

CHEMISTRY O'LEVEL

545/1 2024

SECTION A

Answer all the items in this section.

ITEM

A farmer in village without electricity always keeps his garden tools outside the house after the work. After sometime, his tools developed brown coating and he was disturbed what happened.

Task

As a chemistry student,

- a) Point out the environmental factors that led to his tools to develop the brown coating.
- b) State the properties of one environmental factors listed in (a) above.
- c) What are the uses of the environmental factor in (b) above?
- d) What is the impact of the brown coating on tools and how to solve it?

ITEM 2

An argument took place between the brothers and his sister concerning how to wash clothes clean. Brothers said white star or magic give best results but the sister insists on blue star or Omo. They failed to reach agreement.

Task

Using the knowledge of chemistry,

- (a) Name two types of products in the above argument.
- (b) Briefly explain how one of the two products work.
- (c) State the dangers of using the product in (b) excessively.
- (d) Give the similarity and difference between the cleaning agents used by the brolles.

SECTION B

PART 1

Answer one item from this part.

ITEM 3

A certain rice scheme has been growing rice for along period of time. However the yield has greatly reduced. After analysis, the manager found out that the soils had become Nitrogen deficient nad would require Nitrogen based fertilizers. The manager has been informed that the fertilizer can be made industrially from Nitrogen.

TASK

As a chemistry student, make a write up to the manager on how the fertilizer can be made.

ITEM 4

Kilembe mine on the foothills of Rwenzori Mountain is estimated by government geologists to contain tonnes of the Ore that contain copper. The production of copper was halted due to how copper prices and political instability.

However, the demand for cooper has since then increased.

The ministry of energy and mineral development has cleared an investor to restore the mining of copper with minimal environmental impact. The youth in the area are wondering how the extraction process will be done.

The head teacher has appointed you to explain to the youth how the process will be done and how can they benefit from it.

TASK

Prepare a presentation that you will use during the sensitization.

PART II

Answer one item from this part.

ITEM 5

Recently there has been a rapid climate change for the past years leading to increased temperature changes of the earth and extinction of some species of organisms.

Government through the National Environment Management authority is planning to organize environmental awareness workshop on the effect of climate change.

You have been invited at one of the local FM Radio to talk about the issue.

TASK

AS a chemistry student who has studied about climate change, Prepare your presentation upon your invitation.

ITEM 6

Some people living in rocky area are poor because crops cannot grow well.

They have decided to relocate to another area but the area Member of Parliament (MP) has organized a sensitization workshop on the other ways they could make use of the rocks.

TASK

As a chemistry student, you have been selected to advise the people of the area. Make a write up you would present to the people.