

MATHEMATICS

Item 1

Three barbers, Simon, Tom, and Sulaiti, are hired by a school to cut the hair of 77 students. They start working at 7:30 am and work continuously until they take a break, which occurs when each of them finishes a student's haircut at the same time. Each barber takes a different amount of time for a student's haircut: Simon takes 20 minutes, Tom takes 25 minutes, and Sulaiti takes 30 minutes. They want to know the first time when they will get a break together and also the total number of students, they will have finished to trim by then.

Students pay school fees of Shs. 2,200,000 per term. The school pays the barbers Shs. 3000 per haircut of a student. The school allocates 0.5% of the school fees paid by each student for haircuts for the whole term and 10% of the remaining fees for food.

Since students get their hair cut four times per term, the school wants to know if they are setting aside enough money for hair cutting. The school also wants to know if they are setting aside enough money for food, given that each student eats food worth Shs. 300,000 per term.

Tasks:

- a) At what time will all the barbers first get a break together?
- b) i) How many students will the barbers have cut hair before their first break?
ii) How much will the school spend on each student for only hair cutting for the whole term if every student cuts hair only four times as planned by the school?
- c) Is the school budgeting enough for haircuts? Explain your answer.
- d) Is the amount set aside for food enough, basing on how much food each student eats per term?

Item 2

In a particular village, the poultry farmers always complain of eagles that prey on their poultry birds during the day. One of the farmers came up with a plan of securing his hens and ducks from the eagles and he started with obtaining the number of hens and ducks on his farm and he found out that the total number was 24. He found out that the number of hens on the farm were three times the number of ducks on the farm. He then decided to make a cage from wire mesh to secure the birds on the farm and the cage surrounded the area on the farm defined by $y \leq x + 1$, $x \leq 4$ and $y \geq 1$.

Task: Using your knowledge of mathematics,

- a) Determine the number of hens and ducks on the farm
- b) Show the area surrounded by the cage on the graph
- c) Determine the area of surrounded by the cage

Item 3

A carpenter in a certain village plans to fence his workshop compound built on a rectangular piece of land. After measuring the land, he realizes that the length is 4 metres longer than the width and the total area of the land is 96 m^2 .

He wants to know the exact dimensions of the plot of land so that he can buy enough fencing materials and plan where to place the timber storage area, workbench, and wood-drying section. The fencing cost is UGX 18,000 per metre

Task: Help the carpenter to determine;

- a) the dimensions of the plot of land
- b) the total cost of fencing the entire workshop.

Item 4

Anna bakes cakes and recently received an order for her friend to bake for him a cake for his birthday. Due to the many invited guests, Anna needs to make the cylindrical cake with a circular base of area 660.5cm^2 .

Anna has a triangular board that she wants to cut out the circular tray on which the base of the cake will sit. The two sides of the triangular board measure 60cm and 48cm and the angle between them is 60° .

However, Anna is not sure whether the largest circular tray (inscribed circle) she can cut out of the triangular board will be enough for the base of the cake.

Task: Determine whether the largest circular tray Anna plans to cut out of the triangular board will be enough for the base of the cake.

END

CHEMISTRY

Item one.

Mercy a senior two student came across a label of an element as ^{13}Al on a piece of paper. However, she wanted to know more about the element and approached you for help based on your chemistry knowledge.

Task:

As a chemistry learner;

- (a) Explain the category of the element above.

- (b) State the properties of the element and one use.
- (c) Explain the environmental challenge associated with the use of the element and its mitigation.

Item two

During the extraction of iron metal in Tororo, limestone [calcium carbonate] is used as a raw material in removing silicon dioxide the major impurity. The calcium carbonate decomposes during the production process producing calcium oxide and carbon dioxide gas according to the equation below,



The reaction yields useful gaseous product however they are also dangerous to the environment in one way or the other and the residents want to know this but they lack enough energy and have approached you for help.

Task:

As a chemistry learner;

- Explain the category of the gaseous product.
- State the properties that make the gaseous product useful in the environment.
- Using outermost shell electrons only, show how the gaseous product is formed.
(the atomic number of C is 6 and that of O is 8)
- Explain any danger of the gaseous product to the environment.

Item 3

Jane a senior two student went to his grandmother's village for holidays but she was surprised to see men cutting down trees, heaps of soil and asked her grandmother what activity the men were doing. Her grandmother replied her that they are carrying out charcoal burning and wanted to know how it is done, any possible effect of the activity and the benefit of the activity.

Task:

Assuming your Jane's grandmother make a writeup you can use to guide Jane.

Item 4

Air is a useful natural resource. In Jinja city, the air quality has been reduced due to increased industries that emit dangerous fumes making it unsafe and long run

affect the climate of the area. The youth environment club in the city has organized a radio presentation to create awareness to the people of Jinja about the category of air as a natural resource, its composition effect of industrialization on the natural resource and any benefit of air.

Task

Assuming you're the chairperson of the club, organize a presentation you are to use on the radio station.

END

CHRISTIAN RELIGIOUS EDUCATION

ITEM 1

In kyanamukaka village, lives Mr. Odeke who got saved in one of the churches. He is a committed Christian. However, he fell sick and he has no money for treatment, this has stopped him from attending church which has made him backslide in faith. A friend of his is advising him to go to a witch doctor to get treatment which is not in agreement with his faith, yet he is now considering his friend's offer.

Task

- a) Explain the Christian forms of worship which can enable Mr. Odeke to remain strong in faith?
- b) How can contemporary approaches enable Mr Odeke maintain his faith in God?

ITEM 2

"A week later, when the time came for the baby boy to be circumcised, he was named Jesus, the name which the angel had given him before he had been conceived. The time came for Mary and Joseph to perform the ceremony of purification, as the law of Moses commanded. So they took the child to Jerusalem to present him to the Lord." they also went to offer a sacrifice of pair of doves or two young pigeons, as required by the Law of the Lord." Luke 2:21-24 (GNB)

Task

- a) How can the Christian rituals today strengthen faith as reflected in the Bible text above?

- b) Explain the African Traditional rituals that are related to those in the Bible text above?

ITEM 3

“The teachers of the Law and the Pharisees brought in woman who had been caught committing adultery, and they made her to stand before them all. “Teacher”, they said to Jesus, “this woman was caught in the very act of committing adultery. In our Law Moses commanded that such a woman must be stoned to death. Now, what do you say?” But he bent over and wrote on the ground with his finger. As they stood there asking him questions, he straightened himself up and said to them, “whichever one of you has committed no sin may throw the first stone at her....”

When they heard this, they all left, one by one, the older ones first. Jesus was left alone, with the woman still standing there. He straightened himself up and said to her,” where are they? Is there no one left to condemn you either. Go but do not sin again.” John 8: 3-11 [GNB]

TASK

- a) How should Christians ensure that human dignity is promoted in society in light of the Bible text above?
- b) Explain the contemporary ways of promoting human dignity among people in Uganda?

ENTREPRENEURSHIP 845/1

Item 1.

ISRAEL graduated last year from Kyambogo University with a Bachelor’s degree in Electrical engineering. His father decided to reward him with 25 million shillings. Israel is thinking of using the funds to start a restaurant or motor vehicle garage, but he does not know the basis for selecting the best among the two ideas.

In addition, she wants to ensure that her funds are planned well by allocating specific amounts to specific business activities but he has inadequate skills to that effect. He has contacted you for assistance.

Task.

- a) Guide Israel to select a suitable business opportunity.
- b) Come up with a statement showing estimates for allocating funds to her selected choice of business.

Item 2.

After completing studies, Jorjinah, Joseph and Jane decided to become entrepreneurs and start a joint business venture JJJ Bakery in their hometown of Namilyango mainly producing cakes and daddies. Each of them contributed equal start – up capital of UGX 1,200,000 and agreed to share profits and losses equally. They collaboratively manage production, marketing and finances with Jane taking a more active role. The business has become successful in the community but they are scared of conflicting.

Task.

As a business expert, help them by;

- a) Creating an agreement that outlines the terms and conditions of their bakery.
- b) Explaining to them the challenges they are likely to encounter by only concentrating on producing cakes and daddies.

Item 3.

PRISCILLA owns a hair saloon in a busy trading centre serving both males and females from near and far away. In the saloon, workers use a pair of scissors for trimming hair, sun dry wet heads of the customers, has no appointment book for customers, receives only cash for her services and people from far send letters to the saloon for booking which makes services delay. She only gets feedback from customers who come her saloon physically and the business is not registered for a Tax payers Identification Number (TIN).

Priscilla thinks of using technology to solve business challenges and also register her saloon with the respective authorities but does not know what to do. She has therefore come to you for assistance.

Task.

Guide Priscilla on the;

- a) technology to use to solve business challenges.
- b) steps to follow when registering her saloon business.

END

ENGLISH LANGUAGE

Item 1.

Read the passage below and answer the questions that follow it:

Many researchers have argued that drug addiction is a brain disease. Every type of drug has its own way of affecting or transforming the brain. The brain can undergo serious and long-lasting change with increased drug use.

For example, alcohol, which is a depressant, can cause malnutrition among heavy drinkers. Alcohol is high in calories and, as such suppresses appetite. It also causes vitamin deficiency

by interfering with absorption of vitamin B from the intestines. Other physical effects include liver damage, heart disease, and increased risk of a stroke and susceptibility to infections, due to a suppressed immune system.

Women who drink while pregnant can give birth to babies with fetal alcohol syndrome and when are also underweight. The long-term effect of alcohol is brain damage. Specifically, alcohol can cause memory loss. Cocaine, a stimulant, has been known to increase wakefulness and alertness. Users report a sense of energy and confidence, and a feeling that any problem can be solved, and any task accomplished.

However, when the drug wears off, the user experiences a "hangover" which is characterized by extreme fatigue and depression, irritability, disorientation and agitated motor activity. Large amounts of cocaine can cause restlessness, hallucination and delusions. Long term effects have been associated with severe depression, suicidal tendencies, disrupted thinking and, just like in the case of alcohol, brain damage.

This demonstrates that drugs are specifically designed to alter the arrangement of brain cells. When a young person, whose young brain is still being moulded, starts to abuse drugs for whatever reasons, that person is dramatically altered both physically and mentally. Young people should learn to say "no" to drugs.

Task;

You are the Youth Alive Chairman of your school. Advise your club members about the effects of alcohol and cocaine on the user as shown in the passage. Use about 120 words.

ITEM 2;

Read the text below carefully and then respond to items that follow.

The school's riskety and half-dead fife-band was in full session. Each class stood in twos in rigid military fashion. All the teachers, six of them, were standing on the school veranda, in the shade, while the children stood in the scorching sun. Each class teacher stood in front of his class and backed orders. The newly admitted class one boys were unruly and noisy. They had not yet been initiated into the military discipline, which prevailed on such occasions. It was only a matter of time.

While they were so engaged, Torto, who was in another file, was looking intently in Mensa's direction; he was trying to wink and smile at him, hoping that Mensa too would wink and smile reassuringly back at him. Unfortunately, Mensa would not look his way. Torto

therefore had to persist, and he was so taken up by the fruitless task that when the teacher on duty bellowed "March time" he did not hear him. Mr. Lomo, the impressive head teacher, who stood aloof both from the pupils and teachers, noticed Torto's inattention, but waited for more evidence. Meanwhile, Torto was busy still winking and smiling. The teacher on duty yelled again, "Right turn!" and then "Quick March!" Torto was standing without any attention of moving when the boy immediately behind him, marched and bumped into him. The boy who bumped into him was so startled that soon after the bump, he nudged Torto in the ribs to get moving so that they would soon not be caught. Torto was so startled by the well-intentioned nudge that he squealed.

"Halt." cried Mr. Lomothe, the whole school came to a halt. The boy playing the bass was so taken aback by the thunderous cry of halt that he gave the already tired drum a big superfluous bang, which marked time for nobody. He had to pray to God at once that no ill should befall him for striking the bass drum when it should have been silent. It was the kind of thing the head teacher did not like and he had been warned before. He had been accused by the head teacher of playing the bass not to keep time, just to satisfy his juvenile lust for hitting things.

"Torto! Come forward!" Mr. Lomo thundered. Torto, thinking that Mensa had reported him, decided to run away at once, never to return. But the shock he had on hearing his name mentioned paralyzed him.

"Torto, I say. Come forward!" cried Mr. Lomo, this time brandishing a stout cane he held in his hand. The whole place was quiet as a courtroom just before the judge pronounces a sentence.

Torto once more thought of bolting, but he knew too much about the school. Just as he had been told in detail that the wife of his teacher was selfish and wicked, so also had it been explained to him in graphic language that it was hopeless and indeed dangerous for a class -one boy to run away from school: Mr. Lomo would order the big boys to chase and catch him and if they caught him, they would so secretly nudge and twist all parts of his body that they would give him hell before the worse hell followed.

He therefore obeyed and went forward. By the time he reached the head teacher who stood tight-lipped and over-powering, his mind had become completely blank. Mr. Lomo spoke aloud and said. "Attention, everybody! This boy Torto standing before me, while the master on duty was giving orders, was laughing and winking. When you were all ordered to March, he was so engaged in naughtiness that he wouldn't budge."

"Whip him!" the whole school roared to the skies.

[Adapted from: "The Strange Man," by Amu Djoletto]

Questions

- a) There is a behaviour that reflects a lack of integrity in life. What behaviour in the passage shows a lack of integrity?

b) " The newly admitted class one boys were unruly and noisy. They had not yet been initiated into military discipline. (Join the sentence using a relative pronoun)

b) The way people behave usually tells us a lot about their character. From his behavior in the passage, what kind of person is Mr. Lomo?

c) Sometimes in life, we do certain things only to realize that we should have acted differently. If you were Torto, what would you have done after the head teacher called your name?

d) Situations in life usually arouse certain feelings in us. How do you feel after reading this passage?

e) In life, we learn from our own experiences and those of others. What can one learn from the text above?

Item 3

Design an advertisement for your school.

END

GEOGRAPHY

Item One

For this item, refer to the East African 1:50,000 (Uganda) map extract of **Lukaya**, series Y732 sheet 79/2, Edition 3 – U.S.D and the text below to respond to the tasks that follow;

Lukaya is an area located in Central Uganda latitude 0°05' South of the Equator with many water resources, vegetation resources, land resources and varied climate.

Ssango has lived in Moroto for the past two decades. Recently, he acquired new residence in the area shown on the map extract from where he has acquired land to establish fish ponds and plantations. However, he has a limited understanding of the area's climate that would influence his activities. As a climatologist, you have been contacted by Ssango to offer the necessary information.

Tasks;

a) Draw a **sketch map** of Lukaya and on it show various vegetation types and transport routes that Ssango will interact with while carrying out his activities.

b) Describe for him the climatic characteristics of the area that will influence his activities.

Item Two

The Government of Uganda, through **Uganda Vision 2040**, aims to transform the country from a predominantly peasant and low-income economy into a modern, prosperous, and industrialized nation. To achieve this, the government has invested in improved transport, energy infrastructure, promoted value addition to agricultural products, and encouraged both local and foreign investment in manufacturing

industries. As a result, Bendo Village in Mpigi district shown in the photograph below has been identified and leased to a British Company as a feasible site for establishment of a large-scale agro-processing industry.

While the government believes this will contribute significantly to the country's socio-economic transformation, many local residents in the area have opposed its establishment. They argue that the industry may lead to land loss, environmental pollution, displacement of communities, and destruction of their livelihoods. The district local government in collaboration with the Ministry of Trade, Industry and Cooperatives has organized a community sensitization workshop to make residents allow the industry to be established. You have been approached to attend the meeting and required to address the residents.



Tasks;

- Draw a landscape sketch of the area shown on the photograph showing physical and man-made features that the local residents fear to lose when the industry is established.
- Make a write up of the information that you will provide to the local residents of Bendo village to convince them to accept to set the industry in the area.

SECTION B PART I [*Choose One Item*] Item Three

East Africa is gifted with diverse resources in form of water resources, varied vegetation, and climate among others. These resources are distributed across various relief regions and support mankind.

The East African Community (EAC) has launched a regional development Programme aimed at promoting sustainable utilization of these different relief regions to improve livelihoods and accelerate economic development. To achieve this, they have allowed Swiss investors to make cultivation and manufacturing investments in the area. However, they have limited knowledge about the suitability of the different relief regions to their investment and welfare. They have approached you to guide them on the best choices they can make.

Support Material

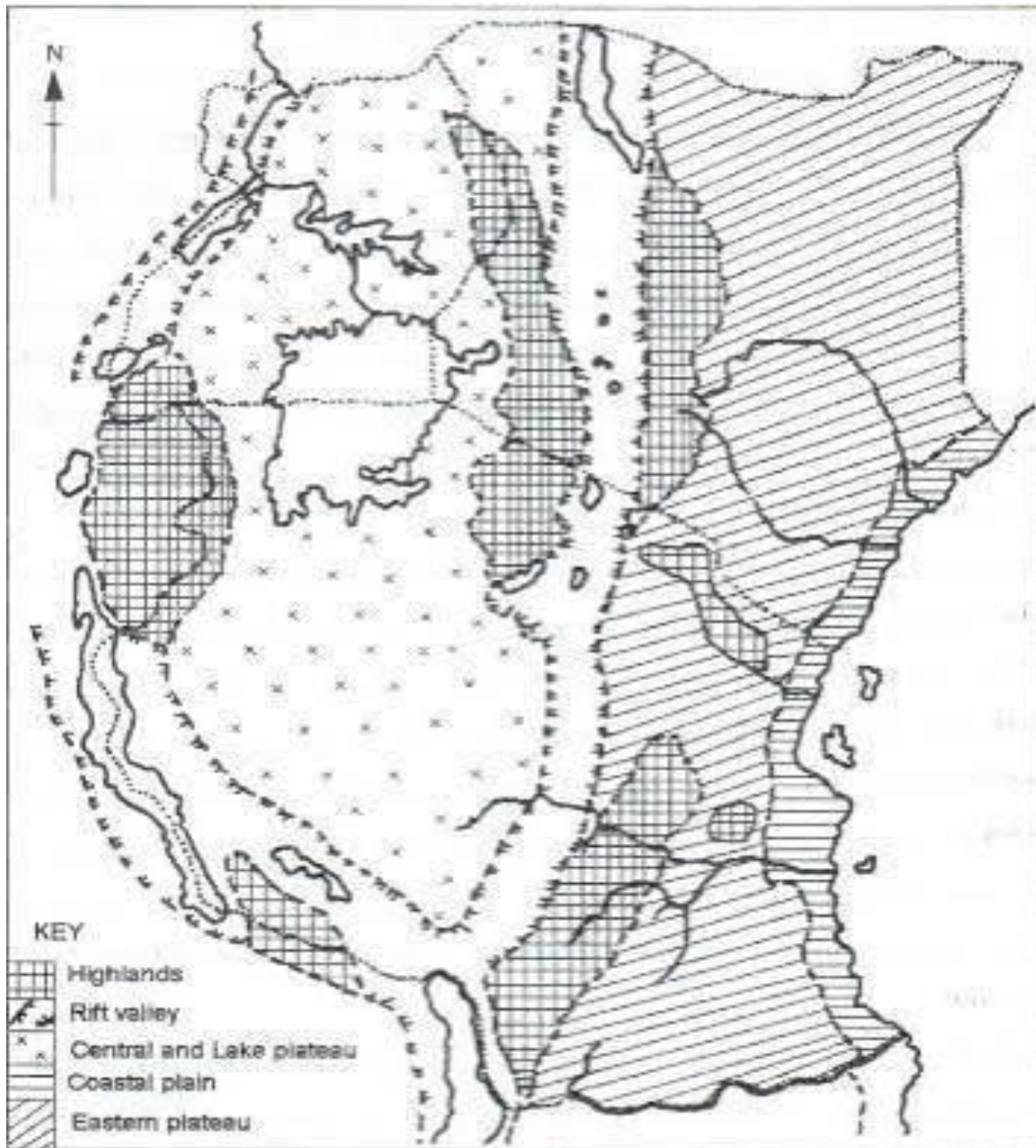


Figure 2: Relief Regions of East Africa

Tasks

- Using the sketch map and text above, identify any one relief region that you would recommend the investors to center in.

- b) Apart from cultivation and manufacturing, explain other economic activities that the Swiss investors can carry out in the region chosen in part (a) above to live an improved life.
- c) Explain the problems that people living in the region answered in part (a) are facing.

Item Four

Uganda has in recent years experienced a number of natural and human-induced disasters such as floods, landslides, prolonged droughts, windstorms, earthquakes and disease outbreaks. These events have affected many communities. The community members are overstrained by the frequency of these disasters.

Recently, the Government of Uganda, in partnership with World Bank launched a National Disaster Risk Reduction and Management Programme aimed at strengthening community preparedness, reducing disaster risks and promoting sustainable livelihoods in disaster-prone areas. As part of the Programme, a disaster preparedness and awareness workshop has been organized for local leaders and community members to discuss disaster experiences and community responses to disasters in Uganda. You have been selected to participate in the workshop as a representative of your community.

Support Material



Tasks

- a) Choose any one disaster in the scenario and explain why it occurs.
- b) Make a write up that you would present in the workshop showing possible measures that communities and the government should adopt to reduce the occurrence and effects of disasters in Uganda.

END

ITEM 1

In one of the meetings held in your district, the district chairperson suggested that the teaching of the history content should be reduced in schools and promote the teaching of science in order to create innovative and skillful people to reduce unemployment among the youth but was opposed by other leaders.

Meanwhile, the district urban planner visited one of the parishes in the district having a historical site and suggested that it should be removed to create way for the construction shopping malls in order to promote economic development. However the residents disagreed with his view. You have been approached by one of the local Radio stations on a talk show to educate the two leaders on their ideas.

Tasks

Prepare information in an essay form you will use on the talk show to educate the,

- a) District chairperson to change his suggestion.
- b) District urban planner not to go on with his plan.

ITEM 2

As early as the 16th Century, large numbers of Bantus and Nilotes migrated and settled in what later became East Africa among the Cushites and Bushmen, among others. The political, social and economic conditions both in the cradle lands and East Africa caused these migrations and settlements.

These migrations and settlements brought several developments in the political, social and economic spheres of life that are, to date, celebrated as some of the cultural heritages of East Africa.

The Ministry of Gender, Labour and Social Development in Uganda is organising a Cultural day celebration. In this celebration, the public is to be enlightened about the role that was played by migrations and settlements in shaping today's East Africa through a public debate.

Task:

Taking into consideration the political, social and economic factors in both the cradle lands and East Africa during the 16th Century, make a write-up to discuss:

- a) the conditions that made those migrations and settlement into East Africa necessary.
- b) ways in which those migrations and settlements have continued to impact East Africa to date.

ITEM 3

During the 2nd half of the 19th century, Africa, East Africa in particular witnessed the coming of Europeans.

The reasons for their coming were political, economic and social. When they arrived in east Africa, they had political, economic and social impacts on the region which is still felt up to date.

During the study of this topic, the S.2 learners in your school were given an assignment by their history teacher to find out the reasons that necessitated the coming of Europeans to east Africa and how their political economic and social impacts have affected the region up to date but the learners couldn't do the work and so approached you for assistance

Task

Prepare an essay having information you will use to help the S.2 learners in finding out;

- a) The reasons why such a group of people came to East Africa.
- b) How their coming has affected east Africa up to date.

ITEM 4

The developed world has achieved that status because of their domination of International trade. Similarly, East African countries participated in a well organised trade before the 20th century. Unfortunately, their level of development has lagged behind up to date. A debate was organised by senior four learners on the topic; **"The 19th century pre-colonial trade benefited East Africa up to date"**. During the session, some students believed that pre-colonial trade was important in the development of modern East Africa while others urged that pre-colonial trade left nothing to show in the development of modern East Africa. You are part of the debate team.

Task: -

- a) Giving reasons for the development of the above trade.
- b) Show how this trade affected east Africa up to date

END

INFORMATION AND COMMUNICATIONS TECHNOLOGY

ITEM 1

The chairperson LC I of Mwota village wishes have a meeting with his people to sensitize them about some safety measures that can help them survive the rampant theft which has been on the rise in this village. He plans to meet the residents of Mwota at the village's community hall. The chairperson would like to have a visual presentation of his speech,

give out a copy of safety measures to each person and also take photos of the people in attendance that will be used as evidence in future.

As an ICT expert, you have been requested by the chairperson to help him prepare the necessary tools since he has limited ICT knowledge about this.

Task: Explain to the LC I chairperson of Mwota the ICTs required to ensure the meeting goes on well and how they can be maintained to ensure their longevity.

ITEM 2

Mukono Council Office is responsible for managing various ICT infrastructure, including servers, routers, switches, desktop computers/laptops, and peripheral devices like scanners and printers. Recently, staff members spend long hours working at their desks, which has led to reports of fatigue, back pain, eye strain and many others. The management is unsure how to handle the accumulation of unusable ICT equipment and how to handle staff health, discomfort and working conditions.

b) Recommend strategies and practical measures to improve the health, comfort, and productivity of staff members, including sustainable solutions for workspace ergonomics and equipment management.

END:

ISLAMIC RELIGIOUS EDUCATION

ITEM ONE

It is not righteous that you turn your faces towards the East or the West. Still, the righteous believes in Allah, the last day, the angels, the books, the prophets and gives his wealth, despite love for it to relatives, orphans, the needy, travelers, those who ask (for help) and for freeing slaves (it includes) those who establish prayers, give zakat, those who fulfill their promise, those who are patient in poverty and hardships and during the battle. Those are the ones who have to be true, and it is those who are righteous. (Suratul Baqara 2:177)

Task

- (a) Explain the guidance in the above Quranic text regarding worship.
- (b) Relate the Quranic teachings in the above text to Christianity.

ITEM TWO

In one month, members of a Muslim community attended different functions. Some gathered to celebrate the end of Ramadan, others attended a wedding ceremony, while another family organized a naming ceremony for their newborn baby. A group of learners observed that each event strengthened relationships within the community.

Task

- a) Identify the Islamic ceremonies reflected in the scenario above.

- b) Explain the significance of these ceremonies to Muslims today.

ITEM THREE

Juma Mawaggali married Fatuma Kassim, whom she met at a wedding party. They have been married for a period of 8 years. Their marriage is characterized by domestic violence, neglect, disrespect, and Juma's denial of Fatuma the right to sex. Despite the love and care Fatuma has for her husband, Juma still considers Fatuma not to have been the right partner. Therefore, he is not willing to change his attitude towards her.

Tasks

Based on the scenario, explain:

- (a) The intentions of marriage in Islam, Juma should consider in his marriage with Fatuma.
- (b) Lessons that married people today learn from Fatuma's marriage.

KISWAHILI 2026

1. *Sama habari hii na kasha ujibu maswali yanayofuata*

Jina langu ni Ndagire mwanafunzi wa kidato cha pili mkondo wa kusini katika shule ya upili ya our lady of Africa Mukono. Mimi ni msichana wa miaka kumi na sita. Nina rafiki yangu anayeitwa Kirabo Angella. Kirabo ni msichana mrembo kama malaika kutoka mbinguni.

Tukiwa shuleni rafiki yangu huwa anatwambia kuwa anapenda shule kwa sababu yeye ni mwanafunzi anayependa kucheza michezo tofauti kama netiboli, voliboli pamoja na kandanda. Siku moja alisema hataki kuenda kwa shule nyingine kwa sababu ya michezo hii.

Rafiki yangu anasema michezo inasaidia sana yaani anasema kuwa unaweza kupata pesa, inaleta watalii kwa nchi, mtu anaweza kujulikana kwa michezo, pia anasema kuwa michezo inaboresha afya ya mtu, pamoja na kuwa ajira kwa wachezaji. Rafiki yangu kila wakati huwa anaongea juu ya Messi, Ronald (CR7), Halland(the Viking), Brown Strawman, The USOS, Roman Reigns na wengine.

Pia rafiki yangu anapenda somo la biashara katika shule yetu. Anasema kuwa kila jumamosi mwalimu Lutaaya huwa anawaletea miradi ya kufanya viatu, kufanya keki, kufanya sabuni na kutengeneza maua. Kirabo anasema kuwa baadaya ya kuuza vitu

hivyo wanapata pesa za kununua chapatti, pipi na vitu vingine kutoka kwa duka la shule.

Maswali:

- a) Andika jina la mwandishi wa habari hii. [alama02]
- b) Andika michezo mitatu (3) ambayo rafiki ya mwandishi anapenda kucheza [alama03]
- c) Andika umuhimu wa michezo kutoka kwa habari hii. [alama04]
- d) Taja majina manne(4) ya wachezaji wa ulimwengu katika habari hii.

[alama02]

- e) Andika jina la mwalimu wa somo la biashara katika shule ya mwandishi [alam01]
- f) Andika miradi ya wanafunzi wa somo la biashara katika shule ya mwandishi. [alama03]

- 2. Nyumbani baba amejenga nyumba mpya nzuri sana na kila mtu anapenda nyumba hiyo katika kijiji chenu. Andika insha nzuri kuhusu nyumba ya baba yako. [alama10]

- 3. Jibu salamu zifuatazo [alama03]

- a) Habari yako?

.....

- b) Mambo vipi?

.....

- c) Hamjambo?

.....

- 4. Andika maneno haya kwa wingi [alama02]

- i. Mti

.....

- ii. Kitu

.....

- 5. Andika umuhimu wa mimea kwa mtu. [alama02]

- 6. Taja vyakula wanafunzi wanavyokula katika shule yako. [alama03]

- 7. Andika wanyama wa nyumbani 3 katika shamba la baba yako.

[alama03]

- 8. Taja sifa 2 za kiongozi bora katika shule yako. [alama02]

PHYSICS PAPER 1

Item one: A farmer's cooperative in Lira City recently established a modern grain processing and storage centre to improve food security and reduce post-harvest losses. The facility uses several simple machines to make work easier and increase productivity during processing and storage. During a routine inspection, learners on an educational visit observed technicians using a screw jack to raise one side of a heavy maize milling machine so that worn-out bearings could be replaced safely.

The screw jack has a handle of length 48 cm and a double-threaded screw with a pitch of 3.0 mm. While lifting a milling machine weighing 1200 N, the engineers found that the screw jack operated at an efficiency of 30%. They explained that although the machine greatly reduced the effort required to lift the load, not all the energy supplied was converted into useful work because some was lost during operation.

The processing centre also uses an electrically powered hoist to lift filled sacks of maize flour from the loading bay to a storage platform 24 m above the ground. During a routine performance assessment, the hoist raised a 30 kg sack to the platform in 8 seconds, allowing the engineers to evaluate its power output under normal operating conditions.

Meanwhile, at a nearby vocational training institute, learners were discussing the transformation of energy in moving objects. During the discussion, a 3 kg toolbox accidentally slipped from a maintenance platform 45 m above the ground and fell freely to the ground. The learners assumed that air resistance was negligible and that all the gravitational potential energy of the toolbox was converted into kinetic energy during the fall.

Hint: Take the acceleration due to gravity, $g = 10 \text{ m s}^{-2}$

Using the information provided above, answer the following questions.

- Determine the mechanical advantage of the screw jack.
- State two factors that may reduce the efficiency of the lifting machine and one practical application of gears in everyday life.
- Calculate the power developed by the lifting machine while raising the sack.
- Determine the velocity with which the toolbox strikes the ground, assuming all its gravitational potential energy is converted into kinetic energy.

Item Two: A humanitarian relief organization has established an emergency supply centre in a flood-prone district. The centre stores cartons of food and medical supplies before distributing them to affected communities. Engineers must ensure that the storage floor is strong enough to support the loads exerted by the cartons and workers moving around the warehouse.

One of the cartons used for transporting relief supplies is a rectangular wooden crate measuring 5.0 m long, 2.5 m wide and 1.5 m high. When fully loaded, the crate weighs 600 N. During transportation and storage, the crate may rest on any one of its rectangular faces. The engineers are required to determine the maximum and minimum pressures the crate can exert on the warehouse floor.

The volume enclosed by the crate is completely filled with packed relief items whose total mass is 60 kg. The engineers also need to determine the average density of the packed materials to help estimate transport costs.

During inspection, a warehouse worker of mass 72 kg stands on the floor wearing protective boots. The total area of contact between the soles of the boots and the floor is 0.036 m^2 . The engineers compare the pressure exerted by the worker with that produced by the crate to identify areas that may require reinforcement.

Using the information provided above, answer the following questions.

- (a) Determine the greatest and least pressure that the loaded crate can exert on the warehouse floor.
- (b) Calculate the average density of the packed materials inside the crate.
- (c) Calculate the pressure exerted by the warehouse worker on the floor.
- (d) State two practical applications of the knowledge of pressure in solids in everyday life

Item three: As part of preparations for the annual inter-school science and sports exhibition, learners at Green Valley Secondary School were assigned to inspect newly completed facilities before they could be used. A rectangular football pitch measured 90 m by 60 m, while a nearby classroom measured 8.0 m by 6.0 m. Each classroom desk had a top measuring 1.20 m by 0.50 m with a thickness of 3.0 cm. In the science laboratory, the learners examined a rectangular metal block measuring $10 \text{ cm} \times 6 \text{ cm} \times 4 \text{ cm}$ and an irregular stone that raised the water level in a measuring cylinder from 180 cm^3 to 455 cm^3 when completely immersed. Another group estimated the walking speed of a learner who covered 20 paces in 16 s, each pace being approximately 0.75 m long. They also checked whether a rectangular water storage tank measuring 2.5 m long, 1.8 m wide and 1.4 m deep would hold sufficient water for the exhibition activities.

Later in the day, while lunch was being prepared in the school kitchen, learners working in different parts of the compound noticed the smell of curry even though the classroom doors remained closed and there was no noticeable movement of air. Curious about this observation, they decided to gather experimental evidence that could help explain how particles from the food reached distant places before presenting their findings during the exhibition.

Tasks

- (a) Evaluate the suitability of the facilities by determining the area of the football pitch, the area of the classroom floor, the volume of the rectangular metal block, the volume of the irregular stone, the speed of the learner, and the capacity of the water storage tank.
- (b) Recommend the most appropriate measuring instruments that would have been used to obtain the measurements.
- (c) Account for the observation that learners detected the smell of curry in different parts of the school compound despite the absence of noticeable air currents.
- (d) Outline how the learners could obtain convincing experimental evidence to support the explanation given in task (c).

Item four: A community health outreach team travelled to a remote village using a pickup truck loaded with medical supplies, water containers and portable equipment. Before setting off, the team used a spring balance and a digital balance to check the loads being carried so that the vehicle would not exceed the recommended limit. Along the journey, they

noticed that the tyres of the truck had become much smoother than when the vehicle was new, especially after months of travelling on rough gravel roads. The driver explained that the remaining tread on the tyres was still important for safe movement on wet and dusty roads.

At one of the health centres, two workers pulled a heavy medicine cabinet to a new room. One worker pulled with a force of 300 N due east, while another pulled with a force of 400 N due north at the same time. The cabinet moved steadily towards its new position.

Later, an outreach team constructed a simple liquid-in-glass thermometer for use in a rural health centre. To determine whether it could be used for accurate temperature measurements, they calibrated it using a standard laboratory thermometer.

When the thermometer bulb was placed in melting ice (0°C), the length of the liquid column was 5.0 cm. When it was placed in boiling water (100°C), the length of the liquid column became 25.0 cm. After wards, while measuring the temperature of drinking water at the health centre, the length of the liquid column was found to be 16.0 cm.

Tasks

- A box of medical supplies has a mass of 35 kg. Determine its weight on Earth, taking the acceleration due to gravity as ms^{-2} .
- Calculate the magnitude of the single force that has the same effect as the two perpendicular forces acting on the medicine cabinet.
- Explain why the tyres of the outreach vehicle became smoother and thinner after long periods of use, and state the importance of tyre tread during travel.
- determine the temperature of the drinking water.

END

PHYSICAL EDUCATION

ITEM 1

In the recently concluded post-primary games, a particular school was forced to drop out of the competition after playing just two games. This was because they sustained many injuries which ended up leaving them with a number of players less than the minimum required for a team. For the few games they played, the following were noted;

- They were getting tired easily
- They could easily fall after being dodged
- The strikers of the opponents would run faster than the defenders
- Some players even felt difficulty to bend while tying their shoelaces

Task:

If given the role to coach that school, in a write-up describe what you would do to ensure a better performance in the next upcoming competitions. **[25 scores]**

ITEM 2

1. In preparation for the game of netball between MUTEESA HOUSE and SSUUNA HOUSE, umpires were observed carrying out the following before the game.
 - i. Inspecting the field
 - ii. Removing jewelry like necklaces from the players who could be wearing them
 - iii. Checking the surfaces of the shoes of the players
 - iv. Checking the size and nature of the ball to be used

As the game progressed, one student collapsed. A colleague was observed performing the following in the order to rescue the friend's life.

- i. Pinched the casualty's nose, sealed his mouth with that of the casualty and blew air into his mouth
- ii. Held him by the shoulders and shook him gently as he called him out
- iii. Compressed his chest at a rate of 100 compressions per minute
- iv. He looked around to check for the cause and also requested the people close to provide space to the casualty
- v. He raised the casualty's chin and tilted the head back
- vi. Moistened his chick and placed it near the nose of the casualty
- vii. Requested one spectator to help get a motor vehicle to rush him to Dandira health centre

After the match, there was an argument as one member said that all what the umpires did were necessary and also added that the spectator who helped the casualty needed to be guided on the proper sequence of what he did.

Task

- a. Explain why the student was right with his comment about what the umpires did **(15scores)**
- b. If you think the procedure that the student followed as he helped the casualty is okay, re-write it the way it is. But if it's not okay, then re-arrange the given procedure into the most appropriate one. **(10 scores)**

ITEM 3

In the recently concluded USSSA National boys' soccer championships in Masaka, a number of issues arose indicating the determination of some school teams to win at all costs. This caused many of such teams to exhibit high levels of poor sportsmanship through characters like;

- Using ineligible players in their teams
- Disobeying the referees' on-field decisions
- Some players intended to fight their opponents resulting from the frustrations and inability to admit a loss
- Rough play against their opponents
- Others would refuse to train

Since the competition was for a short period of time, the players ended up being over stressed and exhausted which further worsened the situation.

TASK:

- a) According to you as an analyst, which other behaviors could these players have exhibited and were not captured **[5 scores]**
- b) Which effects could such a trend have on the championship, teams and players at large if not addressed **[10 scores]**
- c) How can the country address this, in order to protect its talent base? **[10 scores]**

END

CHRISTIAN RELIGIOUS EDUCATION

ITEM 1

In kyanamukaka village, lives Mr. Odeke who got saved in one of the churches. He is a committed Christian. However, he fell sick and he has no money for treatment, this has stopped him from attending church which has made him backslide in faith. A friend of his is advising him to go to a witch doctor to get treatment which is not in agreement with his faith, yet he is now considering his friend's offer.

Task

- c) Explain the Christian forms of worship which can enable Mr. Odeke to remain strong in faith?
- d) How can contemporary approaches enable Mr Odeke maintain his faith in God?

ITEM 2

"A week later, when the time came for the baby boy to be circumcised, he was named Jesus, the name which the angel had given him before he had been conceived. The time came for Mary and Joseph to perform the ceremony of purification, as the law of Moses commanded. So they took the child to Jerusalem to present him to the Lord." they also went to offer a sacrifice of pair of doves or two young pigeons, as required by the Law of the Lord." Luke 2:21-24 [GNB]

Task

- c) How can the Christian rituals today strengthen faith as reflected in the Bible text above?
- d) Explain the African Traditional rituals that are related to those in the Bible text above?

ITEM 3

“The teachers of the Law and the Pharisees brought in woman who had been caught committing adultery, and they made her to stand before them all. “Teacher”, they said to Jesus, “this woman was caught in the very act of committing adultery. In our Law Moses commanded that such a woman must be stoned to death. Now, what do you say?” But he bent over and wrote on the ground with his finger. As they stood there asking him questions, he straightened himself up and said to them, “whichever one of you has committed no sin may throw the first stone at her....”

When they heard this, they all left, one by one, the older ones first. Jesus was left alone, with the woman still standing there. He straightened himself up and said to her,” where are they? Is there no one left to condemn you either. Go but do not sin again.” John 8: 3-11 [GNB]

TASK

- c) How should Christians ensure that human dignity is promoted in society in light of the Bible text above?
- d) Explain the contemporary ways of promoting human dignity among people in Uganda?

END