

Candidate's name/ Index number

THE UNITED REPUBLIC OF TANZANIA
THE PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
SECONDARY SCHOOL

FORM ONE EXAMINATION

CHEMISTRY

MARKING SCHEME MAY 2024

SECTION A (15 Marks)

1.

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
C	C	B	B	B	D	C	A	B (01@ = 10 marks)	B

2.

List A	(i)	(ii)	(iii)	(iv)	(v)
List B	D	H	A	E	B

(01@ = 05 marks)

SECTION B (70 Marks)

3. (a)

- (i) First aid is the help given to someone who is injured or sick before the victim gets further medical assistance. **02 marks**
- (ii) First aid kit is a small box containing materials for rendering first aid. **02 marks**

(b) Importance of first aid

Relieve pain

Bring hope to the victim.

Prevent permanent disability

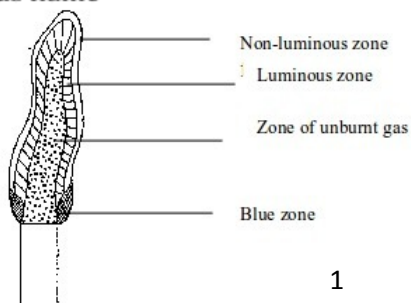
Prevent the victim's condition from getting worse

Reduce the possibility of death. (Any four 1½@ = 06 marks)

Shorten recovery time

4. (a)

Luminous flame



Title: 00½ marks

Diagram 01½ marks

Label 00½ @ = 02 marks

(b)

Part	Name	Function
a	Barrel/ Chimney (00½ marks)	This is a part of the burner where air (from outside), and gas (from gas supply) mix up and burn(01 marks)
b	Collar/Metal ring (00½ marks) (00½ marks)	Regulates the amount of air entering the burner by opening or the air hole. (01 marks) (01 marks)
c	Air hole (00½ marks)	Allows air to enter in the burner (01 marks)
d	Base	Supports the burner

5. laboratory safety measures to obey:

- i. Label and lock all storage areas.
- ii. Be familiar with the location, use and limitations of the safety devices. This includes fire extinguishers, fire blankets, fume hood, spill cleanup materials, first aid kit, eyewash stations and fire alarm.
- iii. Keep all chemicals in properly labelled containers.
- iv. Be familiar with the appropriate safety measures to take when exposed to different hazardous materials.
- v. All chemicals that react with each other must be stored separately.
- vi. Use fume hoods/cupboards/chambers whenever possible.
- vii. Never store food in a refrigerator or freezer where hazardous chemicals are stored.
- viii. Make sure fire extinguishers are in good condition. (Any five 02@ = 10 marks)
- ix. Stored chemicals must be inspected regularly to ensure they have not expired.
- x. Keep the laboratory floor clean and dry at all times. Clean spills of water or chemicals immediately.

6. The Importance of Changing One State of Matter to Another

- i. **Separation of mixtures:** It enables separation of mixtures can through such processes as distillation, sublimation, evaporation and condensation.
- ii. **Industrial manufacture of products:** Industrially, the process of distillation is applied in the production of pure substances such as beer and other alcoholic drinks such as wine. The manufacturing process involves boiling, evaporating and condensation.
- iii. **Refining of petroleum (crude oil):** Crude oil contains organic liquid components, each with a different boiling point. In the refinery, the components with lower boiling points evaporate first ...
- iv. **Drying of crops and clothes:** When you suspend your clothing on a cloth line to dry, the moisture in it is lost through evaporation...

- Candidate's name/ Index number
- v. **Cooling of our bodies in hot weather:** Cooling of our bodies in hot weather depends in the evaporation of sweat or water.
 - vi. **Ice formation in refrigerators:** You can freeze water into ice and then use the resulting ice for cooling the beverage or preserving foods.
 - vii. **Melting metals to make alloys:** in metallurgical industries, need may arise to mix two or more metals (alloys) together...
 - viii. **Formation of rain:** Rain is mainly formed through the process of evaporation and condensation. Water vapour, evaporating mostly from water bodies (02 @ = 10 marks)

7. Causes:

- (i) Imbalance in certain minerals such as potassium and calcium (04 marks)
- (ii) Malfunctioning in the nervous system.
- (iii) Excessive physical activity and hormonal imbalances that lead to excessive sweating.

First aid procedure:

- (i) Lay the victim down (02 @ = 06 marks)
- (ii) Gently massage and stretch out the cramped muscle(s).
- (iii) Apply some anti-cramp ointment to the affected area.
- (iv) If the problem persists, seek medical help immediately.

8. (a) (i) the study of matter and their composition.... (01 mark)
- (ii) Matter is anything that has mass and occupies space 01 marks
- (b) (i) Chemistry is applied in other fields such as agriculture, manufacturing, medicine, processing and food industries, education, cosmetics and home care industries, etc. (04 marks)
- (ii) Materials made by the application of chemistry knowledge include soap, chalk, shoes, clothes, petroleum products, alcoholic and non-alcoholic beverages, cosmetics, drugs, and many others. 04 marks

9. (a) Flames are zones of burning gases that give out heat and light. (02 marks)
- (b)
 - (i) Production of heat for heating substances in the laboratory and also cooking: In this case, a non-luminous flame, which produces much heat, is more convenient.
 - (ii) Flame tests for elements: When some elements are strongly heated, they produce characteristic flame colours that distinguish them from one another.
 - (iii) Production of light: Flames produce light that can be used to light a dark room. Examples of heat sources, which produce flames that may be used for lighting, are hurricane lamp, tin lamp, spirit lamp and candle. (02 @ = 08 marks)
 - (iv) Welding: In most welding operations, an oxyacetylene gas, a mixture of oxygen and ethyne, is used. When burned, the gas produces a flame hot enough to cut or melt the metal.

SECTION C (15 MARKS)

10. The importance of chemistry in life

- Application of chemical knowledge enables the production of different products that we need to live better. Examples of these materials are soaps, medicines, toothpaste and plastics.
- Through chemistry, we are able to change various harmful materials into forms or products that are less harmful.
- It enables processing of raw materials into useful products. For example, changing different mineral ores into steel, aluminum and tin.
- It enhances sustainable crop and animal production through the use of chemicals in agriculture such as fertilizers, insecticides, and weed killers.
- It helps us understand the properties and composition of materials around us.
- It helps us acquire professions and careers in different disciplines such as pharmacy, engineering, medical and natural science professions.

(Any five 03 @ = 15 marks)