NAMUGANGA SENIOR SECONDARY SCHOOL

DEPARTMENT OF CHEMISTRY

LOWER SECONDARY CURRICULUM STUDENTS'DISCUSSION QUESTIONS

S1, S2 AND S3, 2023

1 (a) Define the following terms as applied in Chemistry.

(i) Chemical change.

(ii) Physical change.

(b) State four differences between a Chemical and Physical change in Chemistry.

(c) distinguish between burning and combustion

(c) Ssentongo, a senior one student at Namuganga SS was told to find out the changes that firewood undergoes through to form ash. He started by using the axe and a Panga to break the firewood into small pieces. He then got one piece of chopped firewood, cut it into very small pieces which he lit a match box. He placed the very small pieces first followed by the bigger pieces and the wood was burnt successfully in an open land into ash. No piece remained unburnt.

(i) state the two types of change that took place on firewood.

(ii) why did Ssentongo chop some piece of wood into very small pieces

(iii) why was burning done in an open place without covering the wood

(iv) State the forms of energy produced by burning of this wood.

(v) State the two main products of burning of wood

(vi) state two dangerous effects of this activity to the environment.

(d) Predict whether the following processes are permanent or temporary changes. Give one reason in each case to support your answer. Copy and fill the table below.

Process	Type of change	Reason
Melting of cow boy		
Grinding of maize grains		
Making of bricks		
Boiling of water		

2 (a) Distinguish between the following physical processes.

(i) Freezing and melting.

(ii) Condensation and evaporation.

(iii) Sublimation and cooling.

(b) State the process for the changes below and predict whether the processes require high or low temperature. In each case, state whether heat is released or absorbed. Copy and fill in the table below.

Change	Process	High or low temperature	Heat is released or absorbed
Gas to solid			
Solid to gas			
Liquid to gas			
Liquid to solid			
Solid to liquid			
Gas to liquid			

(c) The table below shows the temperature of a solid sample, Q, that was heated up to its boiling point for 20 minutes. Study it carefully and answer the questions that follow.

Time (minutes)	Temperature (^{o})
0	25
5	40
15	40
20	55
25	55

(i) Plot a graph of temperature against time.

(ii) Explain the shape of your graph.

(d) Using your graph, state the;

(i) boiling point of Q.

(ii) melting point of Q.

(f) Using the knowledge of states of matter, explain why;

(i) Ice cream is always kept in a refrigerator.

(ii) Dwellers of Moroto keep tomatoes in refrigerators.

3. (a) Define the following terms as applied in Chemistry.

(i) Matter

(ii) State of matter

(b) State three main states of matter

(c) Describe the arrangement and motion of particles in the following states of matter. Copy and fill in the table below.

State of matter	Arrangement of particles	Motion of particles
Solid		
Liquid		
Gas		

(d) Explain the following observations.

(i) A lot of heat is required to covert solid to gas than liquid to gas.

(ii) A balloon filled with air is always carried in air unlike a deflated balloon.

(iii) A balloon filled with air and tightly tied reduces in volume once kept for some time.

(iv) Perfume of a bride on a wedding day is smelt by almost every attendant of the function.

(v) Crystals of sugar dissolve completely in hot water unlike in cold water.

(vi) Few crystals of copper(II) sulphate color the whole solution blue.

THE END