



HOME SCHOOLING MATERIAL

PASS A' LEVEL

GEOGRAPHY, ECONOMICS, LITERATURE & IT



YOUR GUIDE AWAY FROM SCHOOL

SOLUTIONS TO PAPER ONE (AICT004)

1. (a) **Computer servicing** is the practice of keeping computers in a good working state while **computer repair** is the act of restoring computer hardware and software to good condition or working order.
- (b) Why a computer laboratory should have;
- (i) **Burglar proofs**
 - ☐ To safeguard or secure the laboratory against burglars.
 - (ii) **Woolen carpet**
 - ☐ To enhance safety of equipment in case a hardware component falls down.
 - ☐ To reduce slipping and falling of users.
 - (i) **Electric blower**
 - ☐ Used to remove dust from hardware.

2.

STATEMENT	WORD
The process of entering data into a computer. Can also refer to the data itself	Input
The transmission of data from one device to another.	Communication
The operation of saving data, programmes or output for future use.	Storage
Data that has been processed into a meaningful form	Information
Performing operations on data that has been entered into a computer to convert it to information.	Processing

3. (a) The appropriate programme or processing technique that matches;
- i) Virtual memory..... **folder**
 - ii) File compression programme..... **Zipped file**
 - iii) Spooling..... **Printer**
- (b)



- i) One page (explanation: only page 45 shall be printed).
ii) Collate refers to gathering and arranging sheets or other printed components into a predetermined sequence.
4. (a) A password is a secret combination of characters used to gain access to a computing device, network, website or other resource.
- (b) Strategies for creating a strong password.
- ☐ Make the password have at least eight characters.
 - ☐ Password should have lower case and upper-case characters.
 - ☐ It should include numbers and special characters.
 - ☐ Choose passwords that are not in a dictionary.
 - ☐ Determine a pass-phrase that you can remember.
 - ☐ Do not keep a written copy of the password in your desk or typed to your monitor.
5. (a) **Editing** refers to changing the content of a document, such as inserting or deleting words, while **formatting** refers to changing the appearance of a document, such as changing the margins or font size.
- (b) Operations one can do using a mouse.
- ☐ Pointing
 - ☐ Clicking
 - ☐ Dragging
 - ☐ Highlighting
 - ☐ Selecting
 - ☐ Scrolling
6. (a) **File extension** is usually three or four characters preceded by a period at the end of the filename, which indicates the type of file.
- (b) File extension that can be created by;
- (i) **Microsoft PowerPoint**ppt
 - (ii) **Microsoft publisher**pub
 - (iii) **Microsoft Access**accdb
7. (a) **Machine language** is a binary-based programming language, consisting only of 0s and 1s, that a computer can execute directly.



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- (b) State the use of each of;
- (i) **Power supply**
 - ☐ This converts AC to DC, which is normally used by the internal components of the computer.
 - (ii) **Expansion slots**
 - ☐ They Connect expansion cards to the motherboard to add additional capabilities.
 - ☐ Memory slots
 - ☐ Connect memory modules to the motherboard.
8. (a) Which term refers to the amount of data that a CPU can manipulate at one time? **A computer word.**
- (b) A computer user was advised to buy a computer with a 64-bit processor. What is the meaning of a 64-bit processor? This means a processor can simultaneously process 64 bits, or 8 bytes, at one time.
- (c) Smartphones are commonly used in Uganda than landlines. Does a smartphone need a multi-core processor? Why?
- Yes**, multi-core processors allow smartphones to deliver increased performance, while delivering better battery life. The tasks that run on a smartphone have widely different performance needs; for instance, compare writing an SMS text message with playing a 3D game. To provide this scalability of performance and power in today's advanced chip manufacturing processes, it is better to have multiple smaller cores.
9. (a) **Machine cycle** is series of operations involved in the execution of a single machine-level instruction.
- (b) state the machine cycle stages at which the following occur.
- (i) the instructions are carried out
 - ☐ **Execute.**
 - ii) the original data or the result from the ALU is stored in the CPU's registers.
 - ☐ **Store.**
- (c) How can a person find out if more memory can be added to a computer?
- The best way to upgrade memory is to go to a memory manufacturer's website (such as Kingston.com) and look up your PC to see which memory upgrade options are available.
10. (a) **Multitasking** is the capability of an operating system to run more than one program at one time.
- Buffer** is an area in RAM or on the hard drive designated to hold data that is waiting to be used by the computer.
- (b) The advantage of multitasking.
- ☐ Multitasking enables a user to work with multiple programmes at one time, hence saving time.
11. (a) Data communication is the process of transferring data from one device to another through a network.
- (b) Components of a data communication system.
- ☐ Messages
 - ☐ Sender

- ☐ Receiver
 - ☐ Protocol
 - ☐ Medium
12. (a) **Analog signal** refers to a type of signal where the data is represented by continuous waves while **digital signal** refers to a type of signal where the data is represented by 0s and 1s.
- (b) For the statements below, fill in the term analog or digital, depending on what the statement stands for?
- (i) Data in space being transferred from one telephone mast to another..... **Analog**
 - (ii) Data being transferred within a computer..... **Digital**
- (c) A device that can convert an analog signal to digital signal and a digital signal to analog signal.
- ☐ Modem
13. The smartphone uses Android
- (i) Apart from Android, a smartphone can use **Symbian, IOS, Blackberry OS operating system.**
 - (ii) At what speed does the processor of this smartphone work?
Speed= 2.3GHz* 8 = 18.4GHz
 - (iii) What is the battery life of this smartphone?
3500 mAh
14. (a) **User interface** is the means by which an operating system or any other programme interacts with the user.
- (b) i) Which user interface is shown in the screenshot above? **Graphical user interface**
- (i). State two advantages of the user interface shown in the screenshot.
 - ☐ User friendly because it is easy to work and learn with.
 - ☐ There is no need to type and memorize any command language.
 - ☐ Interface is similar for any application.
15. (a) **Internet** is the largest computer network linking billions of devices all over the world, while World Wide Web (Web) refers to the collection of Web pages available through the Internet.
- (b) Services provided by the Internet.
- ☐ World Wide Web
 - ☐ Instant messaging
 - ☐ Telnet
 - ☐ Electronic mail
16. (a)
- (i) **A blog** is a webpage that contains short, frequently updated entries in chronological order, typically by just one individual.
 - (ii) **A cookie** is a small file stored on a user's hard drive by a web server commonly used to identify personal preferences and settings for that user.
- (b)
- (i) **SMTP:** Simple Mail Transfer Protocol
 - (ii) **http:** Hypertext Transfer Protocol
 - (iii) **FTP:** File Transfer Protocol
17. The function of;
- (i) **To**
 - ☐ It is a text-box in the e-mail header, where the sender types in the correct e-mail address of the recipient.
 - (ii) **Subject**
 - ☐ It is the textbox where a sender enters a phrase that describes what an e-mail is about.
 - (iii) **Carbon copy**
 - ☐ It enables a person to send a copy of the e-mail to other people and each recipient will view all the addresses of other recipients.
 - (iv) **Blind carbon copy**
 - ☐ It enables a sender to send a copy of an e-mail to other recipients, but each recipient cannot view the e-mail address of the other recipients.
 - (v) **Attachment**
 - ☐ Allows files to be added to an electronic mail.
18. (a) **Encryption** is a method of scrambling electronic content in order to make it unreadable if an unauthorised user intercepts it.
- (b) Ways one can safeguard their personal information when filling online forms.
- ☐ Read a website's privacy policy before providing any personal information.
 - ☐ Avoid putting too many personal details on your website or a social media site.
 - ☐ Avoid using location-based services that share your

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- location information with strangers.
- ☐ Use your throw-away e-mail address when you sign up for free trials or other services that may result in spam.
 - ☐ Supply only the required information when you are completing an online form.
 - ☐ Unless you are using private browsing, use browser options to delete any personal information and settings stored on a public computer at the end of your session.
 - ☐
19. In the table below, write T for the statements which are right and F for statements which are false.

Statement	T/F
Windows 10 Pro is an example of an operating system used on smartphones	F
Versatility of a computer makes it run the same activity over and over again without getting tired.	F
A radio is an example of ICT device.	T
A mainframe can manage large amounts of centralised data & run multiple programs simultaneously.	T
ICT can be integrated in education without the use of desktop and laptop computers	T

20. (a) **A database** is a collection of related data that is stored on a computer and organised in a manner that enables information to be retrieved as needed.
- (b) i) Which database object is shown in the screenshot?
- ☐ **A query**
 - ii) Which field shall not appear when the database object is run?
 - ☐ **Name**
 - iii) Which field is acting as a unique identifier of the records in the database object?
 - ☐ **NIN**

SUBSIDIARY ICT PAPER TWO (AICT005)

SUPPORT FILES

Note: support files can be accessed from the link shorturl.at/nqAB7

1. WORD PROCESSING

- You wish to work during holiday and the company wants you to submit a resume. Using word processing, design your personal resume.
- (i) Set the paper size to A4 and orientation to portrait.
 - (ii) Insert your name as a header and an automatic date update as a footer.
 - (iii) Include page numbers and insert a picture of your choice as a background for your document.
 - (iv) Indent your paragraphs at 1" to the left.
 - (v) Set the line spacing of the text to double.
 - (vi) Apply a page border on your work.
 - (vii) Vary font size and type between headings and rest of the text.
 - (viii) Save & Print your work.

2. SPREADSHEETS

- Your headteacher has invited you to solve a challenge presented to you to illustrate your skills in spreadsheet programmes.
- (i) In folder S001, open the file S0011. In the worksheet "Marks" enter 10 imaginary names besides the marks given.
 - (ii) Insert a heading "end of term 1 marks".
 - (iii) Ensure that the heading is centred.
 - (iv) Change the name of the worksheet "records" to "Grades".
 - (v) Based on the data in the worksheet "Marks" use a formula to complete the worksheet "Grades" given the following information.

Marks	0-39	40-44	45-49	50-54	55-59	60-69	70-74	75-84	85-100
Grade	F9	P8	P7	C6	C5	C4	C3	D2	D1

- (vi) Format your work such that the marks below 50

- appear in Red while the marks above 80 appear green.
- (vii) Insert a picture background in your work.
 - (viii) Insert a footer of your name.
 - (ix) Save your work as your name.
 - (x) Print your work.

3. DATABASE MANAGEMENT

- The following are the departments in XYZ secondary school.
- Arts Department: History, Geography
Science Department: Physics, Chemistry, Mathematics
Language Department: English language, Kiswahili
Vocational subjects: Computer studies, music
- The following are the teachers in the school.
- | | |
|----------------------------|----------------------------|
| Musoke: Biology, | Mugisha: Chemistry, |
| Nelson: History, | Patricia: Geography, |
| Peter: Maths, | Asiimwe: English Language: |
| Mohammed: Physics, | Barbara: Kiswahili, |
| Simon: Computer studies, | Mable: Music, |
| Charles: English language, | Ben: History, |
| Omoding: Geography, | Oday: Physics, |
| Christine: Kiswahili, | Elias: Maths, |
| | Brenda: Music |
- (i) Create a database to enter the above data
 - (ii) Create a table with the following fields

ID no	Auto Number
Name	Text
Picture	Ole Object
Department	Lookup wizard
Subject	Lookup Wizard
 - (iii) Create a form and use it to enter the above objects.
 - (iv) Fill in the picture field for at least 3 records using available picture
 - (v) Generate a grouped report for all the staff in each department.
 - (vi) Create labels for each department.

- (vii) Print the report.

4. DESKTOP PUBLISHING

- Mukasa James and Asiimwe Joan will be wedded on the 1st of July at St Joseph's Church at 11:00pm. After the wedding, at 2:00pm, there will be a reception at KC Gardens. Using desktop publishing software design a wedding programme.
- (i) Set the program to appear as A4 booklet landscape.
 - (ii) Insert a gradient background
 - (iii) Vary font size and type appropriately
 - (iv) Set the name of the bride and groom as a header
 - (v) Insert a calendar that indicates the date of the wedding
 - (vi) Insert relevant graphics and shapes.
 - (vii) Insert your name as the designer
 - (viii) Save your work as your name
 - (ix) Print your work.

5. ELECTRONIC PRESENTATION

- You have been invited by the town mayor to sensitise a group of the youth in area about social media. Create a five-slide presentation about this sensitisation. The slides should include:
- Slide 1: Should have an introduction of topic and your name.
- Slide 2: Examples of social media sites.
- Slide 3: Advantages of using those social media sites.
- Slide 4: Problems that may arise from using social media.
- Slide 5: Conclusion remarks, either encouraging or discouraging.
- (i) The slides should have a uniform transition.
 - (ii) Include a speaker note on slide 4 reading "Are these problems scary".
 - (iii) Loop the slides to continue showing until ESC button is placed.
 - (vi) Save your work as "sensitisation".



LITERATURE IN ENGLISH PAPER TWO GUIDING SOLUTIONS

William Shakespeare: *Richard III*

Question 1:

Discuss the effectiveness of soliloquy in the play, *Richard III*.

We see various instances where Shakespeare uses soliloquy to enable his reader appreciate characters' traits, identify themes, understand plot, etc.

In Act I, Scene I, we encounter Richard appearing alone on a London Street in a soliloquy announcing to the audience his plans to overthrow his brother, King Edward. He says, "And, therefore, since I cannot prove a lover... I am determined to prove a villain..." He admits that since he is cheated of the goodness of those around him, he is determined to rob them of their positions.

This reveals to us Richard as malicious, evil and power-hungry. This soliloquy also helps in the development of plot. Later in the play, we see Richard becoming the villain that he says he is determined to be. It clearly manifests his treacherous plan to seize the throne and informs us the progression of his scheme. Richard says, "And that so lamely and unfashionable that dogs bark at me as I halt by them..." this reveals to the reader Richard's physical deformity. This deformity is symbolism for his inward evil nature.

In Act I, scene 2, Richard yet makes another soliloquy. He says of Anne, "Was ever woman in this humour won? I'll have her, but I will not keep her long. What? I, that kill'd her husband and his father, to take her in her heart's extremest hate..."

The themes of hypocrisy and injustice are portrayed in this soliloquy. We see the heights at which Richard can get hypocritical. We also see how insensitive to people's feelings and plight Richard is.

LITERATURE TEACHERS



This soliloquy builds an overall mood of gloom and melancholy. The soliloquy arouses anger and hatred for Richard and sadness and sympathy for Anne.

Sophocles: *King Oedipus*

Question 2:

Show how effectively Sophocles uses Chorus in the play.

In *Oedipus Rex*, the chorus is made up of the elders of Thebes representing the voice of the average citizens and contributes insight that cannot be communicated by the other characters in the play. Chorus is very vital in the play because it helps the reader appreciate the aspects of literature, such as plot development,

thematic development, portrayal of characters, development of atmosphere etc.

On a number of occasions, we see the chorus making reference to the gods and Teiresia, the prophet. This to the reader, the role of the gods in the lives of the Thebans is portrayed. The first time we encounter the chorus, we see them invoking Athena, daughter of Zeus; Artemis and Phoebus.

Chorus also plays a structural role of keeping the flow of the story sustained. By constantly announcing approaching characters, it acts as a chain between events.

This also sets a glum mood in the play. The chorus says, "Beyond all telling, the city reeks of death in her streets, death-bringing. None weeps, under her children die..." They speak about the gruesome atmosphere that has befallen the city.

The chorus also serves as the primary medium between the audience and the characters of the play, revealing new perspectives to the audience that the characters themselves cannot show. When Teiresias reveals to Oedipus that the killer he seeks is Oedipus himself, the latter lashes out at Creon whom he accuses of envy and of being in cahoots with the blind prophet to bring down his kingship. The chorus says, "...to our thinking, both of you have spoken in the heat of anger..." This registers the chorus as the voice of reason and rationality.

The chorus' comment further portrays Oedipus as irascible and rash. The chorus' sympathy to Oedipus at the very end of the play pushes the audience to commiserate with him.

William Wycherley: *The Country Wife*

Question 3:

Discuss the contribution of disguise in the play, *The Country Wife*.



Disguise is the substitution or alteration of dramatic identity, whereby one character sustains two roles. In the play, there are various instances when it is used to enhance dramatic aspects like plot, characterisation, themes, lessons and atmosphere.

Firstly, Harry Horner disguises as an impotent. In order to gain sexual access to “respectable” women, spreads the rumour that venereal disease has rendered him impotent. He does this to have as many women as possible. This helps in building plot. We see events like when characters like Lady Fidget and Dainty Fidget and her sister, Squeamish, go to his lodging to interact with him. The disguise also helps to portray characterisation. Harry Horner is depicted as a deceptive character. It further helps in developing the theme of deception/appearance versus reality.

Secondly, Margery Pinchwife is disguised by her husband, Jack Pinchwife as a man. Jack Pinchwife, an archetypal jealous husband dresses his wife in a man's suit to give an impression as a man. This helps develop plot in a way that Harry Horner is able notice a striking resemblance between the “man” he has seen and the woman he saw the day before. He kisses “him” and asks that “he” transfers the kisses to the sister. This later strains the relationship between Margery and Jack, when later Margery writes a love letter to Horner.

The disguise also helps in development of the theme of deception.

It also helps in developing a tense atmosphere as suspense is built with the strained relationship.

A reader can also learn that all that glitters is not gold.

Thirdly, Frank Harcourt is disguised as a parson to preside over the marriage between Alethea and Mr. Sparkish. He does to create a situation when this engagement would be nullified. He wants to later to find ground to have Alethea. However, Alethea

notices and sets to warn Sparkish. This enables us to see Mr. Sparkish as gullible and naive and his wife, Alethea as observant. The theme of deception is further developed.

Fourthly, The Quack disguises presence. He hides behind a screen to observe the behaviour of the “respectable”. He wants to observe the behaviour of these women. He sees a lot of things unfolding; developing plot. This develops themes like deception and immorality.

John Ruganda: *The Floods*

Question 4:

Discuss John Ruganda's use of symbolism in the play.

Symbolism means representation of ideas and themes through objects, situations or even characters. Our approach is going to be; to unravel the various symbols in the play, The Floods and show how they help us arrive at the other dramatic aspects like themes, plot, characterisation, atmosphere and feelings.

John Ruganda uses the symbol of the floods to develop the theme of political oppression. A flood is a representation of horror and destruction as allusion is made to the Biblical floods in the story of Biblical Noah.

The symbol of the floods also helps the reader envisage the floods and relating the same horror that fills the hearts of the victims of a brutal government. It portrays people like Bwogo and Boss, the embodiment of such a government as brutal and insensitive.

The other symbol that Ruganda employs is the wall that symbolises the obstacles between the rich and the poor. Nankya's ambition is to scale the wall that divides the masters from their servants. This symbol triggers in the reader's mind the social

and economic injustice, which is discussed with a particular importance in the play.

The military man with the three nails that haunts Kyeyune becomes a symbol of repression and ruthlessness. Kyeyune's constant reference to this ruthlessness and his fear for it keeps the play running, thereby fostering development of the plot.

This same symbol further reveals Kyeyune as superstitious and tender, while it reveals the perpetrators of this ruthlessness as ruthless and atrocious.

Kyeyune refers to Boss as the ogre and the ordinary people being swallowed up as bulls. The reader draws a connection between the image of the ogres in folktales and Boss' regime. This is a symbol of greed perpetuated by Boss and his cronies at the expense of the ordinary people. This portrays to us the theme of injustice.

This symbol portrays Boss and his cronies as greedy and insensitive. Kyeyune is shown as wise, insightful and reflective. Kyeyune stops eating fish when he encounters the corpse of the brigadier. He later stops eating fish because he finds a human finger in the fish. Through this, the reader is made to learn that the common man's refusal to catch the fish or to eat it symbolically suggests the common man's reluctance to check the excesses of power. It represents the idea that sometimes the common man's reaction to the injustices and oppression done to him can sufficiently be submission. This portrays the theme of political perversion. Through the symbol we also envisage Kyeyune as submissive, sensitive and wise.

NB: This is only a guide. A candidate may not rely on it as if it were all he/she needed to satisfactorily answer questions. Please be guided by it to generate more material.

LITERATURE IN ENGLISH PAPER ONE (ALIT005)

SECTION I

Read the passage below and questions that follow:

I am happy to join with you today in what will go down in history as the greatest demonstration for freedom in the history of our nation.

Five score years ago, a **great American**, in whose symbolic shadow we stand today, signed the **Emancipation Proclamation**. This **momentous decree** came as a great beacon light of hope to millions of Negro slaves who had been seared in the flames of withering injustice. It came as a joyous daybreak to end the long night of their captivity.

But one hundred years later, the Negro still is not free. One hundred years later, the life of the Negro is still sadly crippled by the **manacles of segregation** and the chains of discrimination. One hundred years later, the Negro lives on a lonely island of poverty in the midst of a vast ocean of **material prosperity**. One hundred years later, the Negro is still languished in the corners of American society and finds himself an exile in his own land. And so we've come here today to dramatise a shameful condition...

We have also come to this hallowed spot to remind America of the **fierce urgency** of Now. This is no time to engage in the luxury of cooling off or to take the tranquillising drug of gradualism. Now is the time to make real the promises of democracy. Now is the time to rise from the dark and desolate valley of segregation to the sunlit path of **racial justice**. Now is the time to lift our nation from the quicksands of racial injustice to the solid rock of brotherhood. Now is the time to make justice a reality for all of God's children.

It would be fatal for the nation to overlook the urgency of the moment. This **sweltering** summer of the Negro's legitimate discontent will not pass until there is an invigorating autumn of freedom and equality. Nineteen sixty-three is not an end, but a beginning. And those who hope that the Negro needed to blow off steam and will now be content will have a rude awakening if the nation returns to business as usual. And there will be neither rest nor tranquility in America until the Negro is granted his citizenship rights. The whirlwinds of **revolt** will continue to shake the foundations of our nation until the bright day of justice emerges...

I have a dream that one day this nation will rise up and live out the true meaning of its creed: “We hold these truths to be self-evident, that all men are created equal.”

I have a dream that one day on the red hills of Georgia, the sons of former slaves and the sons of former slave owners will be able to sit down together at the **table of brotherhood**.

I have a dream that one day even the state of Mississippi, a state sweltering with the heat of injustice, sweltering with the heat of oppression, will be transformed into an oasis of freedom and justice.

I have a dream that my four little children will one day live in a nation where they will not be judged by the colour of their skin but by the content of their character.

I have a dream today!

I have a dream that one day, down in Alabama, with its vicious racists, with its governor having his lips dripping with the words of “interposition” and “nullification” – one day right there in Alabama little black boys and black girls will be able to join hands with little white boys and white girls as sisters and brothers.

I have a dream today!

I have a dream that one day every valley shall be exalted and every hill and mountain shall be made low, the rough places will be made plain and the crooked places will be made straight; “and the glory of the Lord shall be revealed and all flesh shall see it together.”

Questions:

- a) What troubles is the Negro faced with?
b) What according to the speaker must be done immediately in order to lessen the Negro's troubles?
- What constitutes the speaker's dream?
- Explain the meaning of the following words as used in the passage.

a) momentous decree.	e) racial justice.
b) manacles of segregation.	f) revolt.
c) material prosperity.	g) table of brotherhood.
d) fierce urgency.	h) sweltering.

SECTION II

Read the following passage and answer the questions that follow

I had been about ten days at the front when it happened. The whole experience of being hit by a bullet is very interesting and I think it is worth describing in detail.

It was at the corner of the parapet, at five o'clock in the morning. This was always a dangerous time, because we had the dawn at our backs and if you stuck your head above the parapet it was clearly outlined against the sky. I was talking to the sentries preparatory to changing the guard. Suddenly, in the very middle of saying something, I felt – it was very hard to describe what I felt, though I remember it with the utmost vividness.

Roughly speaking, it was the sensation of being at the centre of an explosion. There seemed to be a loud bang and a blinding flash of light all round me, and I felt a tremendous shock – no pain, only a violent shock, such as you get from an electric terminal; with it a sense of utter weakness, a feeling of being stricken and shrivelled up to nothing. The sandbags in front of me receded into immense distance. I fancy you would feel much the same if you were struck by lightning. I knew immediately that I was hit, but because of the seeming bang and flash I thought it was a rifle nearby that had gone off accidentally and shot me. All this happened in a space of time much less than a second. The next moment my knees crumpled up and I was falling, my head hitting the ground with a violent bang, which to my relief, did not hurt. I had a numb, dazed feeling, a consciousness of being very badly hurt, but no pain in the ordinary sense.

The American sentry I had been talking to had started forward. ‘Gosh! Are you hit?’ People gathered round. There was the usual

fuss - ‘Lift him up! Where's he hit? Get his shirt open!’ etc, etc. The American called for a knife to cut my shirt open. I knew that there was one in my pocket and tried to get it out, but discovered that my right arm was paralysed. Not being in pain, I felt a vague satisfaction. This ought to please my wife, I thought; she had always wanted me to be wounded, which would save me from being killed when the great battle came. It was only now that it occurred to me to wonder where I was hit, and how badly; I could feel nothing, but I was conscious that the bullet had struck me somewhere in the front of my body. When I tried to speak I found that I had no voice, only a faint squeak, but at the second attempt I managed to ask where I was hit. “In the throat,” they said.

Harry Webb, our stretcher bearer, had brought a bandage and one of the little bottles of alcohol they gave us for field-dressings. As they lifted me up a lot of blood poured out of my mouth, and I heard a Spaniard behind me say that the bullet had gone clear through my neck. I felt the alcohol, which at ordinary times would sting like the devil, splash on to the wound as a pleasant coolness.

Adapted from Homage to Catalonia by George Orwell

Questions:

- Briefly explain the main idea in the passage
- What impression of being a soldier has the writer created?
- How has the writer brought out his intended message in the passage?
- Comment on the following:

i. Tone	ii. Mood
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SECTION III

Read the following poem and answer the questions that follow

TO THE VIRGINS, TO MAKE MUCH OF TIME

Gather ye rosebuds while ye may,
Old Time is still a-flying;
And this same flower that smiles today
To-morrow will be dying.
The glorious lamp of heaven, the sun,
The higher he's a-getting,
The sooner will his race be run,
And nearer he's to setting.
That age is best which is the first,
When youth and blood are warmer;
But being spent, the worse, and worst
Times still succeed the former.
Then be not coy, but use your time,
And, while ye may, go marry:
For having lost but once your prime,
You may forever tarry.

(Robert Herrick)

Questions

- Identify the following in the poem:

a) Speaker	b) Audience
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- What is the poem about?
- Comment on the poet's use of symbolism.
- Comment on any other aspects of style employed in the poem.

ECONOMICS PAPER TWO ANSWERS (AECON004)



1. (a) (i) **Price elasticity of demand** refers to the measure or the degree of responsiveness of quantity demanded of a commodity to the changes in the price of the commodity, **while cross elasticity of demand** refers to the measure or the degree of responsiveness of quantity demanded of a commodity to the change in the price of another commodity.
(ii) Uses of price elasticity of demand in Uganda.

To the producer

- Used in price determination.
- Used in price discrimination.
- Used to determine prices of joint products.
- Used to determine the intensity of advertisement.
- Used to determine the wage rate..

To the government

- Used to determine goods to be provided as public utilities.
- Used to determine the incidence of a tax.
- Used to determine the tax rate.
- Used in subsidisation.
- Used as a basis of devaluation.

To consumers

- Helps consumers to make expenditure plans.
- (b) (i) **Break-even point of a firm** is one where the firm neither makes supernormal/abnormal profits nor losses i.e. it is a point where the firm is making normal/zero profits. (AR=AC), **while shut down point of a firm** is one where a firm cannot cover all its average costs of production or it is a point below which a firm cannot cover its average variable costs of production. i.e. A point where AR=AVC.
(ii) Circumstances under which firms can continue to operate even when they cannot meet all their average costs of production.
- In case it is still an infant/beginner firm.
 - In case the firm hopes to merge in future.
 - In case the firm hopes to get a loan/aid to boost operations.
 - When the firm hopes to switch to a cheap mode of production.
 - When the firm fears to lose its contracts due the punitive measures that result from breach of contract.
 - When there is hope for better management.
 - In case it is a state-owned firm whose aim is not to maximise profits but to offer essential services.
 - In case it is a branch of a bigger firm and its losses are compensated by the profits made by the bigger firm.
 - In case the firm fears losing control or grip of its market share and good will.
 - In case the firm is a research or demonstration firm.

NOTE: For all circumstantial questions, start your points with circumstantial words like "when" or "in case"

(c) Calculation:

Given;
Stock of machinery = Shs. 200 billion
Total output = Shs.600 billion.
Depreciation rate = 10%
Value of depreciation = depreciation rate x Stock of machinery
$$= 10 \times 200,000,000,000$$
$$= 2,000,000,000,000$$
$$= \text{Shs. } 20,000,000,000 \text{ or Shs. } 20 \text{ billion.}$$
$$\text{Net Output} = \text{Total output} - \text{Value of depreciation}$$
$$= 600 \text{ billion} - 2 \text{ billion}$$
$$= \text{Shs. } 580 \text{ billion}$$

- (d)(i) **Absorptive capacity** is the ability of a country to use its foreign resources (borrowed funds or aid) efficiently and effectively or optimally to achieve the intended/desired objectives.

(ii) Causes of low absorptive capacity

- Low level of accountability/high level of corruption.
- Limited skilled labour.
- High degree of conservatism.
- Political instability.
- Poor government plans.
- Poorly developed infrastructure.
- Poor technology.
- Unfavourable strings/conditions attached on aid.
- Limited natural resources.

- (e)(i) **Agricultural modernisation** refers to the changing of the agricultural sector from subsistence production to commercial high-yielding production, **while agricultural mechanisation** refers to the adoption and use of machines, tools and equipment in the production of agricultural products.

(ii) Ways the government of Uganda should(can/may) modernise the agricultural sector

- Improve entrepreneurial skills through trainings.
- Undertake land reforms.
- Train/equip farmers with better production methods.
- Introduce high yielding seeds and animal breeds.
- Provide soft/affordable credit facilities to farmers.
- Improve infrastructure, such as roads.

ECONOMICS TEACHERS



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- Political stability should be ensured in all areas.
- Expand the market for agricultural produce.
- Corruption should be fought/improve accountability.
- Encourage and support further research in better breeds.

NOTE: Use the same tense to state and explain the points as one used in the question. The suggestive/speculative tense used in the question above requires you to simply suggest or use words "CAN, MAY or SHOULD"

SECTION B

2. (a) Why small scale industries are widely spread in Uganda;
- They use simple raw materials which are easy to acquire.
 - They require limited capital to start and maintain.
 - They require mainly semi-skilled and un-skilled labour.
 - Most of them are owned by local individuals who do not have the ability to undertake large-scale production.
 - The stable political climate in many areas.
 - They do not require a lot of procedures to start.
 - Small markets/low demand in most parts of Uganda.
 - Government policy of promoting small scale industries.
 - Poor infrastructure in the different regions of Uganda.
 - Large subsistence sector/low levels of commercialisation.
 - Majority are agro-based and since agriculture is practiced in many different regions, it attracts their development.
 - Limited entrepreneurial development in Uganda.
 - They occupy a small floor area, which is easily acquired.

NOTE: The question requires you to give justifications for the spread of small scale industries throughout Uganda. Don't give the advantages. In the explanation, tell us how the factor given in the point makes them widespread throughout Uganda.

(b) Implications of the existence of many small scale industries

Positive implications

- Creates a lot of employment opportunities since they are labour intensive.
- Provides market to other sectors like agriculture due to linkages.
- Encourages self-reliance in the economy to some extent.
- Improves the terms of trade by adding value to export commodities.
- Provides a source of revenue to government through taxation.
- Improves the balance of payments position because many of the small scale industries use fewer imported raw materials.
- Encourages or promotes the development of infrastructure.
- Encourages technological development because they enable the emergence of local artisans making industrial machines.
- Enhances skills development through training of labour.
- Increases output, hence contributing to the country's GDP.
- Promotes the utilisation of would-be idle resources.
- They reduce income inequality through providing jobs.
- Reduces the size of the subsistence sector.

Negative implications

- Encourages rural urban migration and its negative effects.
- Leads to poor quality output on the market.
- Breeds regional imbalance in development because areas with the small scale industries tend to develop at a faster rate.
- Encourages external economic dependence since the import machines and some raw materials.
- Worsens the balance of payments position due to the high content of imported raw materials.
- Leads to low levels of output, hence low levels of economic growth.
- Worsens income inequality as farmers continue to earn less.
- Contributes low government revenue due to low tax revenue.
- Leads to capital outflow through profit repatriation.
- In the long run, there is technological unemployment as these industries expand and become capital intensive.

NOTE: The question requires you to give the positive and negative conclusions/implications/consequences one can draw from the existence of many small scale industries in Uganda. In the explanation, show how or why one draws that conclusion.

3. (a) The investment multiplier is still low in Uganda because:

- High interest on loans/high cost of borrowing.
- Low marginal efficiency of capital, which has scared a lot of people from undertaking investment.
- Low levels of income, leading to low savings.
- Unfavourable government investment policies like heavy taxation and unnecessary bureaucracy discourage investors.
- Low level of existing stock of capital in Uganda.
- The low level of entrepreneurship skills.
- Insecurity/political unrest in some parts of the country.
- Economic instabilities, such as inflation and price fluctuation.
- Poor state of technology used (rudimentary technology).
- Small market size has slowed investment in Uganda.

NOTE: The question requires you to give reasons why the rate at which investments in Uganda increase has not helped to improve greatly the size of national income.

- (b) The following should be done to improve the investment multiplier in Uganda:

- Control population growth to reduce the dependence.
- Maintain political stability in order to encourage investors.
- The government should improve the infrastructure.
- Extend credit facilities to investors.
- Improve the land tenure system.
- The government should control inflation
- Provide investment incentives, such as subsidies and tax holidays.
- The government should fight corruption.
- Improve entrepreneurial skills/ability.
- The government should re-distribute income.

NOTE: The question requires you to advise/compel/order/command/suggest to government on what should be done to ensure that the rate at which investments growth helps to increase the size of national income greatly. In your explanation, show how the factor stated can improve national income after increasing investment and ensure that you maintain the suggestive tense.

4. (a) Factors that hinder the success of the East African regional co-operation include:

- Lack of the will to sacrifice national interests. This is due to the desire to maintain national sovereignty.
- Absence of a common currency among the member states.
- Similar opportunity cost in all states/absence of specialisation in production. Most of countries produce similar products.
- Desire to raise a lot of revenue, hence taxing members states.
- Poorly developed infrastructure within the region.
- Uneven distribution of industries. This results in polarisation of trade, with industries concentrating in one country.
- Unequal gains from co-operation.
- Desire for self-sufficiency over integration by some states.
- Personal disagreements among political leaders.
- Ignorance of the long-term benefits of the co-operation.
- Ideological differences.
- Unequal development of the member states.
- Geographical barriers. Mountains, lakes, rivers, rift valleys and other physical features have limited geographical proximity.
- Cultural differences (absence of shared language).
- Differences in historical background, hindering co-operation for mutual growth among member countries.
- Desire to avoid trade diversion effect/membership to parallel economic blocs. Some East Africa states are not willing to sacrifice their cheap non-member partners in favour of the regional high-cost trade. Eg Tanzania still prefers trade with SADC.
- High costs of running the regional government through periodic contributions.

NOTE: This question requires specific factors that have hindered the growth of regional co-operation in the East African community. In your explanation, tell us how/why the factor stated has not helped the East African co-operation to progress.

- (b) Implications of the East African regional co-operation on Uganda are positive and negative;

Positive implications:

- Trade creation effect. The East African regional co-operation enables Uganda to acquire commodities at a lower price.
- Promotes specialisation and its benefits.
- Stimulates industrial development due to existence of larger markets.
- Avoids duplication of resources due to specialisation.
- Low average cost of joint research and information gathering.
- Attracts foreign investors because of a larger market following the formation of the regional co-operation.
- Increases resources utilisation hence avoiding wastage.
- Increases output, hence economic growth.
- Improves the bargaining power of the region in the international market.
- Strengthens political co-operation between Uganda and other states to deal with military invasion and natural disasters.
- Variety of goods are enjoyed by Ugandans, hence widening



- consumer choice, improving standards of living.
- Creates employment opportunities due to labour mobility.
- Creates a wider market for Ugandan output.
- Production of quality output due to competition.
- Economies of scale are enjoyed by firms due to a widened market.
- Increases provision of infrastructure at relatively low average cost for each member country as resources are pooled.

Negative implications of the East African regional co-operation to Uganda:

- Leads to loss of tax revenue from previous customs duties.
- Causes unequal distribution of benefits due to goods moving mainly in one direction only.
- Creates a trade diversion effect. This is because integration leads to trade shifting from a low cost non-member state to a high cost member state, forcing members to consume highly priced goods within the region.
- Surpluses may result due to production of similar goods.
- Forces the buying of poor quality goods from members states.
- Results in sacrifice of national interest.
- Distribution of industries may be done without considering economies of scale, but for purposes of distribution of projects and benefits.
- Leads to loss of political sovereignty.
- Results in unequal development due to unequal distribution of industries.
- It is associated with high costs of running the regional government, which member states have to contribute.
- Causes loss of Uganda's cultural heritage. E.g. many languages in Uganda have been sacrificed.
- Leads to loss of Uganda's identity; in the spirit of promoting the mutual interests of East African countries, Uganda recently adopted the East African passports instead of the local one.

NOTE: The question requires you to give the positive and negative conclusions/consequences one can draw from Uganda joining the East African regional co-operation. The present simple tense is the most appropriate and in the explanation, show how or why one draws that conclusion.

5. (a) Describe Irving Fisher's Quantity theory of money.

Irving Fisher's quantity theory of money states that, The general price level in an economy is determined by the quantity of money assuming that the velocity of circulation of money (V) and the Volume of transactions (T) are constant.

OR

The quantity theory of money states that an increase in money supply leads to a proportionate increase in the general price level provided the velocity of circulation of money and the volume of transactions remain constant.

The theory is represented by the equation

$$MV = PT \quad \text{OR} \quad P = \frac{MV}{T}$$

Where M = Quantity of money
V = Velocity of circulation of money
P = General Price level
T = Level of transactions

A change in any of the variables will influence the price.

According to the theory, M and V vary directly while T varies inversely with the general price level (P).

Assumptions of the quantity theory of money

- It assumes that the Velocity of circulation of money is constant.
- It assumes that the level of transactions is constant.
- All transactions take place using money as a medium of exchange.
- Assumes a general price level which is directly proportional to the amount of money in circulation.
- Assumes a constant cash ratio.
- Assumes that money is held by individuals only for transaction.
- Assumes that the four variables M, V, P and T are independent of each other.
- Assumes that excessive money supply is the only cause of inflation.

NOTE: For description of theories, it is better to break down the whole theory into meaningful sentences. As much as possible, it must be accurate and having a logical flow of events mentioned there in.

(b) Limitations of the quantity theory of money in Uganda include:

- There is no general price level in Uganda as the theory assumes but rather a series of price levels.
- The theory ignored the influence of the rate of interest, yet it is vital in relation to money and its circulation in Uganda.
- The theory does not take into account the demand for money in Uganda. (it only looks at money supply).
- The theory only attempts to explain changes in the value of money, but does not show how the value of money is determined, making it inappropriate to Uganda.
- Sometimes an excessive money supply in Uganda does not lead to inflation, especially in periods when the marginal propensity to save (MPS) is high.
- Uganda has many unemployed resources, therefore, an increase in money supply to exploit them increases domestic output hence making prices to fall or not change at all.
- The theory ignores haggling between buyers and sellers.

- The theory does not consider government intervention in the determination of prices, yet in Uganda government determines prices of especially subsidised public utilities and road tolls.
- The theory does not take into account other causes of price increment in Uganda like rising cost of production.
- It is not a theory, but a truism. It shows that M, V, P and T are related.
- It ignores barter trade and considers exchange only through use of money, yet Uganda still practices barter trade in rural areas.
- It only considers the transaction motive of holding money and ignores the speculative and precautionary motives of money.
- The four variables M, V, P and T are not independent of one another as the theory assumes because a change.
- The theory assumes that the velocity of circulation of money (V) and the level of transactions (T) are constant but this is not true in Uganda because money is always changing hands.

NOTE: The question requires you to give the assumptions/statements in the theory that are not visible/applicable in Uganda's current situation regarding money supply and price levels. You can also give the factors that are currently observable in Uganda about money supply and price levels which the theory ignored/didn't mention.

- (a) **Stagflation** is a situation in which high inflation rates co-exist with high levels of unemployment **while/where as/ yet stagnation** refers to a prolonged economic period of slow economic growth (slow GDP growth) usually characterised by low levels of investments and low levels of employment.
(b) Why have prices of foodstuffs in Uganda gone up after the government declaration of a lockdown due to the COVID-19 pandemic?
 - Breakdown in the transport system as fewer vehicles were allowed to operate.
 - High credit creation levels by commercial banks, increasing demand for the different commodities, prompting price hikes.
 - Issuance of currency by the central bank without a corresponding increase in the level of output.
 - Inflow of a lot of funds from abroad in the form of donations, grants, loans, COVID-19 relief, hence high amounts of money in circulation forcing prices to rise.
 - Heavy government expenditure on issues like elections preparation, infrastructure, wages, fighting COVID - 19 and its effects, thereby leading to a lot of money supply.
 - Exportation of essential goods, such as masks, sugar, milk, maize flour and other foodstuffs to neighbouring countries.
 - High prices of essential imports very expensively e.g. COVID testing kits, sanitisers, ventilators, which has led to imposition of high prices on such commodities in the domestic market.
 - High costs of production e.g. high wages for essential staff, interest rates, fuel prices, etc.
 - Importation of goods from countries suffering from high prices. Uganda over relies on imports, but some of these imports are bought from countries that are suffering high prices eg Kenya.
 - Greed for profits by traders who want to obtain a lot of profits have caused artificial shortages of goods and hiked prices.
 - Speculation by traders and consumers. As consumers anticipated future price increases, especially before the lockdown announcements, they increase their demand for the available goods on the market, thus a rise in prices.
 - Recent occurrence of natural hazards/calamities such as drought, landslides, floods e.g. Kasese floods, leading to drastic fall in supply from the agricultural sector.
 - Political unrests/insecurity in some parts of the Uganda e.g. Karamoja, leading to destruction of productive infrastructure.

NOTE: The question requires you to give the factors/conditions in Uganda after declaration of lockdown that have made the prices of commodities to be high. Emphasis on explanations should address issues/ factors that have led to scarcity of goods relative to their demand making their prices to be high.

- (a) **Account for the rampant tax evasion in Uganda.**
 - Unfair tax system, which is discriminatory.
 - High tax rates and amount payable in Uganda increases tax expenses and reduces the amount of disposable income.
 - Complicated tax laws and lengthy administrative procedures.
 - Low level of taxpayer sensitisation about the advantages of tax compliance.
 - Negative perception about government spending. Ugandans see no need to pay tax after seeing existence of poor infrastructure and poor medical facilities, etc.
 - Poor quality of business management. Many entrepreneurs are unethical; they tend to falsify documents to evade tax.
 - Low quality of tax administration; perceived to be corrupt, making people to lose trust and refuse to pay the taxes.
 - Existence of many low income earners.
 - Low allowance for taxpayer's self-regulation: Many taxpayers in Uganda are not involved by tax authorities in assessment, making them feel demotivated and unfairly taxed.
 - Inconvenience within the tax system; the system is rigid, leaving the taxpayer in the dark.
 - Absence of enforcement of heavy penalties for evasion.

NOTE: The question requires you to give the factors that have made many of the Ugandan taxpayers to refuse to pay the taxes and in their right time and amount. In the explanation, tell us how/why the factor given has made many people to evade the taxes.

(b) Measures done to reduce tax evasion in Uganda:

- Massive sensitisation has been undertaken.
- Encouraged businesses to do proper book keeping.
- Government has reduced compliance costs.
- Compliance costs have greatly reduced after the URA introduced the online tax assessment and payments.
- Reduced corruption within government. Many Ugandans are now paying the taxes willingly because they know the funds collected will not be diverted.
- Provided convenient ways of making tax payments, thus reducing time spent by taxpayers lining in selected banks.
- Reduced tax rates to encourage taxpayers to pay.
- URA has specially recognised tax compliant citizens and has rewarded them, thus encouraging other taxpayers.
- Imposed penalties for non-compliance: Strong punishments have been imposed on people who default taxes.
- The tax system has been made simpler; making it simple for all people to understand.
- Government has developed infrastructure, especially roads in rural areas, easing enforcement of tax administration.
- URA has employed trained personnel to assess and collect taxes, thus reducing the level of falsification of documents.
- Ensured political stability in most areas, which has reduced the number of people smuggling goods through porous borders.
- Government has enforced anti-smuggling laws by impounding goods and vehicles involved in smuggling.
- The facilities required to facilitate tax assessment and collection have been put in place e.g. computers and other logistics.

NOTE: The question requires you to write the interventions government has put in place to reduce tax evasion in Uganda. In your explanation, maintain the past tense and show how the stated government interventions have reduced tax evasion.

ECONOMICS P.1 (AECON005)

SECTION A

- (a) (i) What is meant by mobility of a factor of production?
(ii) Mention three factors that affect mobility of capital in an economy.
(b) (i) What is a population census?
(ii) Give any three factors that may hinder population census in an economy.
(c) (i) Define the term critical minimum effort.
(ii) State three limitations of the Big Push theory in LDCs
(d) (i) Distinguish between open shop and closed shop trade unions.
(ii) Give two factors that have led to an increase in the number of trade unions in LDCs.
(e) (i) What is meant by national budget?
(ii) Outline the components of a national budget.

SECTION B

- (a) Explain how profits are maximised by a monopolist.
(b) Examine the implications of monopolistic firms in an economy.
- (a) Explain how the cost of living index is computed in an economy.
(b) Study the table below and answer questions that follow:

Commodity (Kgs)	2000 average price (shs)	1998 Simple PI	1998 average price (shs)	Weight
Rice	1000	100	1100	3
Sugar	500	100	700	5
Salt	400	100	500	6
Beans	800	100	1300	2
Maize	800	100	1050	4

Calculate the:

- Simple price index for each commodity.
 - Simple price index for 2000.
 - Weighted price index for each commodity.
 - Weighted price index for 2000.
- (a) Distinguish between Capital-saving and labour-saving techniques of production.
(b) Explain the arguments for and against adopting labour-saving techniques of production.
 - (a) Account for the divestiture of public Enterprises in an economy.
(b) Examine the challenges faced in the divestiture of public Enterprises in LDCs.
 - (a) What criteria would you use to determine a good tax system in an economy.
(b) Account for the need to levy taxes in an economy.
 - (a) Account for the persistent hyper inflation in an economy.
(b) Under what circumstances may inflation be desirable in an economy?

GEOGRAPHY

MORE PAPER ONE ANSWERS (AGOO)

4. Features resulting from glacial erosional processes.

Approach:

- Define glacier and glaciation.
- Describe the processes of glacial erosion.
- Explain the resultant glacial erosional features from the processes.

Accompany the explanation with relevant illustrations and examples in East Africa.

Glaciation is the massive ice and snow cover over land. Glacier is moving ice. The large mass of ice move out of a snow field under the influence of gravity. In East Africa, snow or ice is found in high altitude areas above snow line that is, 4500 metres above sea level. This is referred to as highland (mountain) glacier. In East Africa, it is found on peaks of mountains namely, Rwenzori in Uganda, Mt. Kenya in Kenya and Kilimanjaro in Tanzania. As glacier moves down the valley, it erodes the surface in three ways or processes namely, abrasion, plucking and basal sapping (freezing and thawing).

Abrasion refers to wearing away of the valley bottom and sides by rocks frozen within the glacier.

Plucking is where a glacier erodes away chunks of bed rock frozen at the bottom and sides of the valley.

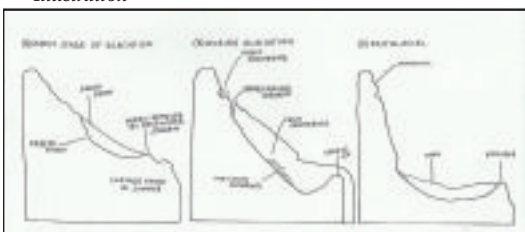
Basal sapping is where the rocks between the glacier and valley sides are broken up due to alternate freezing and thawing of water in the rock joints.

The following are the resultant features of glacial erosion processes; cirque (Corrie), aretes, pyramidal peak, roche moutonnee, crag and tail, glacial troughs (U-shaped valley), hanging valleys, truncated spurs, ribbon lake, rock steps.

Cirque/Corrie/CWM

This is an armchair shaped hollow high on a mountain side with steep back and side walls. Through plucking, freezing and thawing process, rock joints on the sides of the mountain are deepened and widened forming a cirque. Examples in East Africa are Bujuku, Butaha, Lac Nior on Mountain Rwenzori in Uganda, Nyamindi, Rupingazi, Nanyuki on Mountain Kenya in Kenya.

Illustration



Aretes.

This is a knife-shaped ridge separating two cirques. It is formed when two cirques lying opposite or side by side erode backwards (recession) by the help of plucking process. A sharp wall or ridge is left standing in between two cirques.

Pyramidal peak

It is a radial pattern or focal point of many arêtes. It is formed when three or more cirques are eroded backwards by plucking and abrasion towards the central peak forming a jagged peak inform of a pyramid hence the name pyramidal peak. Examples of pyramidal peaks in East Africa include Margherita peak (5109m) which is the highest, Stanley, Speke on Mountain Rwenzori and Piggot, Nelioon, Batia, Midget on mountain Kenya in Kenya.

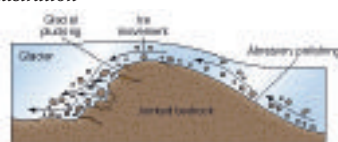
Illustration



Roche Moutonnee

This is an outcrop rock of uniformly resistant rocks whose upstream slope is smoothened and polished by moving ice through abrasion process. The downstream slope is roughened and steepened by plucking to produce a steep jagged slope. Examples are found on the upper Mubuku valley on Mountain Rwenzori and along the Gorges valley on mountain Kenya.

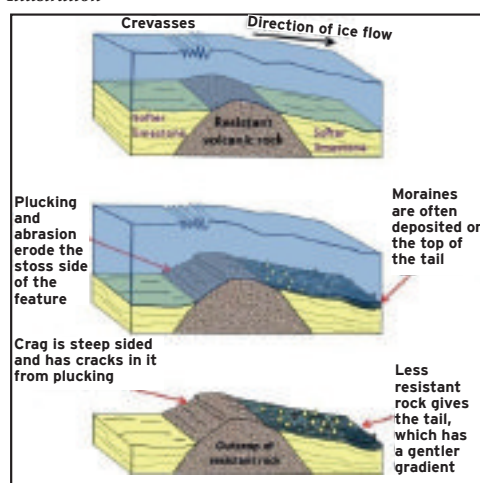
Illustration



Crag and tail

This is similar to a Roche moutannee but composed of both hard and soft rocks. The harder rock protects the softer rock from glacial erosion as glacier moves. The hard rock is steepened by plucking to form the crag, while the protected soft rock forms the tail. The best example is found on Mountain Kilimanjaro.

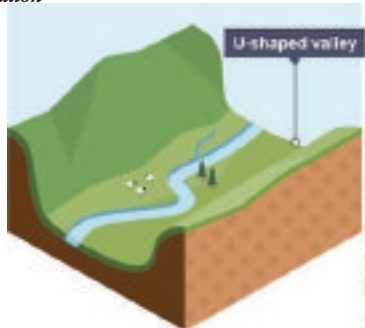
Illustration



Glacial troughs (U-Shaped valleys)

These are steep sided valleys formed by plucking and glacial abrasion. They are formed as a result of a big movement of glaciers along a former river valley. As glacier moves along the main valley, it deepens the bottom, cuts off the spurs and straightens the sides of the valley. Examples of glacial troughs are Mubuku, Kamusoso, Bujuku on Mountain Rwenzori.

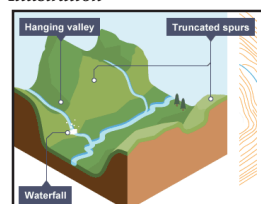
Illustration



Hanging valley

This is formed when a tributary river valley becomes frozen, turning the tributary river into a glaciated valley. As a main U-shaped valley is eroded deeply and widened since it occupies a large glacier. The tributary valley has small glacier and therefore cannot erode deeply hence it is left hanging above the main U-shaped valley. Example of hanging valleys are Lubi, Bujuku, Mugasa valley on mount Rwenzori.

Illustration



GEOGRAPHY TEACHERS



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TEACHER AND AUTHOR



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ST CATHERINE SS, BUJUKO

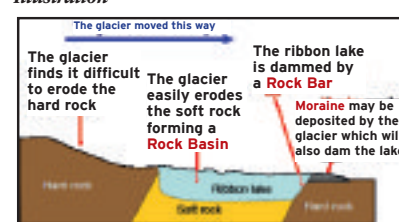
Truncated spur

These are blunt ended rock ridge of land which have been cut off from spurs as glacier moves through the main valley. Truncated spurs descend from the steep sides of a U-shaped valley. They are separated by hanging valleys and are often rounded at the top but steep at the bottom.

Ribbon Lake

This is a long and narrow, finger shaped lake. It is usually found in a glacial trough. Its formation begins when a glacier moves over an area containing alternative band of hard and soft bedrock. Glacier erodes the soft rock more quickly by abrasion process creating a hollow called a rock basin. When filled with water, it forms a ribbon lake. Examples include Kitandara lake in Kamusoso valley on Mountain Rwenzori, Kami on Teleki valley on mountain Kenya.

Illustration



Rock steps

These look like real steps on a house. These are caused by intrusion like dykes in a U-shaped valley. They cause uneven vertical erosion. Examples are found on the floor of the upper Mubuku valley on the slopes of Mountain Rwenzori.

5. Landform development formed by a river in the lower course.

Approach:

- Define river.
- Describe with characteristics the river in old stage.
- Explain the processes responsible for formation of landforms in lower course of river.

Accompany the explanation with relevant illustrations and examples in East Africa.

A river is a stream of water (natural or artificial) flowing in a defined channel. The river's duty is to erode, transport and deposit. This work is done in different stages.

Rivers erode in four ways:

Abrasion or corrosion: This is when large pieces of bedload material wear away the river banks and bed.

Attrition: This is when the bed load itself is eroded when sediment particles knock against the bed or each other and break, becoming more rounded and smaller.

Hydraulic Action: This is when the force of water erodes softer rock.

Solution or corrosion: This is when acidic water erodes rock. Rivers transport material in four ways:

Solution: Minerals are dissolved in the water and carried along in solution. This typically occurs in areas where the underlying bedrock is limestone.

Suspension: fine light material is carried along in the water.

Saltation: small pebbles and stones are bounced along the river bed.

Traction: Large boulders and rocks are rolled along the river bed.

Lower course/Senile of a river



A river in its senile stage is characterised with; very low gradient, large volume of load that was eroded in the upper course, very slow speed.

The volume of water in a river is at its greatest in the lower course. This is due to the contribution of water from tributaries. The river channel is deep and wide and the land around the river is flat. Energy in the river is at its lowest and deposition occurs.

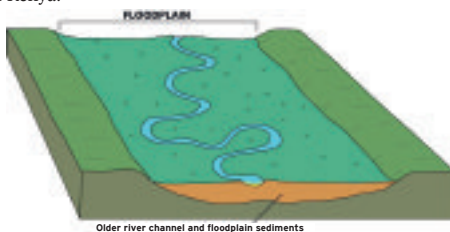
Deposition

Deposition is the processes where material being transported by a river is deposited. Deposition occurs when a river loses energy. This can be when a river enters a shallow area (this could be when it floods and comes into contact with the flood plain) or towards its mouth where it meets another body of water.

The following are landforms that develop due river deposition in senile stage; flood plain, meanders which turn into ox-bow lakes, meander scars, levees, lagoons, deltas, and alluvial fans.

Flood plain.

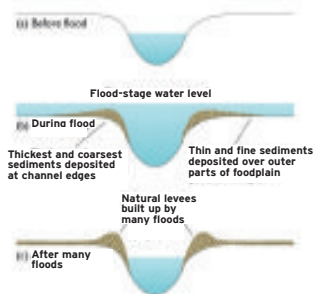
This is a wide gently sloping plain of alluvium covering the valley floor. Rivers flood on a regular basis. The area over which they flood is known as the floodplain and this often coincides with regions where meanders form. Meanders support the formation of flood plains through lateral erosion. When rivers flood the velocity of water slows. As the result of this the river's capacity to transport material is reduced and deposition occurs. This deposition leaves a layer of sediment across the whole floodplain. After a series of floods layers of sediment form along the flood plain. Examples of flood plains are found on river Manafwa in Uganda, Kilombero river in Tanzania, River Nyando forming Kano plains and River Tana in Kenya.



Levees.

These are formed on the sides of the river after flooding. Larger material and the majority of deposition occurs next to the river channel. This is the result of increased friction (with the flood plain) causing the velocity of the river to slow and therefore rapidly reduce its ability to transport material. This leaves a ridge of higher material next to the river channel on both banks of the river known as a levee.

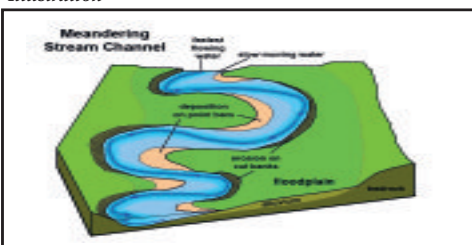
Illustration



Meanders.

These are bends/curves in the lower course of the river. The meanders form due to the heavy load and reduced gradient of the river which leads to reduced speed. Water flows down and begins to drop the load of eroded materials it carried from upstream. As the river tries to dodge the deposits by flowing around them in semi-circular circles, it forms meanders. Meanders are well developed.

Illustration



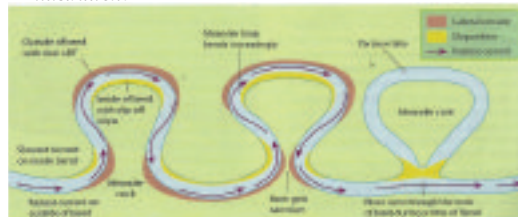
Braided channel.

This is when the river sub-divides (splits) into several channels which rejoin while flowing around the obstacle deposited within the flood plain. This is caused by deposition of the material into the river's way hence blocking its own channel. The deposits form obstacles and cause the river to split in several channels flowing around the deposited obstacles. Examples are on river Semulki in Uganda, Tana and Nyando in Kenya.

Ox- Bow Lake.

This is a horse-shoe shaped lake. It is formed as the river deposition on the inside side bends of meanders cut off the meander loop to trap water in the meander. It is formed as a result of lateral erosion and deposition along the meander. Ox-bow lakes can be found on river Rufiji, Kilombero in Tanzania, Tana in Kenya.

Illustration.



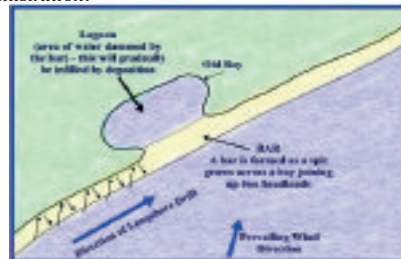
Meander Scar

This is formed as the river deposits fill the ox-bow lake during further flooding. Later these deposits (marshes and mudflow) encourage vegetation to grow hence drying up the ox-bow lake. When this happens, what is left behind is a meander scar. Examples can be found on river Semulki in Western Uganda.

Lagoons

These are enclosed water bodies between distributaries in the river's mouth. Lagoons are formed when the river floods over the levees on the distributary side. The levees hold the back flow of water to form a pool of enclosed water body called a lagoon.

Illustration.

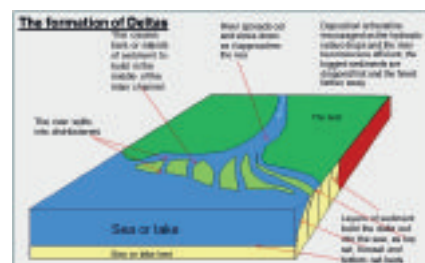


Distributaries

These are formed when the river deposits its load at the mouth due to extremely reduced speed. This causes the river to subdivide into small short streams through which water escapes to the sea. Distributaries are found on river Rufiji in Tanzania, Tana in Kenya.

Deltas

These are large flat low lying plains made of successful layers of deposits laid down at the entry to the sea or lake. Deltas are formed when the load is extremely great, speed is sufficiently low and when the river load is deposited faster than it is removed by tides and currents or waves of the sea or river where the river pours its water.



Alluvial fans.

These are river (alluvial) deposits that accumulate at the foot of a cliff where a tributary stream joins the main river. Alluvial fans also form where a hanging valley joins a main U-shaped valley. Alluvial fans form on dry land.

SECTION C

6. To what extent is aridity in East Africa caused by natural factors?

Approach:

- Define aridity.
- Describe with characteristics of aridity.
- Explain the natural/physical factors that lead to aridity.
- Explain the human activities that lead to aridity.
- Conclude.

Aridity is a climatic phenomenon characterised by high temperatures and insufficient rainfall or very low rainfall. Areas of less than 250mm of rainfall are regarded as arid areas. However in some parts of the world, the aridity may be measured differently e.g. in East Africa areas of less than 500mm may be regarded as arid. Areas of aridity are generally referred to as deserts or semi deserts and are characterised by dryness. In East Africa areas that experience aridity include Northern Kenya, parts of Eastern Kenya, North Eastern Uganda, the Ankole - Masaka corridor parts of North Eastern Tanzania, Central Tanzania, parts of southern Kenya and parts of the western and the Eastern rift valley e.g. along Lake Albert, Lake Edward and Lake George. Desert areas are those that may receive less than 250mm of rainfall and these may include areas in Northern Kenya e.g. around Ladwor in North Eastern Kenya and the Chalbi desert. In addition to this there is also the Nyiri desert in Southern Kenya and the Masai steppe in North Eastern Tanzania. On the other hand semi desert areas experience relatively higher rainfall though less than 500mm.

Characteristics of arid areas.

- Low and seasonal rainfall is experienced. Drought is a common phenomenon in such areas.
- High temperatures are experienced i.e. temperatures of 30°C and above.
- High diurnal range of temperature normally more than 15°C i.e. during the day it is very hot and during the night is cold.
- There is generally low humidity. Relative humidity tends to be less than 20%.
- There is a limited cloud cover. Much of the year is characterized by clear skies.
- There are high transpiration rates and evaporation rates.
- There is unreliable or unpredictable rainfall.
- There is occurrence of strong winds and occasionally dust storms are experienced.
- There is limited plant cover, this is because of the low rainfall such that the vegetation tends to be adapted to low rainfall conditions e.g. there are generally drought resistant species such as steppe savannah grasslands, thicket, thorn bush, cactus, scrub, as well as patches of bare land.

Arid conditions in East Africa have been brought about by a number of factors.

The basic causes of aridity have been physical while human factors have increased or contributed to further aridity in East Africa.

Physical causes of aridity

- ✓ **Prevalence of dry/desiccated winds.** Some areas in East Africa have been influenced by dry winds for instance the N.E trade winds which emanate from the Arabian Desert. Those winds pick some moisture as they blow southwards towards Africa however these winds tend to lose their moisture in the Ethiopian highlands. Since they are dry they do not bring in rain. They even absorb the little moisture that exists in the regions in which they blow and even warm up such areas. This explains the dry conditions experienced in Northern Kenya.
- ✓ **Limited water masses:** Several areas in East Africa that experience aridity such as Northern Kenya and Central Tanzania lack large water bodies that could otherwise contribute to atmospheric moisture through evaporation. This therefore results into limited atmospheric moisture in such areas and therefore dry conditions result.
- ✓ **Highland relief** causing the rain shadow effect on the leeward side of the highland. Relief has contributed to aridity in East Africa because of the rain shadow effect produced on the leeward side of mountains. The prevailing winds that continue onto the leeward side from the Windward side are desiccated or dry and do not bring in rainfall but instead may even absorb the little moisture that may exist in the leeward areas. Arid areas in East Africa that are due to the rain shadow effect include Northern Kenya, the Masai steppe on the leeward side of the Pare and Usambara mountains ranges in N.East Tanzania. The western rift valley zone area on the leeward side of the Rwenzori mountains. In addition, the absence of highlands or mountains to trap high level winds bearing moisture

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- may also contribute to aridity, this is because winds gather momentum and blow away to other areas.
- ✓ **Continentality:** This refers to the remoteness from the sea. Areas far from the Indian Ocean and whose climate is continental or affected by land conditions have tended to suffer from aridity. Coastal areas are influenced by maritime conditions such as land and sea breezes that lead to high rainfall. However, continental areas such as central and N.Eastern Tanzania tend to be dry because of the long distance from the sea.
 - ✓ **Coastal configuration:** this refers to the shape or alignment of the E. African coast. The coast is aligned in a N.E or S.W direction. Due to this alignment winds from the N.E such as the N.E trades tend to blow parallel to the coast especially along the Kenyan coast in a south westerly direction and hardly blow inland. Therefore these moisture-laden winds which may not blow inland deprive much of northern, central and southern parts of Kenya of rainfall. This therefore partly explains the prevalence of arid conditions in these parts of Kenya.
 - ✓ **Coriolis force effect:** this is a drag force as a result of the earth's rotation and has effect in that any object moving in the northern hemisphere from the southern hemisphere is deflected to the right. This force accounts for the prevalence of arid conditions in the Ankole - Masaka corridor and other parts to the N.West of Lake Victoria. This is because when the S.E trade winds blowing through Tanzania cross the Equator, they are deflected eastwards i.e. to the right leaving the North Western parts of Lake Victoria without moist winds. This explains the semi-desert/arid conditions experienced in the Ankole-Masaka corridor and the neighbouring areas.
 - ✓ **Perturbation:** This is a situation where low pressure conditions due to high temperatures are created on the Indian Ocean and as a result air from the land or air that would have blown on shore is instead redirected into this low pressure belt. Air will therefore blow from the land to the Indian ocean thereby becoming offshore winds and as a result rain is formed in the Indian ocean while parts of the East African mainland and including Northern Kenya are left dry. Perturbation that may occur during certain seasons contributes to aridity and especially extended drought in East Africa.

Human causes of aridity

- ✓ These include mans' environmentally unfriendly activities such as the following:
- ✓ **Deforestation:** The removal of vegetation by man is a cause of aridity. This has been due to mans' activities in the clearance of forests and other forms of natural vegetation. The main activities involved include cultivation, lumbering, industrialisation etc which have led to the destruction of natural forests that contribute to atmospheric moisture. Destruction of this source of atmospheric moisture results into aridity. Deforestation also contributes to soil erosion, which in turn leads to poor plant growth consequently leading to poor rates of transpiration thereby compounding the problem of aridity.
- ✓ **Overstocking:** The rearing of a big number of animals i.e. more than what the pastureland can accommodate can lead to aridity. In case the carrying capacity of the land is exceeded, the pastures are depleted very fast and the large number of animals trample the ground to create bare patches of land and loosening the soils thereby promoting erosion. This results into poor vegetation growth and low levels of transpiration and consequently leading to aridity.
- ✓ **Overgrazing:** This may be as a result of continuous grazing by herbivorous animals without leaving the land to rest. Overgrazing depletes the vegetation cover and may lead to low rainfall because of limited transpiration.
- ✓ **Bush burning:** This may also be responsible for aridity because it leads to the degeneration of the grass and other plants and reduces transpiration. Traditional farmers normally burn grass with the aim of ensuring growth of fresh pastures for the animals but this may have adverse effects on the climate.
- ✓ **Reclamation of wetlands:** Wetlands like swamps, swamp forests, grass swamps, marshlands, dambos etc are major sources of atmospheric moisture through evapotranspiration and their reclamation greatly reduces the process. In addition, the water table is lowered. In the final analysis, humidity and rainfall are reduced and this leads to aridity. Reclamation in East Africa has been due to the search for land, for cultivation, settlement as well as industrialisation.
- ✓ **Borehole drilling:** The sinking of boreholes to provide underground water resources for humans and animals may lead to the lowering of the water table. As the water

table falls, plant roots may fail to access the soil moisture and as a result the plants wither. This therefore reduces the capacity of the natural vegetation to recharge the atmosphere with water vapour through evapotranspiration and this may increase on the problems of aridity.

- ✓ **Industrialisation:** Industrial development has also been a cause of aridity or desertification in East Africa. Industrial plants or factories emit exhaust fumes or clouds of smoke containing pollutants such as carbon dioxide, carbon monoxide, sulphur dioxide, etc, which tend to be green house gases. Such gases are good absorbers of solar radiation thereby contributing to increase in temperatures. In addition, gases such as carbon dioxide and sulphur dioxide may dissolve in water leading to acid rains. Acid rains lead to forest damage in that the plants lose their leaves, their growth stagnant and may finally die. This in turn will also reduce on the ability of the natural vegetation to recharge the atmosphere with moisture through transpiration and hence aridity.
- ✓ **Mining:** The extraction of minerals and more so through open cast method leads to the destruction of surface vegetation meaning that the ability of the vegetation to contribute to the atmospheric moisture is greatly reduced and thereby compounding the problem of aridity.
- ✓ **Poor methods of cultivation:** Primitive or non-scientific methods of cultivation that expose soils to erosion have also contributed to aridity. With erosion the ability of the soil to support plant growth is reduced meaning that there would be poor vegetation and consequently low levels of evapotranspiration. Such methods include shifting cultivation, cultivating up and down slope and other forms of subsistence cultivation. In addition, the use of machinery such as tractor ploughs that carry out deep cultivation tend to loosen soil particles making them prone to erosion.
- ✓ **Political conflicts/wars:** These may lead to destruction of vegetation through burning, cutting down of trees, demolition of vegetation by armoured vehicles as well as emission of dangerous chemicals and gases through explosives and bombs. Such explosives tend to harm the natural vegetation. Consequently, transpiration is reduced and rainfall also reduces. All these human environmentally unfriendly activities may result in reduced atmospheric moisture and an increase in temperature. It is important to note that human causes of aridity increase desert conditions. They are also, the causes of desertification. Otherwise the naturally existing desert areas of East Africa are basically as a result of physical factors.

7. Use of vegetation for land use planning.

Approach:

- Define the term vegetation.
- Describe with characteristics of different vegetation types.
- Explain how the occurrence of different vegetation types can be used for land use planning.
- Conclude.

Vegetation is the general plant cover of an area. Plants can grow on their own. These are called natural vegetation. There are different types of natural vegetation among which include; Equatorial, Savanna, Montane, semi-desert, Mangrove (swampy) etc.

Equatorial vegetation trees are ever green due to heavy rainfall received and fertile soils. Trees are tall about 50-60 metres because of struggle for sunlight. Trees have buttress roots to support the great heights. They form thick canopy on top, they form three layers as the grow. There is little or no undergrowth because canopies prevent sunlight from reaching the ground. Trees have climbers around them like the lianas. Trees are of hardwood like Ebony, Mvule, Mahogany, Rose wood. Trees do not grow in pure stand because they grow naturally in mixed species. Trees are broad leaved to trap enough sunlight for manufacture of food.

Savanna vegetation is characterized with scattered trees which are umbrella shaped

There is thick undergrowth. Trees are medium sized with height of about 15 metres. Commonest species include acacia which is drought resistant, etc.

Therefore, the characteristics of different vegetation types can be used for land use planning as follows:

The presence of tropical rain forest in an area, shows that the area receives heavy and well distributed rainfall of about 1500 - 2000 mm per year, this indicates to planners that the area can be used for growing of perennial crops such as coffee, tea, banana which require such conditions. For example the areas of Buikwe district.

- The presence of papyrus vegetation in area, indicates that the area is poorly used for growing of yams, rice, sugarcane

which need a lot of water to grow well. For example growing of rice at Tilda (Kibimba) irrigation scheme in Eastern Uganda.

- The presence of savanna grass land in an area can help land use planners to use the area for wildlife conservation due to presence of grass which acts as food for herbivorous animals. For example Queen Elizabeth National park (western Uganda), Serengeti national park Northern Tanzania.
- The existence of savanna vegetation in an area, shows that the area receives seasonal rainfall ranging between 750-1000mm per year. This indicates to land use planners that the area can be used for the growing of annual crops such as maize, beans which are grown seasonally during the wet season.
- The existence of xerophytes which adapt to dry conditions such as cactus, indicate to land use planners that area is dry and therefore crop growing should be under irrigation farming. For example North Eastern Uganda, Northern Kenya.
- The existence of dry savanna vegetation, also indicates that the area receives very little rainfall below 250 mm, this area can be used for nomadic pastoralism, for example north eastern Uganda.
- The existence of temperate vegetation, indicates that the area is has cool temperature of about 15°C, hence can be used for ranching (rearing of exotic breeds of cattle). For example, Kenya highlands.
- The existence of tropical rainforest, can support the activity of bee keeping, for example in Mabira forest Buikwe district.
- The existence of health and moorland indicates that the area is at a high altitude and has cold temperatures of about 6°C, hence cannot be used for many land use types other than tourism.
- The existence of tropical rainforest with hard wood trees like Mahogany, Ebony, Mvule can support lumbering activity for example Bwindi-impenetrable, Mabira forest.

The existence of papyrus vegetation supports art and craft industry like weaving of mats, baskets due to the presence of papyrus reeds which act as a raw material. For example areas near Lubigi swamp.

GEOG P3 AGE0005

UGANDA AND FIELDWORK SECTION A: FIELDWORK

1. For any one fieldwork study you have conducted either as a group or an individual,
 - a) State the:
 - (i) Topic of the study (ii) Objectives of the study
 - b) How did you use the following tools of data collection;
 - i) note books and pen, ii) pencil and note book?
 - c) Describe the geography of the area.
 - d) What steps did you carry out to conclude your research?
2. For any one fieldwork study you have carried out on a fishing pond.
 - a) i) State the topic of the study.
 - ii) Outline the objectives of the fieldwork study.
 - b) Describe how you use the following methods during the fieldwork study.
 - i) Sampling ii) Recording ii) Observation
 - c) Describe the factors which have favoured the establishment of the fishing pond the area studied.
 - d) Outline the problems encountered when collecting data during the study.

SECTION B

3. (a) Describe the processes responsible for the formation of the Rwenzori Mountain.
 - b) Explain the importance of the Rwenzori Mountain to the development of Uganda.
4. Study the table given below and answer the questions that follow: Uganda's crop exports by value between 2001 - 2005 in US \$' 000.

Crop	2001	2002	2003	2004	2005
Coffee	97,650	96,630	100,230	124,240	172,940
Tea	30,030	31,290	38,310	37,260	34,270
Cotton	13,430	9,520	17,760	20,760	28,820

- Source: UBOS, 2006/7, *The state of Environment Report for Uganda*.
- a) Draw a comparative line graph to show the trends in exports by value for various crops between 2001 and 2005.
 - b) Account for the trend in crop exports identified in (a) above.
 - c) To what extent are agrarian systems a result of variation in rainfall?