

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

**FORM TWO EXAMINATION**

**032 CHEMISTRY**

**Time: 2½ Hours**

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**Instructions:**

1. This paper consists of sections A and B with a total of ten (10) questions.
2. Answer ALL questions in the spaces provided.
3. All writing must be in blue or black ink, except drawing, which must be in pencil.
4. Cellular phones and any unauthorized materials are **not** allowed in the examination room.
5. Write your **Examination Number** at the top right corner of every page.

QUESTION #	MARKS	INITIALS OF EXAMINER
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
Total		

## SECTION A (15 Marks)

### Answer all questions

1. Choose the most correct answer among the given alternatives and write the answer in the space given.

- (i) One of the following is NOT a purpose of first aid
  - A. To relieve pain
  - B. To cure diseases
  - C. To prevent permanent disability
  - D. To give hope
  
- (ii) Chemistry is a branch of science that deals with the study of
  - A. Nature, composition and properties of matter
  - B. Energy in relation to matter
  - C. Living things and their interactions with the environment
  - D. Afforestation, deforestation and environment conservation
  
- (iii) Which of the following sets of substances contain mixtures only?
  - A. Water, cooking oil and petrol
  - B. Steel, bronze and brass
  - C. Iron, brass and Ice
  - D. Table salt, sugar and chalk
  
- (iv) Substances that can burn or corrode your skin.
  - A. Oxidizing agent
  - B. Flammable
  - C. Corrosive
  - D. Biohazard
  
- (v) One of the reasons for painting car bodies is to avoid rusting. How does the paint prevent the rusting?
  - A. By preventing sunlight and oxygen from reaching the iron
  - B. By preventing oxygen and water from reaching the iron
  - C. By preventing sunlight and water from reaching the iron
  - D. Because paint is higher in the electrochemical series than iron
  
- (vi) Which of the following statements is correct?
  - A. Crucible is used for grinding materials into powder
  - B. Crucible is used in burning powder in jars
  - C. Combustion spoon is used in measuring temperature
  - D. Combustion spoon is used in burning powder in jars
  
- (vii) Shock is a condition which results into
  - A. The rupturing of the blood vessel in the brain
  - B. A stroke, because shock is another word for stroke
  - C. The body system failing to take enough blood to the vital organs.
  - D. Choking because the air passage becomes blocked

- (viii) During an experiment, dry hydrogen gas was passed through a test tube containing a strongly heated black copper oxide without any air. What was eventually observed in the test tube?
- The black copper oxide changed into white copper metal
  - The black copper oxide changed into brown copper metal.
  - The hydrogen gas exploded with a pop sound
  - The copper dissolves to form salt
- (ix) The following are reasons for keeping all chemicals in properly labelled containers in the Chemistry laboratory EXCEPT.
- To show how skilled the laboratory technician is
  - To avoid accidents
  - To avoid errors in experiments
  - To make it easy for laboratory users to find what they need
- (x) You want to measure exactly 20 milliliters of a solution. Which of the following measuring apparatus would be more appropriate to use?
- Measuring cylinder
  - Beaker
  - Pipette
  - Burette

## ANSWERS

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

2. Match the mixtures in list A with the correct separation method in list B.

LIST A	LIST B
(i) Splinter or stinger removal	A. Petroleum jelly
(ii) Disinfects wounds	B. A pair of scissors
(iii) Soothes broken skin	C. Safety pin
(iv) Splinter removal and securing bandages	D. Liniment
(v) Reducing muscle pain	E. Antibiotic
	F. Distilled water
	G. Soap
	H. Spirit
	I. Tweezers

## ANSWERS

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

**SECTION B (70 Marks)**

3. (a) When you burn a piece of paper in fire, you get ash. Mention the type of the change that occurs and give its definition.

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- (b) Give four characteristics of the type of change described in 3 (a) above.

(i) .....

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(ii) .....

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(iii).....

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(iv).....

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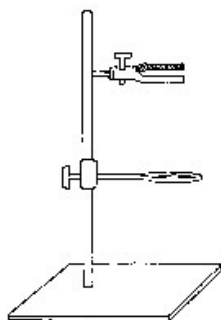
4. State the name and function of each of the following laboratory apparatus:

(i)



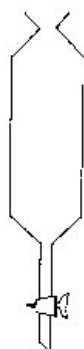
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(ii)



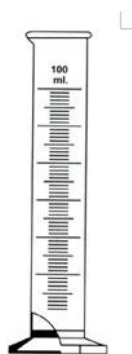
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(iii)



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(iv)



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5. (a) Hydrogen is most commonly prepared in the laboratory. Outline the most convenient way of preparing hydrogen gas in the school laboratory and write a word equation for the reaction during the preparation.

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- (b) State any six uses of hydrogen gas.

- (i) .....  
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 (ii) .....  
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 (iii).....  
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 (iv).....  
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 (v) .....  
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(vi).....  
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6. (a) As a form one student who has already visited and worked in the Chemistry laboratory, how would you explain to someone who has never seen it about what it is?

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- (b) Working in the Chemistry laboratory can be dangerous sometime. What are the four possible causes of the danger in the laboratory?

(i) .....  
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(ii) .....  
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(iii).....  
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(iv).....  
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7. (a) In his first day at school as a form one student, Seypalm was telling his parents that he has learned Chemistry. His parents asked him, "what is that?" Help Seypalm to answer his parents' question correctly.

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- (b) After getting an answer about what Chemistry was, Seypalm's parents asked him again where that knowledge of Chemistry is applied. What could be the correct response in four points?

(i) .....  
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(ii) .....  
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(iii).....  
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(iv).....  
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8. (a) Mixtures can be categorized as homogenous or heterogeneous, with at least one example, explain each of the two categories of mixtures.

- (i) A homogeneous mixture:

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(ii) A heterogeneous mixture:

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(b) When it comes to the separation of mixtures, an appropriate method may need to be used in order to make the mixture separation process successful. One of the methods is chromatography, explain the following about it:

(i) Its definition:

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(ii) Two of its practical application in life:

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9. (a) The kinetic theory of matter has three main points. Outline any two of those points.

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(b) Explain the three states of matter

(i) .....

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(ii) .....

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(iii).....

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**SECTION C (15 Marks)**

10. Gas N is made up of the most abundant element in the earth's crust. The clear, colourless gas, which is odourless and tasteless can be prepared in the school laboratory by using potassium chlorate.

- (i) Suppose you were required to demonstrate the preparation of the gas by using potassium chlorate, with the aid of a well labelled diagram, illustrate the preparation of gas N.

- (ii) Describe the test used to identify gas N

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- (iii) State any three chemical properties of gas N

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