acid
- (vii) There is a moment when even the atoms or ions of different elements may have the same number of subatomic particles, as discovered by J.J. Thomson. Which among the following neutral atoms have the same number of particles as Mg^{2+} ?
- Magnesium
 - Neon
 - Sodium
 - Argon
- (viii) When a brother was frying chicken eggs, suddenly, the frying pan caught fire. Which of the following fire extinguishers is appropriate for putting off this type of fire?
- Water extinguisher
 - Carbon extinguisher
 - Wet chemical extinguisher
 - Dry air extinguisher
- (ix) Fresh milk consists of water and trace amounts of buffer fat. Such kind of mixture is known as _____
- Solution
 - Suspension
 - Emulsion
 - Colloids
- (x) When naming compounds on the blackboard, a student came across " Cu_2O ". What would be the correct name of this compound?
- Carbon dioxide
 - Copper (I) oxide
 - Copper (II) oxide
 - Carbon monoxide

ANSWERS:

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)

2. Match the accidents in LIST A with corresponding first aids in LIST B by writing the letter of the correct response below the item number in the table provided.

LIST A		LIST B	
(i)	A student gets a deep cut on the hand from a broken glass in the laboratory.	A.	Pour cold water immediately and cover loosely with sterile gauze
(ii)	A girl burns her finger while using a spirit lamp.	B.	Tilt the head forward and pinch the nose
(iii)	A classmate faints during a long parade under the sun.	C.	Perform abdominal thrusts (Heimlich maneuver)
(iv)	A student experiences a nosebleed after being hit in a football match.	D.	Move to fresh air, lay flat and raise the legs.
(v)	A boy chokes while eating and struggles to breathe.	E.	Apply a clean dressing and elevate the injured part.
		F.	Pour very hot water immediately and cover the welling part with a bandage
		G.	Wear goggles and observe him.

ANSWERS:

LIST A	(i)	(ii)	(iii)	(iv)	(v)
LIST B					

SECTION B (70 Marks)

Answer all questions in this section

3. (a) Form one students were told to choose between science studies and other studies, few students chose science studies. As a form two Chemistry student, convince them to choose science studies. (Use five (5) points)

- (i) _____
- (ii) _____
- (iii) _____
- (iv) _____
- (v) _____

- (b) A scientist has to acquire scientific skills to be successful in obtaining facts and verifying them. As a form two chemist, outline five (5) skills to be acquired.

- (i) _____
- (ii) _____
- (iii) _____
- (iv) _____
- (v) _____

4. (a) Compound Q is one of the most abundant and essential compounds on the Earth.
When compound Q reacts with the chemical substance p, p changes from blue to pink.

- (i) Identify compound Q by its name _____
(ii) What are the uses of compound Q in our daily life?

- (b) Briefly explain what can be observed when the following experiments are performed in a chemistry laboratory at your school.

- (i) Lowering a burning splint into a jar full of hydrogen gas.

- (ii) Iron nail is left in an open space for a week.

- (c) By using word equations, show the products formed when the following burns in air

- (i) Carbon

- (iii) Sodium

5. Element X and Y have a total of 13 and 17 positively charged sub atomic particles, respectively. Use the given information about elements X and Y to answer the following questions:

- (a) (i) What is the valency of elements X and Y?

- (ii) Write the chemical formula when element X combines with Y.

- (iii) Mention the type of bond formed between elements X and Y.

- (b) Write down five (5) properties of the bond formed between elements X and Y.

- (i) _____
(ii) _____
(iii) _____
(iv) _____
(v) _____

- (c) Both elements X and Y are found in the same period of the periodic table. Briefly explain the difference in electronegativity between elements X and Y.

6. When peroxide of hydrogen decomposes in the presence of manganese (IV) oxide yields gas W and water. The gas is collected by the downward displacement of water. From the information above, answer the questions below:

(a) (i) Name the gas W produced _____

(ii) What is the chemical test of the gas W?

(iii) Why is gas W collected by downward displacement of water?

- (b) List any five (5) apparatuses that were used in the preparation of the gas W above.

(i) _____

(ii) _____

(iii) _____

(iv) _____

(v) _____

- (c) (i) Describe the role of manganese (IV) oxide on the decomposition of hydrogen peroxide.

(ii) How is the gas W useful in our daily life activities (04 points)?

7. (a) Your school science club wants to educate the community that liquefied petroleum gas (LPG) is a better fuel for domestic use than firewood. As a member of science club, describe six (6) points that should be used to educate them.

(i) _____

(ii) _____

(iii) _____

(iv) _____

(v) _____

(vi) _____

- (b) A mass of 20g of petrol was burnt in the air. The heat produced was used to boil 2.5 litres of water. Given that the heat value of petrol is 43640 kJ kg^{-1} . What was the temperature change of water?

Given that:

- Specific heat capacity of water = $4.18\text{kJkg}^{-1}\text{k}^{-1}$
- Density of water = 1000kg/m^3
- $1\text{m}^3 = 1000$ litres

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

8. (a) Ummy is a wholesaler of hardware commodities. When she was inspecting one of her stores, she discovered that many of her iron sheets, iron nails and hinges had developed a permanent brown coat that corroded them.

(i) Name the chemical process that caused the coat on the commodities.

(ii) Write down a word equation to represent the process named in a(i) above.

- (b) Explain briefly five (5) methods that you would advise Ummy to use to prevent coat formation on the commodities

(i) _____

(ii) _____

(iii) _____

(iv) _____

(v) _____

- (c) Secondary school students attended a fire fighting seminar held at fire station. In the seminar, they learned different measures to be taken during putting off the fire. What three measures were expected to be learnt by the students?

(i) _____

(ii) _____

(iv) _____

9. (a) confusion had happened in a form four classroom when students were discussing whether muddy water is a compound or a mixture. As an expert in chemistry, clear this confusion by using only four (4) points to support your answer.

(i) _____

(ii) _____

(iii) _____

(iv) _____

- (b) In an experiment to investigate the solubility of sodium chloride salt, it was found that an increase in temperature increases the solubility of sodium chloride salt. From the above experiment, identify:

(i) Dependent variable _____
(ii) Independent variable _____
(iii) Controlled variable _____

- (c) Scientific methods can be applied in different areas in real life. Identify three areas in your experience.

(i) _____
(ii) _____
(iii) _____

Candidate's Assessment Number: _____

[illegible]