STUDENT'S NAME _____

THE UNITED REPUBLIC OF TANZANIA

PRIME MINISTER'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

ENG. STELLA MANYANYA SECONDARY SCHOOL

FORM ONE ANNUAL EXAMINATION 2026

032

CHEMISTRY

TIME: 03:00 HOURS

NOVEMBER 2026

Instructions

1. This paper consists of section **A**,**B** and **C** with total of T**en (10)** questions.
2. Answer **All** questions
3. Section A carries Fifteen **(15) marks**, Section B **Seventy(70)** marks and section C carries Fifteen **(15)** marks
4. All writings should be in **blue** or **black** ink, Except drawings which should be in Pencil
5. Cellular Phones and any unauthorized material(s) are **Not** allowed in the examination Room
6. Write your **Full name** in every page of your answer sheet(s)

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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 beside the correct number.

i) Chemistry is defined as:

(a) The scientific study of matter, compounds and chemical reaction
(b) The scientific study of compounds, mixture and organic substances
(c) The scientific study of composition, structure and properties of matter
(d) The study of relation between human being, medicine and pollution

ii) The following set of laboratory equipment consists of volume measuring items:

(a) Beaker, electronic balance, measuring cylinder
(b) Burette, pipette, thermometer
(c) Burette, pipette, measuring cylinder
(d) Spatula, funnel, conical flask

iii) Which of the following is not among the instruments and chemicals used for first aid?

(a) Pair of scissors (b) Mosquito spray
(c) Assorted bandages (d) Sterilized cotton wool

iv) Which state of matter is involved when drying wet clothes?

(a) Liquid to solid (b) Gas to liquid (c) Solid to gas (d) Liquid to gas

v) The branch of chemistry that deals with the study of carbon and its associated compounds is called:

(a) Physical chemistry (b) Analytical chemistry
(c) Organic chemistry (d) Inorganic chemistry

vi) The fume chamber is designed for carrying out:

(a) All experiments
(b) Experiments that involve liquid reagents
(c) Experiments that release harmful vapour or gas
(d) Experiments that use moderate reactive metals

vii) A Bunsen burner flame is likely to contain soot when:

(a) The air hole is closed (b) The burner is not raised
(c) The air hole is opened (d) The gas supply is high

viii) _____ is a burn caused by hot liquid or vapour.

(a) Choking (b) Scalds (c) Fire (d) Injuries

ix) When sugar is dissolved in water, a uniform mixture is formed. What is the name of the resulting mixture?

(a) Solute (b) Solution (c) Suspension (d) Solvent

x) Hassan wants to grind granules of a certain chemical to a fine powder. The apparatus he will use includes:

(a) Filter paper and filter funnel (c) Mortar and pestle
(b) Trough and beaker (d) Bunsen burner and filter paper

Answers:

i	ii	iii	iv	v	vi	vii	viii	ix	x

2. Match the items in **LIST A** with the responses in **LIST B** by writing the letter of the correct response beside the item number in the table below.

LIST A	LIST B
i. Measuring syringe	A. Used to hold and estimate the volume of liquid.
ii. Burette	B. Used to measure the volume of liquids or gases.

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iii. Dropper	C. Used to suck in and measure specific volume of liquids.
iv. Beaker	D. Used to measure accurate and dispense known volume of a liquid.
v. Pipette	E. Used to transfer the liquid drop by drop.
	F. Used to heat the substance to very high temperature.

Answers:

List A	**(i)**	**(ii)**	**(iii)**	**(iv)**	**(v)**
List B					

SECTION B (70 MARKS)

Answer ALL questions in this section.

3. **(a)** Before entering the laboratory for practical activities, students have to observe their dressing codes. In Four (4) points, describe how students are supposed to wear appropriately for practical activities for chemistry experiments.

i. _____
_____

ii. _____
_____

iii. _____
_____

iv. _____
_____

(b) Explain briefly the reasons for the following instructions:

(i) Keep the windows open during chemistry practical activities.

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(ii) Keep all flammable chemicals away from open flames.

_____
_____

(c) Imagine you have been given a chance to advise the school building committee on how the laboratory building should look like. What could be your advice? Give four (4) points.

i. _____
_____

ii. _____
_____

iii. _____
_____

iv. _____
_____

4. (a) The form one students at Mwembeni Secondary School had a debate on whether chemistry is important in their daily life or not. As a chemist, convince them of the usefulness of chemistry in daily life by providing at least six (6) points.

i. _____
_____

ii. _____
_____
iii. _____
_____
iv. _____
_____
v. _____
_____
vi. _____
_____

(b) The study of chemistry provides chemists with the knowledge and skills that are required for their future career opportunities. Mention eight (8) professions that chemists can acquire in the future.

i. _____ v. _____
ii. _____ vi. _____
iii. _____ vii. _____
iv. _____ viii. _____

5. (a) The following substances available in a chemistry laboratory were: *stones, sodium, magnesium ribbon, calcium carbonate, sulphur, ethanol and water*. With one example from the substances listed above, define:

(i) Element:

.....

(ii) Compound:

.....

(iii) Mixture:

.....

(b) Write chemical symbols for the following elements:

(i) Sodium: ..... **(iv) Gold:** .....
(ii) Lead: ..... **(v) Tin:** .....
(iii) Mercury: ..... **(vi) Silver:** .....

(c) In learning chemistry, there are various techniques for separation of mixtures. Name a method which is suitably used to separate the following mixtures in a chemistry laboratory:

(i) Iron and sand: .....
(ii) Iodine and sand: .....
(iii) Ethanol and water: .....
(iv) Oils from groundnuts: .....
(v) Dye: .....

6. Anjela was digging in his garden. Unfortunately, he cut his leg with a hoe. After a few minutes, a Form One student was passing in that area and started to help Anjela before sending him to the hospital.

(i) State what kind of help was given to Anjela.

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(ii) List four (4) possible items required for effective help.

.....

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(iii) Give five (5) importance of that help in our daily life.

i. _____

ii. _____

iii. _____

iv. _____

v. _____

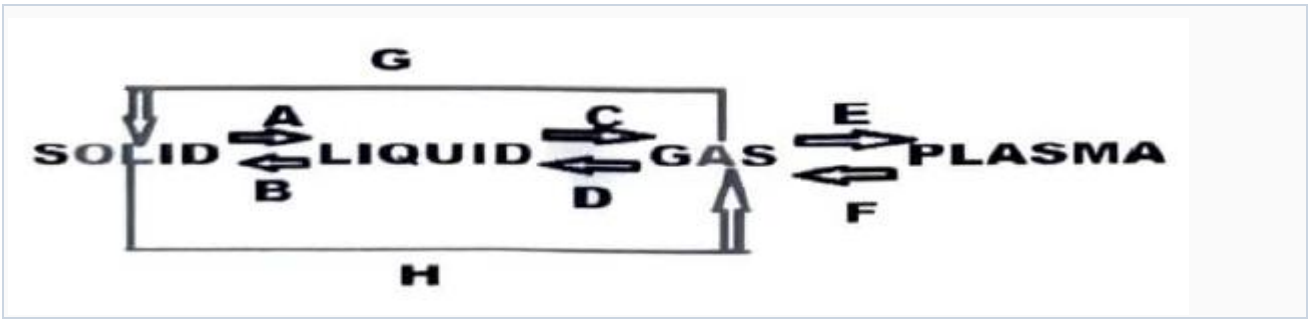
7. (a) Differentiate physical change from chemical change:

Physical Changes	Chemical Changes
(i)	(i)
(ii)	(ii)
(iii)	(iii)
(iv)	(iv)

(b) Categorize the following processes as either chemical change or physical change:

(i) Aluminium foil is cut into half: .....
(ii) Jewellery tarnishes: .....
(iii) Wood is burnt: .....
(iv) Digestion of food in the body: .....
(v) Decaying of teeth: .....
(vi) Cloud changing into rain: .....

8. (a) Study the processes taking place in state transitions as illustrated below:



Identify the processes labeled **A – H**:

A: .....
B: .....
C: .....
D: .....
E: .....
F: .....
G: .....
H: .....

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(b) Jeff argues that the processes indicated in Question 8(a) diagram have their significance in our daily life. Support him by giving three (3) importance of these processes in our daily life.

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9. (a) Water is said to be a compound and not a mixture. Give three (3) reasons.

i. _____
_____

ii. _____
_____

iii. _____
_____

(b) Your exercise book is said to be matter. Give two (2) reasons.

.....

.....

SECTION C (15 MARKS)

Answer question number ten (10) from this section.

10. A Bunsen burner is used in the Chemistry laboratory as the best heat source. When it is lit, a luminous flame and non-luminous flame are produced depending on the adjustment of the air hole.

(a) Assume you are given a task of lighting a Bunsen burner and showing up the flames. Which five (5) important steps will you follow?

Step i: .....

Step ii: .....

Step iii: .....

Step iv: .....

Step v: .....

(b) Give two (2) reasons to justify the fact that a non-luminous flame is considered the best flame to be used in chemistry laboratory.

i. _____
_____

ii. _____
_____

(c) Give three (3) applications of the non-luminous flame in our daily life.

i. _____
_____

ii. _____
_____

iii. _____
_____