

- (vii) Trashes collected from all dustbins in a school were put into a special furnace where they produce energy in the form of light and noticeable heat when lit. What is the process taking place inside the furnace?
A. Decomposition B. Combustion C. Disposing D. Rotting
- (viii) Mabala was prescribed to use a medicine whose container had a label written “**shake well before use**” as the best for him. In which kind of mixture is the medicine categorized to? A. Solution B. Emulsion C. Suspension D. Filtrate
- (ix) Kibanji was ironing her uniforms, suddenly her mother called and she went to listen without switching off the socket. Upon coming back she found out that iron had exploded and the fire started to spread. Classify the type of fire caused by Kibanji.
A. Class C B. Class D C. Class E D. Class F
- (x) Lulela is facing a problem of fetching water at his village because all available water sources are full of mud. His friend advised him to assemble a simple water filter. Which of the components outlined below should not be included by Lulela in assembling the device?
A. Cloth B. Alum C. Charcoal D. Gravel

ANSWERS:

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

2. Match the methods of preventing rusting in LIST A with the corresponding descriptions in LIST B by writing the letter of the correct response below the item number in the table provided.

LIST A	LIST B
(i) Painting	A. A more reactive metal than iron is attached to the protected material and will be consumed in favour of it. B. A substance in form of grains and it absorbs moisture C. The process of coating iron materials or steel with zinc D. The coating of substances such as metals with a special pigment E. Involves coating iron with oil. F. The process of spraying iron with carbon dioxide gas G. The coating of material with tin. H. It
(ii) Galvanization	
(iii) Sacrificial anode	
(iv) Plating	
(v) Silica gel	
(vi) oiling	

ANSWERS:

LIST A	(i)	(ii)	(iii)	(iv)	(v)	(vi)
LIST B						

SECTION B (54 Marks)

Answer **all** questions in this section

3. (a) You have been appointed in a village meeting as an expert of Chemistry to explain to villagers four (4) applications of Chemistry in our daily life on the following fields:
- (i) Agriculture
 - (ii) Transportation
 - (iii) Medicine and pharmacy
 - (iv) Construction materials industry
- (b) A student was asked to mention four professional careers he/she may attain through studying Chemistry subject. What correct answers can we get from her/him?
4. (a) A teacher planned with his students to perform an experiment at 8:00 pm. Students reminded the teacher that the laboratory has no source of electricity so how can the experiment be conducted without light? The teacher told them we shall use the Bunsen burner to get light.
- (i) What type of flame will be suitable during their experiment?
 - (ii) Why is the flame named in (i) above suitable for that purpose? Give two reasons.
 - (iii) Draw a well labelled diagram of the flame named in (i) above.
- (b) Scientists believe that the use of chemical symbols is more significant than using common names of elements. Give two reasons to support this statement
5. (a) Madam Aisha took 1kg of maize to a mortar and pestle for grinding it, after few hours she succeeded to get 1kg of maize flour from those grains.
- (i) Comment on the change occurred on the maize grains, as it was a physical change or chemical change.
 - (ii) Give four reasons to support your answer in (i) above
- (b) Four beakers/bottles were found in the laboratory containing the following components: Bottle A contains a mixture of spirit and water, Bottle B contains a mixture of Iodine and sand, Bottle C contains a mixture of dyes and Bottle D contains muddy water. Which methods can you use to help a laboratory technician to separate these components accordingly?
- In bottle A ,In bottle B ,In bottle C ,In bottle D
6. (a) Form four (4) students confused the uses of the gas that supports combustion (ignites) with the one which burns with a Pop sound.
- As a form two (2) student give the name of the gas that burns with a pop sound, then correct this confusion by giving them four uses of the gas which burns with a pop sound;
- (i) Name of the gas
 - (ii) Uses of the gas (four points)
7. Mr. Majula went to the laboratory and found a substance T kept in a beaker, he also observed that the substance T boils at 100°C and freezes at 0°C at standard pressure.
- (i) Outline three (3) chemical properties of substance T.

- (ii) How is the substance T used in manufacturing industries? Give two (2) uses;
8. (a) Give the meaning of the following terms:
- (i) Fuel
- (ii) Efficiency of a fuel
- (b) You have been given the following; Biogas, petroleum, solar energy, wind energy, charcoal, natural gas. Help your young brother to classify them as renewable or non-renewable energy sources.

Renewable	Non-renewable

SECTION C (30 Marks) Answer

ALL question

9. (a) Scientists have modified the ideas put forward by John Dalton concerning the structure of an atom. List any four (4) ideas suggested by those scientists so as to amend Dalton's atomic theory.
- (b) Many elements that occur naturally display isotopy. Suppose an isotope of Cadmium (symbol Cd) has an atomic number of 48 and a mass number of 112.
- (i) Find the number of protons in Cadmium
- (ii) How many electrons does it have?
- (iii) Determine the number of neutrons in it
- (iv) Write its nuclide notation
- (v) Draw the structure of an atom to represent the nucleus of the Cadmium atom:
10. (a) With a well labelled diagram explain the working mechanism of a biogas plant.
- (b) outline any four advantages of a biogas in every day life.
- (c) Suppose your mother told you to buy a good/proper fuel for normal domestic uses. Which four (4) factors you may consider to implement your mother's order?