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CHEMISTRY.

545/1

Theory

1 ¾ hrs

July/Aug-2022

CHEMISTRY DEPARTMENT

Uganda Certificate of Lower secondary Education

END OF TERM 2 EXAMINATIONS 2022

Chemistry

S.1

Time. 2 hours: 45 minutes.

INSTRUCTIONS .

Attempt **all** questions. Answers to all questions must be written in the spaces provided. Present your work neatly.

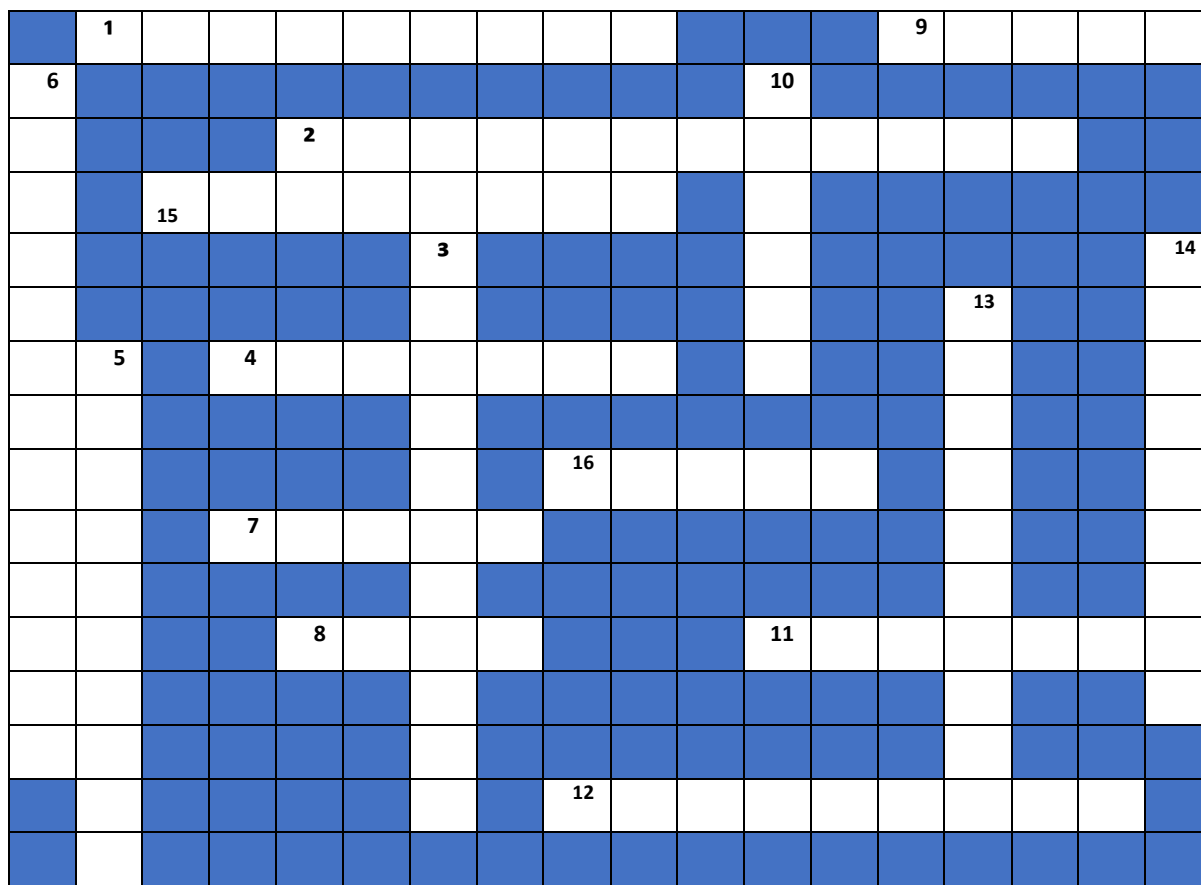
Table For Examiners use only

Number	Marks	Comment.
1		
2		
3		
4		
5		
6		
Total.		

1).Figure 1 below is a crossword puzzle about ***the substances we use in our daily life which are as a result of knowledge of chemistry***. Fill in the puzzle as guided by the clue list. Choose the correct word from the list and write it across or downwards in upper case (Capital letters). Do not use a pencil.

Figure 1
marks)

(16



Pick the substances to be filled in the table from the list below. Each substance is briefly described after list of substances.

- SOAP • ETHANOL •TABLESALT •HANDSANITIZER •CHARCOAL
- SHOE POLISH •STEEL •DETERGENT •PAINT •COPPER •MOUTHWASH
- SUCROSE •PARACETAMOL •BAKINGPOWDER •TOOTHPASTE •WATER

Across.

1.An antiseptic solution which is used to kill antibacterial load in your oral cavity.

2. A dry chemical leavening agent which is a food additive used for increasing volume and lightening the texture of baked goods made of floor.

- 4.Type of table sugar, added to tea; juice and sweetening of other beverages.
7. Universal solvent , needed by all living organism and also used for domestic purposes.
- 8.Processed in bars, cleansing agent used for washing clothes, untencils and other kinds of household cleaning.
- 9.A substance composed of solid colouring matter suspended in a liquid medium and applied as a protective or decorative coating to various surfaces and also used in producing work of art.
11. A clear colourless liquid which is widely used in making beers, wines and whisky, produced as a result of fermentation of sugars.
12. Water soluble cleansing agent usually in powdery form, forms lather readily with any kind of water. Used for washing of clothes and other household cleaning.
- 15.Light weight black carbon residue produced by heating wood in absence of air.
- 16.Alloy of carbon and iron used making kitchen cutlery such as knives; forks and used in making nails and bars.

Downwards.

- 3.Common pain killer(tablets) usually called "*panadol*" used to treat aches and pain.
- 5.Applied of black shoes. It is made of black carbon called *lampblack*. Commonest example is "*kiwi*"
6. Known as "*hand antiseptic* " it is a liquid or gel packed in small or medium sized bottles which people used in Covid-19 times to wash their hands against corona virus.
- 10.reddish-brown metal used in making electric wires because of their high electrical conductivity.
- 13.used in brushing of teeth to remove bacteria present in our teeth. Commonest examples include *Colgate and delident*,
- 14.It's chemical name is *sodium chloride* . Used as a preservative and added to foods during food preparation.

2(a)Laboratory equipment we use are called **apparatus**. There are several pieces of apparatus used for different purposes.

Search for the following apparatus in from the **word search puzzle** and circle each apparatus. The name of the apparatus may be found written horizontally , vertically moving downwards or vertically moving upwards; and can also be found written diagonally upwards or downwards. (09 marks)

Beaker	Test tube	Pipette
Funnel	Dropper	Bunsen burner
Spatula	Test tube rack	Retort

Lab Equipment word search

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K N U V P H E T F A V M S Z Q T X
Y E V W P I H P K N L V S G N O T
G V N R W M P E O A L U Z S A K G
C V H E V W G E C C S X T M X B L
T M T N J V K W T Y S E O A P G A
E J E R D M Y O B T N O X A P X S
S E S U X G X D I E E H R U U S S
T O T B P X R O X T A T A C O O R
T H T N K D H E E L I K N P I O O
U T U E P Q T N T Q E R E X Z M D
B M B S Y G G F S O O N X R U B P
E M E N W A W L Z U R E N S T K A
R D J U M J E Z D P E T Q U X Y A
A C I B Z U P K S A L F N P F K M
C A K X X C R E P O R D I C C P E
K U P F O H R X N H O G E E G J M
N C G E G C K E G N I R Y S C G Y

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(a)State the use of,

(i). Test tube.

(01 mark)



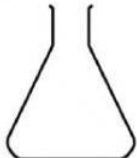



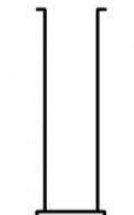
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(ii).Pipette.

(01 mark)

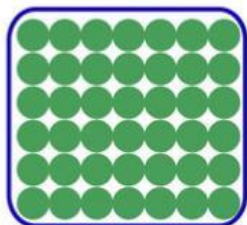
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(b) Match the following. On the left hand side are pieces of apparatus and on the right hand side are the names of the apparatus provided. (08 marks)

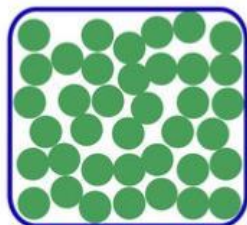
Apparatus








Name
Conical flask
Retort stand with clamp
Filter funnel
Beaker
Tripod stand
Measuring cylinder
Gas jar
Test tube

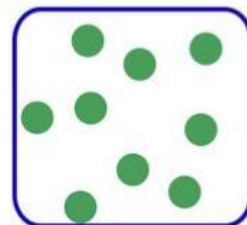
3. Matter is any thing that occupies space and has weight. Matter exists in different physical states. A physical state of matter is a distinct form in which exists. Below are diagrams illustrating the different states of matter.



State **S**



State **L**



State **G**

(a) Name state of matter, (03 marks)

S.....

.....

L.....

.....

G.....

(b) State the differences in properties between,

(i) State of matter **S** and **G**. (Use a table) (03 marks)

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(ii) state of matter **L** and **G**. (use a table) (02 marks)

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(c) Briefly state how,

(i) States of matter **S** and **L** are similar. (01 marks)

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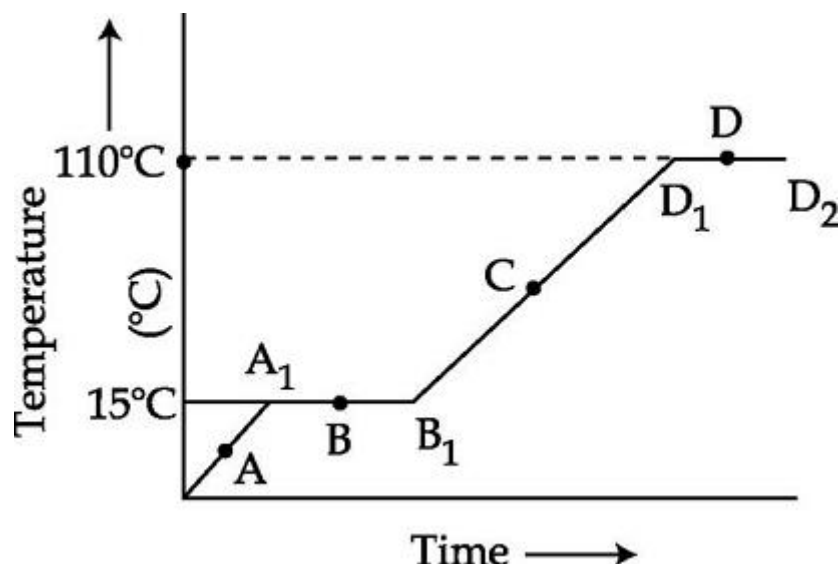
(ii) States of matter **L** and **G** are similar. (01 mark)

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(d) Name the **process** of state of matter as given in the table below and state whether the change **heat energy is released** or **heat energy is absorbed** for each of state name. (06 marks)

Change of state	Name of Process of change	State whether heat energy is released or heat energy is absorbed
L to G		
G to S		
S to L		

4. A group of S.1 students heated a pure sample of substance **Q** and the temperature changes recorded at regular time intervals. They plotted the graph as below.



(a) State what the temperatures on the graph shows. (02 marks)

(i) 15 oC

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(ii) 110 oC.

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(b) Explain

(i) what happens during heating of substance **Q** until 15 oC is reached.

(2 ½ marks)

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.....

(ii) why the temperature remains constant along **A1** and **B1**.

(1 ½ marks)

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(c) Name the state of substance **Q** at point; (03 marks)

(i) **A**.

.....

(ii) **C**

.....

(iii) **D**.

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5. Use kinetic theory of matter to explain the following observations



For part (a). Increasing of air pressure in tubes of car tyres



For part (b), putting a drop of spirit on skin

(a)The air pressure in the tubes within car tyres increases after a very long journey drive on a hotter day. (03 marks)

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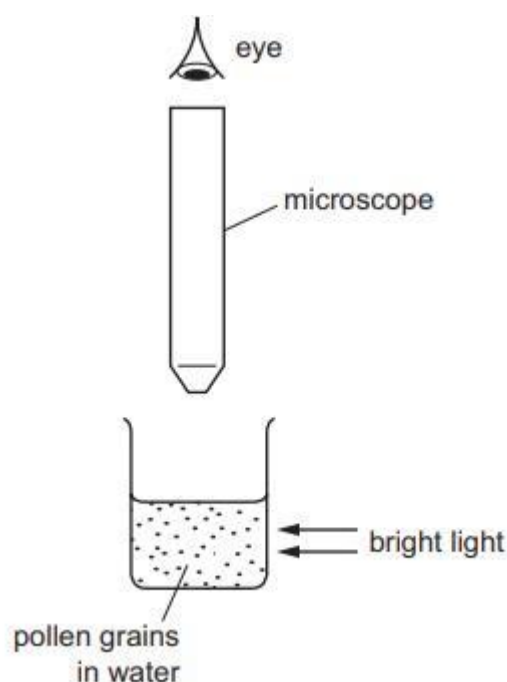
(b)When a drop of spirit is put on your skin of the hand, you feel cold as the drops evaporates. (02 marks)

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(6)In an experiment to investigate the existance of particles of matter, two S.1 students ,Bestnacy and Tonny carried out the experiment below, they poured powdered pollen grain particles on to water in a glass beaker and then passed a beam of light into the beaker. When each one of the students observed through the microscope; they saw pollen grain particles moving in a zig gag pattern.



(a) State why the pollen grain particles were seen moving in zig zag pattern?

(01 mark)

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(b) Give a reason for your answer in (a).

(01 mark)

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(c) State what the experiment indicated?

(01 mark)

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(c) Supposing Bestnacy and Tony increased the temperature of water State what they observed?

(01 mar)

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(d) Give a reason for your answer in (c).

(01 mark)

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Success!

End.

@Hasems sem chemistry department 2022

