
MASTERING O'LEVEL GEOGRAPHY PAPER 273/1

|

FEATURING MAP WORK, PHOTOGRAPH INTERPRETATION AND FIELDWORK

SIMPLIFIED AND

WORKED OBJECTIVES

WAIGO SIMON

MASTERING O'LEVEL GEOGRAPHY PAPER 273/1

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year	

PREFACE

This book aimed at simplifying practical geography for students and teachers. It focuses mainly in compulsory areas which often have been problem to students. thus, this book covers Map reading, photograph interpretation and fieldwork. Many users may find it easy to use as the book is well illustrated with hands on.

It also has plan to carry out fieldwork and reporting. There are a number of objective questions sets and answers to them.

Always search for more knowledge. Your creativity in interpreting geographical phenomenon is divine as this subject changes from time to time.

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SET 1

1. the problem of rapid population growth in Kigezi highlands can best be controlled by
 - A. family planning
 - B. Change in land tenure system.
 - C. Encouraging outward migration.
 - D. Educating the masses.
2. Which of the following is an igneous rock?
 - A. Limestone
 - B. Slate.
 - C. Shale
 - D. Granite.
3. Which one of the following is a tributary of river Rufiji?
 - A. Aswa
 - B. Galana.
 - C. Kilombero
 - D. Ruvuma.
4. Landslides in the highland areas of East Africa are mainly caused by
 - A. Earthquakes.
 - B. Heavy rainfall.
 - C. Cultivation on slopes
 - D. Use of explosives
5. Which one of the following is a marine type of fish?
 - A. Tilapia
 - B. Catfish.
 - C. Lungfish.
 - D. Mackerel.
6. The amount of water vapour in the atmosphere is called
 - A. Pressure.
 - B. Rainfall.
 - C. Humidity.
 - D. Cloud cover.
7. Which of the following human activities is the major threat to wetlands in East Africa?
 - A. Cultivation.
 - B. Industrialization.
 - C. Animal grazing.
 - D. Mining and quarrying
8. The major factor which led to the location of the cobalt processing plant in Kasese is the presence of
 - A. Market.
 - B. Labour.
 - C. Power.
 - D. Raw materials.
9. Which one of the following stations in east Africa receives rainfall in two seasons per year?
 - A. Gulu
 - B. Dodoma
 - C. Bukoba
 - D. Wajir
10. Which one of the following factors best explains the uneven distribution of population in Kenya?
 - A. Poorly developed transport network.
 - B. Variation in rainfall
 - C. Land tenure system.
 - D. Difference in soil fertility.
11. The main factor responsible for the development of soil catena in East Africa is
 - A. Climate.
 - B. Vegetation
 - C. Relief.
 - D. Time.
12. Which one of the following port in East Africa is directly linked to Zambia by a railway line?
 - A. Mombasa.

- B. Tanga.
 - C. Mtwara.
 - D. Dar-es-salaam
13. The main problem facing fishing in lake Kyoga is
- A. Over fishing.
 - B. Pollution.
 - C. Water hyacinth.
 - D. Fish predators.
14. Which one of the following types of transport in east Africa is commonly used for movement of bulky goods?
- A. Air.
 - B. Rail.
 - C. Road.
 - D. Water.
15. The major problem facing communities living near conservation areas is
- A. Presence of tsetse flies.
 - B. Destruction of crops by wild animals.
 - C. Conflicts with game rangers.
 - D. Limited land for agricultural expansion.
16. Which one of the following tree species is commonly found in savannah region of East Africa?
- A. Ebony.
 - B. Mahogany.
 - C. Acacia.
 - D. Mangrove.
17. The type of vegetation in East Africa characterized by tall grass and scattered trees is
- A. Bush and ticket.
 - B. Rain forests.
 - C. Heath and moorland.
 - D. Savannah woodlands.
18. Which one of the following cash crops is exported by all the three East African countries?
- A. Tea.
 - B. Sisal.
 - C. Cloves.
 - D. Vanilla.
19. Dairy farming is carried out in Kenya highlands mainly because of the presence of
- A. Good pastures.
 - B. Cool climate.
 - C. A large market.
 - D. Cheap labour.
20. Which one of the following processes was responsible for the formation of cirques in East Africa?
- A. Folding.
 - B. Faulting.
 - C. Glaciations.
 - D. Vulcanicity.
21. The main factor encouraging the development of market gardening in east Africa is
- A. Increasing demands for vegetables.
 - B. Improved transport facility.
 - C. Improved technology.
 - D. Availability of skilled labour.
22. Which one of the following coastal features is formed as a result of wave deposition?
- A. Geos.
 - B. Stacks.
 - C. Arches.
 - D. Sand bars.
23. The mineral obtained from coral reefs along the east African coast is
- A. Coal.
 - B. Limestone.
 - C. Peat.
 - D. Salt.

24. Which of the following factors has mainly limited the development of heavy industries in East Africa?
 - A. High cost of production.
 - B. Narrow domestic market.
 - C. Low level of technology
 - D. Poor transport network.
25. Modernization of agriculture in East Africa is mainly facing the problem of
 - A. Limited capital.
 - B. Unskilled labour.
 - C. Land tenure system.
 - D. Poor transport system.
26. Which of the following method is commonly used in preserving fish in East Africa?
 - A. Sun drying.
 - B. Smoking.
 - C. Salting
 - D. Frying.
27. Equatorial forests in East Africa have been mainly cleared for
 - A. Settlement.
 - B. Industrial development.
 - C. Road construction.
 - D. Agriculture.
28. Which one of the following winds is responsible for the dry conditions experienced in north –western Kenya?
 - A. The north-east trades.
 - B. The South –East trades.
 - C. South- Western monsoons.
 - D. Westerly winds.
29. Bwindi impenetrable forest national park is visited by tourists mainly because of its
 - A. Chimpanzees
 - B. Gorillas.
 - C. Monkeys.
 - D. Baboons.
30. Which one of the following is the major problem facing trade among East African countries?
 - A. Trade restrictions.
 - B. Smuggling goods.
 - C. Use of different currencies.
 - D. Production of similar goods.

SET 2

1. The island of Zanzibar is densely populated mainly because of
 - A. Nature of soils.
 - B. Heavy rainfall.
 - C. Tourism.
 - D. Trade.
2. Which one of the following fault line scarp is found in the western rift valley?
 - A. Aberdares
 - B. Butiaba.
 - C. Elgeyo.
 - D. Kilosa-msolwa.
3. Weathering by exfoliation occurs as a result of
 - A. Carbonation
 - B. Frost action.
 - C. Temperature changes.
 - D. Action by living organisms.
4. Which one of the following places in east Africa experiences a dry season from November to March?
 - A. Lindi
 - B. Gulu.
 - C. Dodoma.
 - D. Entebbe.
5. The type of land use found in the semi-arid areas of East Africa is

- A. Livestock farming.
 - B. Plantation farming.
 - C. Forestry.
 - D. Fish farming.
6. Which one of the following mineral in East Africa is mined by the open cast method?
- A. Soda ash.
 - B. Diamonds.
 - C. Coal.
 - D. Copper.
7. The savannah areas of East Africa are mainly used for
- A. Hunting.
 - B. Bee keeping.
 - C. Wildlife conservation.
 - D. Forest conservation.
8. The most common method of fish preservation used in East Africa is
- A. Smoking.
 - B. Salting.
 - C. Sun drying.
 - D. Freezing.
9. Which of the following National parks in Kenya for protection of the white Rhino?
- A. Tsavo.
 - B. Amboseli.
 - C. Nairobi.
 - D. Meru.
10. The most dominant soil component which is found in the A horizon is
- A. Humus.
 - B. Minerals
 - C. Water.
 - D. Air.
11. The spread of desert conditions in East Africa can best be controlled by
- A. Setting up irrigation schemes.
 - B. Afforestation and re-forestation programs.
 - C. Providing alternative sources of fuel.
 - D. Establishing ranches.
12. Which one of the following coastal features is a result of wave deposition?
- A. Stack.
 - B. Cave.
 - C. Arch.
 - D. Beach.
13. Which of the following is the greatest threat to tropical rainforests in Uganda?
- A. Destruction by wild animals.
 - B. Seasonal outbreak of fire.
 - C. Competition with other land uses.
 - D. Existence of pests and diseases.
14. Which one of the following factors greatly hinders transport along river Nile?
- A. Presence of water falls.
 - B. Existence of crocodiles.
 - C. Strong winds.
 - D. Floating vegetation.
15. Rapid population increase in Uganda is mainly due to
- A. Decline in internal tribal wars.
 - B. Increased immigration.
 - C. Improved medical facilities.
 - D. High fertility rates.
16. Which of the following is an igneous rock?
- A. Schist.
 - B. Mudstone
 - C. Granite.
 - D. Slate.

17. Wetlands in East Africa are mainly conserved for
 - A. Regulating the climate.
 - B. Providing building materials.
 - C. Providing fish.
 - D. Attracting tourists.
18. Which of following areas in Tanzania is important for growing of pyrethrum?
 - A. Lake Victoria shores.
 - B. Southern highlands.
 - C. The coastal areas.
 - D. The rift valley floor.
19. The sparse population in western Tanzania is a result of
 - A. Remoteness of the area.
 - B. Depopulation by slave raids.
 - C. Unreliable rainfall.
 - D. Tsetse fly infestation.
20. Which one of the following cash crops is grown in northern Uganda?
 - A. Tea.
 - B. Sisal.
 - C. Cotton.
 - D. Pyrethrum.
21. The establishment of small scale industries in East Africa has mainly contributed to
 - A. Rural development.
 - B. Creation of employment opportunities.
 - C. Reduction in rural –urban migration.
 - D. Development of skills by the local people.
22. The lake in East Africa which is most important for transport is.
 - A. Lake Kyoga.
 - B. Lake Turkana
 - C. Lake Tanganyika.
 - D. Lake Victoria.
23. Which of the following is the major factor affecting the development of road transport in East Africa?
 - A. Limited capital.
 - B. Few economic activities.
 - C. Sparse population.
 - D. Low level of technology.
24. The vegetation type in East Africa which has tall grass with scattered trees is called.
 - A. Semi-desert vegetation.
 - B. Savannah vegetation.
 - C. Heath and moorland.
 - D. Savannah woodlands.
25. Which of the following is the largest industrial establishment at Kisumu?
 - A. Petroleum refining.
 - B. Motor vehicle assembly.
 - C. Cement work.
 - D. Leather tanning.
26. The major problem faced by fisher men on lake Kyoga is
 - A. Presence of crocodiles.
 - B. Shallow waters.
 - C. Floating vegetation.
 - D. Strong winds.
27. The national park in Uganda which is most affected by the problem of remoteness is
 - A. Mt. Elgon
 - B. Kibale.
 - C. Bwindi.
 - D. Kidepo.
28. Which of the following towns has a motor vehicle assembly factory in East Africa?
 - A. Jinja.
 - B. Arusha.
 - C. Mombasa.

- D. Nakuru.
- 29. Gold in East Africa is not exploited on a large scale because
 - A. The method of mining is expensive.
 - B. World market prices keep changing.
 - C. Of competition from other producers.
 - D. The deposits are in small quantities.
- 30. The type of clouds which is associated with thunderstorms is
 - A. Cumulus.
 - B. Altocumulus.
 - C. Cirrostratus.
 - D. Cumulonimbus.

SET 3

1. The major problem faced in areas of east Africa with a high population density is
 - A. Tribal conflicts
 - B. Decline in living standard
 - C. Land fragmentation
 - D. Increased unemployment
2. Which of the following coastal land forms in East Africa were formed by deposition?
 - A. Beaches and spits
 - B. caves and blow holes
 - C. Arches and stacks
 - D. cliffs and geos
3. Which of the following is a sedimentary rock?
 - A. Granite
 - B. sandstone
 - C. marble
 - D. Basalt
4. Which of the following cattle disease is spread by tsetse flies?
 - A. Rinderpest.
 - B. east coast fever
 - C. Anthrax
 - D. Nagana
5. the most suitable method of extracting minerals that occur close to the surface is
 - A. opencast
 - B. adit
 - C. drilling.
 - D. Filtration.
6. Tarns on glaciated mountains in East Africa have been mainly used for
 - A. Tourism
 - B. Fishing
 - C. research
 - D. water supply.
7. The type of forest found at the coast of East Africa is known as
 - A. Bamboo
 - B. temperate
 - C. mangrove
 - D. montane.
8. Which of the following fish landing sites is found on shores of lake Albert?
 - A. Katunguru
 - B. Rweshama
 - C. Namasle
 - D. Wanseko
9. The major factor limiting local tourism in East Africa is
 - A. Low income level
 - B. Inadequate information
 - C. Shortage of accommodation
 - D. Political instability
10. Which of the following lakes in East Africa is found in the rift valley?
 - A. Kyoga
 - B. Wamala
 - C. Rukwa
 - D. Bisina
11. The low rate of chemical weathering in North Eastern Uganda is due to
 - A. Dry climatic condition
 - B. Flat topography
 - C. Resistant rocks
 - D. Limited human activities

12. Which of the following human activities has mainly led to environmental degradation in north Eastern Uganda?
 - A. Building settlement
 - B. Animal rearing
 - C. Uncontrolled hunting
 - D. Bush burning
13. Which of the following districts in Uganda has the highest population density?
 - A. Mbale
 - B. Gulu
 - C. Masindi
 - D. Iganga
14. The major factor which favoured the location of Kilombero sugar plantation was
 - A. Presence of fertile soils
 - B. Gentle relief for mechanization
 - C. Government policy to open remote areas
 - D. Presence of water for irrigation
15. The major problem facing hydro electricity generation at Owen Falls (Nalubale) dam in Uganda is.
 - A. High cost of operation
 - B. Presence of water hyacinth
 - C. Changing water level
 - D. Narrow market level
16. The product obtained from forest plantations in Kenya is,
 - A. Paper
 - B. Timber
 - C. Medicine
 - D. Charcoal
17. Which one of the following fish species in East Africa is mainly caught in the swamps?
 - A. Tilapia
 - B. Mudfish
 - C. Dagaa
 - D. Nile perch
18. Atmospheric pressure at a weather station is measured in units called.
 - A. Millibars
 - B. Percentages
 - C. Millimeters
 - D. Degrees
19. The major problems facing the port of Der-es-Salam is
 - A. Shortages of ware houses
 - B. Limited land for expansion
 - C. Pollution from oil spills
 - D. Poor docking facilities
20. Which of the following exports from Uganda is transported by air?
 - A. Pineapples
 - B. Coffee
 - C. Sugar
 - D. Minerals

21. Which of the following volcanoes is found outside the rift valley i East Africa?
 - A. Meru
 - B. Longonot
 - C. Elgon
 - D. Muhavura
22. The reduction of infant mortality rate East Africa is mainly due to improved
 - A. Medical services
 - B. Child nutrition
 - C. Income levels
 - D. Family life education
23. Which of the following industries in East Africa use water as raw material?
 - A. Textile mills
 - B. Breweries
 - C. Sisal factory
 - D. Leather tanning
24. The most common type of exotic tree species growth in East Africa is
 - A. Wattle
 - B. Cypress
 - C. Pine
 - D. Eucalyptus
25. Farmers in highland areas of East Africa practice agriculture on small holdings mainly because of
 - A. Lack of skilled labour
 - B. Inadequate capital
 - C. Limited land
 - D. Lack of market
26. Which of the following towns in Uganda has soft drink factory?
 - A. Mbarara
 - B. Gulu
 - C. Kasese
 - D. Tororo
27. Which of the following factors limit fish farming in Uganda?
 - A. Unskilled labour
 - B. Limited capital
 - C. Narrow market
 - D. Low fish prices
28. The economic activities which has led to the destruction of wetlands in East Africa is
 - A. Brick making
 - B. Fishing
 - C. Fishing animal rearing
 - D. Tourism
29. Limestone rocks are weathered by the process of
 - A. Hydration
 - B. Oxidation
 - C. Carbonation
 - D. Hydrolysis
30. Which of following industries in East Africa is Agro based?

- A. Pharmaceuticals
 - B. Electronics
 - C. Plastic manufacturing
 - D. Clothing and textile
31. The Mobuku river in Kasese is important for
- A. Irrigation
 - B. Fishing
 - C. Navigation
 - D. Tourism
32. The method of preserving fish commonly used in East Africa is
- A. Freezing
 - B. Salting
 - C. Smoking
 - D. Frying
33. Which of the following game reserves is found i Kenya?
- A. Matheniko
 - B. Selous
 - C. Ugalla
 - D. Masai Mara
34. The type of cloud associated with thunderstorms in East Africa is
- A. Cirro-stratus
 - B. Alto-stratus
 - C. Cummulo-nimbus
 - D. Cirro-cumulus
35. Which of the following crops is grown on Zanzibar island?
- A. Cloves
 - B. Pyrethrum
 - C. Sugarcanes
 - D. Cotton

SET 4

1. Central Tanzania is sparsely populated mainly because of
 - A. Infertile soils
 - B. Unreliable rainfall
 - C. Presence of tsetse flies.
 - D. Existence of woodland vegetation.
2. Which of the following is a horst?
 - A. MOUNT Kenya.
 - B. MountUsambara.
 - C. MountMoroto.
 - D. Mount Kilimanjaro.
3. Physical weathering is common in northern Kenya mainly due to the existence of
 - A. Dry climate
 - B. Flat relief.
 - C. Scanty vegetation.
 - D. Granitic rock.
4. Which of the following is a characteristic of Equatorial climate in East Africa?
 - A. Large temperature range.
 - B. Low temperature.
 - C. Heavy rainfall.
 - D. Low humidity.
5. The major problem facing coffee farmers in East Africa is
 - A. Fluctuation of prices.
 - B. Competition for land with food crops.
 - C. In adequate capital for investments
 - D. shortage of labour.
6. Which of the following is perennial crop?

- A. Cotton. B. groundnuts. C. tea. D. rice.
7. The development of hydroelectricity power station on River Pangani was mainly favored by the presence of
A. hard basement rock. B. water falls.
C. narrow gorge. D. a large volume of water.
8. The major effect of deforestation on the slopes of Mount Elgon is
A. shortage of wood. B. Reduction of rainfall.
C. Destruction of Wildlife. D. soil erosion.
9. The greatest problem facing the fresh water fishing grounds in East Africa is
A. indiscriminate fishing. B. water pollution
C. poor transport. D. changing water level.
10. the most effective solution to the problem of land shortage In urban areas is
A. reclaiming wetlands. B. encouraging urban-rural migration.
C. constructing sky scrapers. D. upgrading slums.
11. Which of the following human activities has resulted in the destruction of vegetation in North Eastern Uganda?
A. Cattle ranching B. Nomadic pastoralism. C. wild game hunting.
D. crop cultivation.
12. a steep sided feature formed between two adjacent cirques is called.
A. a pyramidal peak B. a glacial trough. C. a hanging valley.
D. an arête.
13. Which of the following is a metamorphic rock?
A. Quartzite. B. granite. C. sandstone. D. Basalt.
14. The major factor influencing the location of cement manufacturing industries in East Africa is the availability of
A. Efficient transport. B. Power supply. C. Raw materials. D. Skilled labour.
15. Soft wood plantations in East Africa are mainly used to provide
A. poles B. medicine D. timber. D. pulp.
16. Which of the following fishing grounds in East Africa is affected by the water hyacinth weed?
A. LakeKatwe B. Lake Victoria C. Lake Tanganyika.
D. Lake Turkana.
17. The major problem affecting transport on East African rivers is
A. Presence of floating vegetation B. Variation in the volume of water
B. Presence of waterfalls. D. Existence of strong winds.
18. Which of the following fish Landing site is found on Lake Kyoga?
A. Lwapanga B. Kigungu C. Kasenyi D. Ntoroko.
19. The low rainfall received in Lake Turkana region in Kenya is as a result of
A. scanty vegetation. B. flat relief C. Human activities
D. dry trade winds.
20. The total population of a country divided by the total land area of that country is a measure of population
A. distribution. B. density. C. growth rate. D. structure.
21. Which of the following rivers in East Africa has oxbow lakes?
A. Kafu B. Nzoia. C. Tana. D. Kagera.
22. The largest game reserve in Tanzania is
A. Rungwa B. Selous C. Ugalla. D. Mkomazi.
23. The lines joining places on map with equal amount of rainfall are known as
A. isohyets. B. isobars. C. isohels. D. Isotherm.
24. the most popular fresh water fish consumed in East Africa is
A. Dagan. B. Tilapia. C. Nile perch. D. haplochomis.
25. the most suitable mode of transporting bulky goods from Kampala to Mombasa is by
A. railway. B. air. C. road. D. water.
26. Leaching in equatorial regions of East Africa produces.
A. Alluvial soils. B. Sandy soils C. Lateritic soils. D. Loamy soils.
27. Which of the following industries in East Africa is heavy industry?
A. Cement processing B. Textiles
C. Wild life D. Food processing
28. the most important tourist attraction in North Eastern Uganda is
A. Beautiful scenery B. Historical sites

- B.** availability of mineral deposits
C. well-developed transport network
D. ready market provided by the dense population.
10. Which one of the following methods is used by large scale companies to preserve fish at the coast of East Africa?
A. refrigeration **B.** smoking. **C.** salting. **D.** canning.
11. The development of the tourist industry in East Africa has been mainly favoured by
A. liberalization of economies **B.** increase advertisement.
C. presence of varied wildlife. **D.** well developed hotels
12. Which of the following means of transport in East Africa is most suitable for the transportation of bulky commodities?
A. railway. **B.** air . **C.** Pipeline. **D.** road.
13. Which of the following types of fish is found in the inland fresh waters of East Africa?
A. halibut **B.** tuna. **C.** prawns. **D.** Dagaa.
14. North-western Kenya is sparsely populated mainly because of
A. presence of diseases. **B.** semi-arid climate.
C. remoteness **D.** absence of minerals.
15. The process of leaching involves
A. movement of minerals to the sub-soil
B. weathering of rocks by temperature changes.
C. addition of organic matter to the soil
D. erosion of the top soil by water.
16. Which of the following types of lakes in East Africa was formed by volcanic activity?
A. Tarn. **B.** Ox-bow lake **C.** Lagoon. **D.** Crater Lake.
17. Which of the following factors best explains why Kampala has higher temperature than Nairobi?
A. Kampala is near Lake Victoria **B.** Nairobi is far from the equator.
C. Kampala is at low altitude. **D.** Nairobi has dense cloud cover.
18. Horticulture is carried out near the urban areas of East Africa due to the availability of
A. fertile soils. **B.** skilled labour. **C.** ready market. **D.** abundant capital.
19. Which of the following industries is raw material oriented?
A. cement manufacturing. **B.** shoe making.
C. breweries. **D.** bakery.
20. The savannah vegetation in East Africa is characterized by
A. short evergreen trees. **B.** thick thorny bush and scrub.
C. tall trees with buttress roots. **D.** tall grass with scattered trees.
21. Which of the following lakes yields the largest fish catch in east Africa?
A. Tanganyika. **B.** George. **C.** Victoria. **D.** Albert.
22. The major mineral exported by Tanzania is
A. coal. **B.** diamonds. **C.** gold. **D.** iron ore.
23. A depositional feature joined to the bay at one end with the other end projecting into the sea is called a
A. Spit. **B.** Bar. **C.** Beach. **D.** Tombolo.
24. Navigation along the rivers of East Africa has mainly been affected by
A. flooding of the banks. **B.** silting of the channels.
C. seasonality of the rivers. **D.** narrowness of the valleys.

25. Which of the following problems has mainly hindered fishing on Lake Victoria?
 A. limited fish species. B. attack by pirates.
 C. presence of wild animals D. poor fishing gear.
26. The major problem facing the mining industry in East Africa is
 A. limited capital. B. remoteness. C. poor quality ores. D. low prices.
27. Which of the following best explains the low population density in the Miombo woodlands of Tanzania?
 A. infertile soils. B. presence of tsetse flies.
 C. poor transport. D. unreliable rainfall.
28. Lines drawn on maps joining places with the same atmospheric pressure are called.
 A. isobars. B. Isohyets. C. Isoneph. D. Isotherms.
29. Which of the following cash crops grow well in the highlands of East Africa?
 A. tobacco. B. cloves. C. pyrethrum. D. cotton.
30. There is more erosion in the youthful than in mature stage of a river because of
 A. narrow valley. B. small river load.
 C. low volume of water. D. steep gradient.
31. Which of the following tourist attractions are found at Olorgesailie?
 A. sand beach. B. recreational fishing. C. archeological site. D. wildlife.
32. The population around Kinyara sugar estate has mainly benefited through
 A. obtaining cheap sugar. B. the out grower scheme.
 C. the available social services. D. marketing their food crops.
33. Which of the following describes equatorial forests?
 A. tall grass with scattered trees. B. drought resistant scrubs.
 C. needle shaped leaves. D. ever green trees.
34. The vegetation type found between 1000 meters on Mount Kilimanjaro is
 A. tropical rainforests. B. heath and moorland.
 C. savannah vegetation. D. bamboo forests.
35. Which of the following towns in East Africa has a cement processing factory?
 A. Shinyanga. B. Thika. C. Mbeya. D. Hima.

SET 6

1. The rapid increase in population of East Africa is mainly due to
 A. early marriage B. high fertility rate
 C. increased food production D. improved sanitation
2. In East Africa cloves are grown
 A. in the rift valley areas B. in the highlands
 C. in the Miombo woodlands D. along the coast
3. Which of the following lakes in East Africa was formed by Glaciation?
 A. L.Nabugabo B. L.Teleki C. L.Bunyonyi D. L. Katwe.
4. Iron ore in East Africa is not commercially exploited mainly because of
 A. small ore deposits B. low quality ores
 C. inaccessibility of the deposits D. unskilled labour

5. Which of the following is a planted forest in Uganda?
A. Zoka B. Maramagambo. C. Mafuga D. Mabira.
6. Landslides in Uganda are most common in the
A. Lake Victoria B. highland areas
C. Nyika plateau D. coastal areas
7. The biggest problem facing Tanga port is
A. poor hinterland B. traffic congestion C. shallow harbour C. poor roads.
8. Gulu is hotter than Fort portal because of differences in
A. vegetation cover B. Altitude C. cloud cover. D. latitude.
9. Which of the following is a major tourist attraction in Bwindi impenetrable National Park?
A. birds. B. beautiful scenery C. forests D. gorillas.
10. Most rivers in East Africa are difficult to use for transport mainly because of
A. presence of rapids B. existence of water weeds
C. changes in water volume D. deposition of silt
11. Which of the following mountain in East Africa was formed due to faulting?
A. Kipengere B. Muhavura C. Usambara. D. Aberdare.
12. Northern Kenya has low population density mainly because of
A. un reliable rainfall. B poor transport network.
C. high evaporation rate. C. limited job opportunities.
13. Which of the following factors has mainly hindered the development of large-Scale manufacturing industries in East Africa?
A. shortage of skilled manpower. B. limited capital for investment
C. inadequate supply of raw materials. D. narrow domestic market.
14. The lee ward side of mount Rwenzori is dry mainly because of
A. limited forest vegetation. B. high altitude
C. absence of large water bodies. D. Descending dry winds.
15. The major problem facing fishing industry in East Africa is
A. inappropriate fishing methods. B. limited capital
C. remoteness of fishing grounds. D. limited fish species.
16. Afforestation in the highland area of East Africa is being carried out to solve The problem of
A. overgrazing. B. strong winds. C. soil erosion. D. fuel wood shortage.
17. Which of the following systems of farming is capital intensive?
A. plantation agriculture. B. shifting cultivation.
C. bush fallowing D. nomadic pastoralism.
18. Which of the following types of fish is abundantly caught in the fresh waters of East Africa?
A. mud fish. B. Nile perch. C. cat fish. D. Tilapia.
19. The deep hollow found at the head of a glaciated valley is called
A. arête. B. cirque. C. hanging valley. D. truncated spur.
20. Which of the following modes of transport in Uganda has declined in importance?
A., air. B. water. C. railway. D. road.
21. The best method of preserving fish for a long time is

- A. sun drying. B. smoking. C. salting. D. freezing
22. In which of the following industries is water used as raw material?
A. breweries. B. tea processing. C. leather tanning. D. textiles.
23. Slashing and burning of natural vegetation are characteristics of
A. mixed farming. B. nomadic pastoralism.
C. shifting cultivation. D. plantation farming.
24. Which of the following towns in East Africa is important for textile Manufacturing?
A. Kisumu. B. Kasese. C. Dodoma. D. Songea
25. The mangrove type of vegetation in East Africa is found
A. around Lake Victoria. B. along the coast.
C. on the Nyika plateau. D. in the highlands.
26. Which of the following forms the basis for the tourist industry in East Africa?
A. beautiful scenery. B. cultural diversity.
C. warm climate. D. fauna and flora.
27. Masailand is sparsely populated mainly because the area has
A. poor soils. B. low rainfall. C. tsetse flies. D. poor pastures.
28. Which of the following mineral product is imported by East Africa?
A. asbestos. B. steel. C. petroleum. D. copper ingots.
29. An elongated depression bounded by parallel fault scarps is called a
A. rift valley. B. gorge. C. fjord. D. hanging valley.
30. Which of the following is a characteristic of a clay soil?
A. has large particles. B. is rich in humus.
C. retains much water. D. is well aerated.
31. The lines on a map joining places with equal sunshine duration are known as
A. Isobars. B. isotherms. C. isohyets. D. isohels.
32. Which of the following tree species in East Africa provides hard wood?
A. eucalyptus. B. mahogany. C. pine. D. spruce.
33. The most common method of fishing used on lake Kyoga is
A. gill netting. B. use of hooks. C. use of spears. D. basket method.
34. The method used for mining diamond at Mwadui is
A. adit. B. open cast. C. deep pit. D. alluvial.
35. Doho irrigation scheme is found on river
A. Mpologoma. B. Sironko. C. Manafwa. D. Sezibwa.

SET 7

- 1 The Miombo woodlands are sparsely populated because of
A. Poor transport network. B. tsetse fly infestation
C. unreliable rainfall. D. poor drainage.
2. Which of the following glacial feature in East Africa is a result of deposition?
A. cirques. B. arêtes. C. terminal moraine. D. pyramidal peaks

3. Soils in highland areas of East Africa are fertile because of the presence of
A. volcanic lava. B. heavy rainfall.
C. cool temperature. D. high level of humus.
4. Which of the following types of climate covers the largest percentage of land in Kenya?
A. tropical continental. B. semi –arid.
C. highland subtropical. D. modified equatorial.
5. The major factor limiting the expansion of land under cropland in Kenya is
A. poor transport. B. pests and diseases.
C. water shortage. D. labour shortage.
6. Which of the following is the greatest problem facing the mining industry in East Africa?
A. exhaustion of minerals. B. inadequate capital
C. frequent mining accidents. D. increasing cost of mining.
7. Equatorial forests are described as evergreen because
A. the leaves are broad. C. the trunk is covered by climbing plants.
B. Trees grow close together. D. trees shade their leaves at different times of the year
8. Which of the following fish landing sites is found on Lake Kyoga?
A. Lwampanga. B. Butiaba. C. Katunguru. D. Majanji
9. Which of the following towns in East Africa is located in the rift valley area?
A. Nakuru. B. Voi. C. Tororo. D. Tabora.
10. Some areas in East Africa have been gazetted as national parks in order to
A. reduce deforestation. B. promote tourism.
C. control poaching. D. provide employment.
11. Which of the following commodities is exported through Entebbe airport?
A. Flowers. B. cotton. C. coffee. D. tea.
12. Coral reefs are not found at the mouth of rivers on the east African coast because the water is
A. warm. B. salty. C. shallow. D. muddy.
13. Weathering by frost action in East Africa has been experienced in the
A. rift valley areas. B. coastal region.
C. mountainous areas. D. coastal plateau.
14. Which of the following crops should be grown near the market?
A. tomatoes. B. coffee. C. pyrethrum. D. cotton.
15. The method used in the mining of diamond at Shinyanga is
A. shaft. B. open cast. C. adit. D. drilling.
16. Which of the following vegetation types covers the largest part of East Africa.
A. tropical rainforest. B. savannah grassland.
C. bush and ticket. D. heath and moorland.
17. In East Africa, fish farming is mainly practiced in
A. river mouths. B. bays. C. ponds. D. swamps.
18. The use of air transport within East Africa is limited by
A. few commodities to transport. B. few airports and aerodromes.
C. high fares. D. competition from road transport.
19. Which of the following processes led to the formation of Mount Kilimanjaro?
A. folding B. up warping. C. step faulting. D. Vulcanicity.

20. The 2002 census showed Uganda's population size as.
A. 24.7 million. B. 12.6 million. C. 35.0 million. D. 16.6 million.
21. The main factor influencing the development of soil catena in east Africa is
A. relief. B. drainage. C. climate. D. vegetation.
22. Which one of the following is a characteristics of the trees in the savannah region in East Africa?
A. presence of buttress roots. B. Periodic shedding of leaves.
C. Forming a dense canopy. D. stems of over sixty meters.
23. Cashew nuts in East Africa are grown in the
A. highland areas. B. rift valley areas.
C. coastal areas. D. Lake Victoria shores.
24. The type of erosion which involves uniform removal of soil from a large area is called
A. rill erosion. B. sheet erosion. C. splash erosion. D. gulley erosion
25. Minimum and maximum temperatures of a place are obtained by using
A a barometer. B. A hygrometer.
C. the six's thermometer. D. an anemometer.
26. Marine fishing at the East African coast has been affected by.
A. presence of coral reefs. B. availability of unskilled labour.
C. limited fish species. D. lack of mechanized fishing vessels.
27. which of the following animals in Uganda is faced with danger of extinction?
A. Kob. B. Rhino. C. Zebra. D. Giraffe.
28. Lake Teleki in Kenya is an example of a
A. crater lake. B. rift valley lake.
C. lava dammed lake D. glacial lake.
29. The type of climate in East Africa characterized by heavy rainfall well distributed throughout the year is called
A. montane. B. tropical. C. equatorial. D. monsoon.
30. The East African rift valley areas are mainly used for
A. animal rearing. B. hunting.
C. bee-keeping. D. arable farming.
31. Which of the following fish types is exported by East African countries?
A. Tilapia. B. Barbus. C. Dagaa. D. Nile Perch.
32. The problem of traffic congestion in Kampala is being solved by
A. constructing flyovers. B. encouraging use of public transport.
C. installing traffic lights. D. increasing the number of traffic police.
33. oil refineries in East Africa are found in
A. Nairobi. B. Jinja. C. Mombasa. D. Eldoret.
34. Lugari plantation forest in Western Kenya was established mainly to provide.
A. raw material for pulp and paper industry. B. fuel wood for local population.
C. wind break for homesteads. D. building poles.
35. The major export from East Africa is
A. timber. B. copper. B. coffee. D. frozen fish.

SET 8

1. Which of the following areas in East Africa has the lowest population density?
A. shores of Lake Victoria. B. central Tanzania.
C. lower slopes of Mt. Kilimanjaro. D. Kigezi highlands.
2. Inselbergs in East Africa are found in
1. voi. 2. Morogoro. 3. Kigoma. 4. Nakasongola.
A. 1,2 and 3. B. 2,3 and 4. C. 1,2 and 4. D. 1,3 and 4.
3. Which of the following results from the process of leaching?
A. sandstone. B. clay. C. limestone. D. laterite.
4. Areas along the equatorial belt of East Africa experience
A. high temperature and rainfall. B. low pressure and low humidity.
C. thick cloud cover and low rainfall. D. low temperature & low humidity.
5. Which one of the following has greatly hindered the development of livestock farming in the Miombo woodlands of Central Tanzania?
A. seasonal rainfall. B. poor soils.
C. limited pasture. D. tsetse flies.
6. A cobalt industry was established in Kasere mainly because of the presence of
A. raw materials. B. skilled labour. C. market for the products.
D. good transport network.
7. In which of the following areas is mangrove forest vegetation found in East Africa?
A. Lake Victoria basin. B. central Tanzania. C. coastal plain.
D. Kenya highlands.
8. The main problem facing fishing activity on lake Albert is
A. limited market. B. inadequate fish species. C. steep banks.
D. limited manpower.
9. Which of the following factors led to the development of Tororo town?
A. its location at the railway and road junction
B. development of mining activities
C. establishment of manufacturing industries.
D. Its position near the border.
10. Wild life in East Africa has been mainly conserved in gazetted areas in order to
A. attract tourists. B. promote scientific studies
C. maintain soil fertility. D. protect valuable plants and animals.
11. Which of the following commodities does Kenya import from Uganda/
A. Cement. B. Wheat. C. Maize. D. shoes.
12. Lake Tanganyika was formed as result of
A. down warping. B. faulting. C. Vulcanicity. D. glaciation.
13. Which of the following mountain in East Africa experiences weathering by frost action
A. Rwenzori. B. Moroto. C. Usambara. D. Meru.
14. The difference between a day's maximum and minimum temperature recorded for a place is called
A. daily mean temperature B. diurnal temperature range.
C. mean monthly temperature. D. annual temperature range.

15. Which of the following conditions have greatly favoured the growing of pyrethrum in East Africa.
A. gentle slope. B. heavy rainfall. C. fertile soils. D. high altitude.
16. The main problem facing the supply of hydro-electric power in Tanzania is
A. limited market size B. inadequate capital
C. few power stations D. seasonal change in river flow.
17. Which of the following is an example of hardwood tree species in East Africa?
A. ebony B. pine C. Spruce. D. Cypress.
18. the most common type of fish caught in the marine fishing grounds of East Africa is
A. mullet. B. prawns. C. oysters. D. sardines.
19. Which of the following volcanic mountains has a caldera?
A. Muhavura. B. Kilimanjaro. C. Longonot. D. Meru.
20. Which of the following is the greatest problem limiting the expansion of Nairobi city?
A. Increasing cost of land. B. inadequate supply of clean water.
C. development of slums. D, poor transport facilities.
21. Road transport is popular in East because it is
A. cheaper. B. flexible. C. faster. D. safer.
22. Which of the following is the most important contribution of the fishing industry in East Africa?
A. development of fish processing industries.
B. Foreign exchange earnings.
C. Improved transport network
D. Development of ports.
23. The arrangement of soils down a slope is called
A. catena. B. structure. C profile. D. Texture.
24. Which of the following land forms resulted from the deposition of shells of marine organisms?
A. Spits. B. Beaches. C. Fringing reefs. D.Tombolo.
25. The different sizes of particles making up soil is referred to as soil
A. Catena. B. Texture. C. Profile. D. Composition.
26. Which of the following National parks in Uganda was gazetted to protect endangered species?
A. Bwindi. B. Murchison falls. C. Semiliki. D. Mt. Elgon
27. Which of the following district in Uganda has the highest population density?
A. Kabarole. B. Luweero. C. Mbale. D. Arua.
28. A hygrometer at a weather station is used for measuring
A. Wind speed. B. relative humidity.
C. Atmospheric pressure. D. temperature
29. which one of the following tree species is the characteristics of savannah vegetation in East Africa?
A. Mahogany. B. Ebony. C. Acacia. D. Rosewood.
30. Horticulture is practiced around the urban centers in East Africa mainly because of
A. Limited land B. high labour costs.
C. Quick transport. D. ready market.
31. Which of the following factors have favored commercial fishing in L. Victoria?
A. introduction on Nile perch. B. use of outboard engines.

- C. establishment of processing plants. D. improvements at landing sites.
32. The major problem limiting agricultural modernization in Uganda is
 A. inadequate capital. B. cultural practices.
 C. poor transport. D. land tenure system.
33. Which one of these products is manufactured from soda ash?
 A. Tooth paste. B. Glass. C. Fertilizers. D. Cement.
34. Which of the following types of natural vegetation is commonly found in North -Eastern Uganda?
 A. thorn bush and thicket. B. rainforest.
 C. woodland. D. montane forest.
35. Navigation along river Nile in Uganda is limited by the
 A. high speed of waters. B. presence of rapids and waterfalls.
 C. existence of floating vegetation. D. seasonal changes in water volume.

SET 1 ANSWERS

1.A 2.D 3.C 4.C 5.D 6.C 7.A 8.D 9.C 10.B 11.C 12.
 13.A 14.B 15.B 16.B 17.C 18.A 19.B 20.C 21.A 22.D 23.B 24.C
 25.A 26.B 27.D 28.A 29.B 30.D

SET 2 ANSWERS

1.B 2.B 3.C 4.B 5.A 6.B 7.C 8.A 9.D 10.A 11.B 12.D
 13.C 14.A 15.D 16.C 17.A 18.B 19.D 20.C 21.B 22.D 23.A 24.B
 25.C 26.C 27.D 28.C 29.D 30.D

SET 3 ANSWERS

1.C 2.A 3.B 4.D 5.A 6.A 7.C 8.D 9.A 10.C 11.A 12.B
 13.A 14.D 15.C 16.A 17.B 18.A 19.B 20.A 21.C 22.A 23.B 24.D
 25.C 26.A 27.B 28.A 29.A 30.D 31.A 32.C 33.D 34.C 35.A

SET 4 ANSWERS

1.C 2.B 3.A 4.C 5.A 6.C 7.A 8.D 9.A 10.C 11.B 12.A
 13.A 14.C 15.D 16.B 17.C 18.A 19.D 20.B 21.B 22.B 23.A 24.B
 25.A 26.C 27.A 28.D 29.D 30.B 31.A 32.C 33.C 34.C 35.C

SET 5 ANSWERS

1.A 2.B 3.A 4.C 5.D 6.B 7.A 8.D 9.D 10.D 11.C 12.A
 13.D 14.B 15.A 16.D 17.C 18.C 19.A 20.D 21.C 22.B 23.D 24.D
 25.D 26.A 27.B 28.A 29.C 30.D 31.C 32.B 33.D 34.C 35.D

SET 6 ANSWERS

1.B 2.D 3.B 4.A 5.C 6.B 7.B 8.B 9.D 10.A 11.C 12.A
 13.B 14.D 15.D 16.C 17.A 18.D 19.B 20.C 21.B 22.A 23.C 24.A
 25.B 26.D 27.B 28.C 29.A 30.C 31.D 32.B 33.A 34.B 35.C

SET 7 ANSWERS

1.A	2.C	3.A	4.D	5.A	6.C	7.B	8.B	9.C	10.A	11.A	12.D
13.C	14.A	15.B	16.B	17.C	18.C	19.D	20.A	21.A	22.B	23.B	24.B
25.C	26.A	27.B	28.D	29.C	30.A	31.D	32.C	33.C	34.A	35.C	

SET 8 ANSWERS

1.B	2.C	3.D	4.A	5.D	6.A	7.C	8.C	9.B	10.C	11.C	12.B
13.A	14.B	15.D	16.D	17.A	18.D	19.C	20.C	21.A	22.B	23.A	24.C
25.B	26.A	27.A	28.C	29.C	30.D	31.C	32.A	33.B	34.C	35.B	

MAP READING

MAPS AND THEIR IDENTIFICATION

What is a map?

The surface of the earth comprised of two types of features. Natural and man-made or artificial features.

A map is the representation of one or both the above features drawn on a flat surface as the features are observed from above.

Maps are made for several purposes. Thus only features required for the purposes of the user may be included.

TYPES OF MAPS

In geography, the following types of maps are commonly used.

(a) Outline maps

These are maps common in text books and are usually simple line drawings. Only selected information may be added on them.

(b) Projected Maps

These are Atlas maps. They are drawn in such a way that the curvature of the earth is taken into account. (Curvature means lack of flat surface of the earth due to its spherical nature).

(c) Survey maps: These are maps which take the actual measurement of the ground. They are further divided into two i.e.

(i) Planimetric maps: These represent distances and show selected features such as road, field, buildings, air fields, etc. But they do not show relief or varying heights.

(ii) Topographical maps

This includes all the features found in the plan metric maps as well as heights or relief using contours.

What is map reading?

This refers to identification of features, measuring dimensions and interpreting information on survey topographical maps of selected areas.

Qualities of a map;

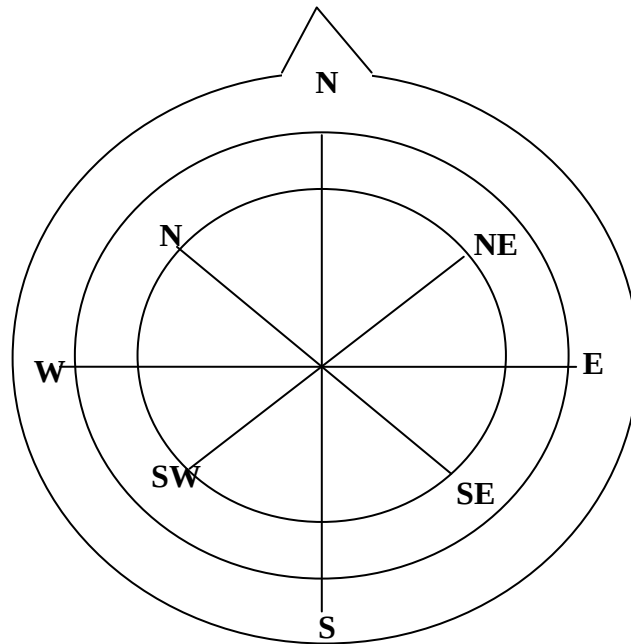
A good map should possess the following features;

(a) Title: This is what the map is about. It is usually written on top of the sheet where the map is drawn.

For instance, 1:50,000 KAKUTO UGANDA

(b) Direction: The direction is normally shown by the compass. It helps to show the location of the map in relations to the surrounding areas.

The compass direction includes the four cardinal points i.e. **North (N) South (S) East (E) and West (W)**. The compass direction is important for determining both **direction** and **bearing**.



(c) Frame: This is an outline of the map which show its extent. Always remember to enclose a map in a frame.

(d) Key: These are symbols used on a map with their meanings explained in a specially arranged table. The key is sometimes known as a legend.

A serious map user must be well conversant with the key of maps just as motorists are familiar with different road signs.

(e) Scale

As already defined, a map is a piece of ground drawn on a flat surface or piece of paper. However, the piece of the paper is not as large as the actual ground. It would be impossible and meaningless to have a map of similar size as the actual ground. This therefore calls for the use of scale which shows constant proportion between map distances and the real distance on actual ground.

TYPES OF SCALE

Map scales are always shown in the margin of every map.

Different ways of expressing the scale

1. STATEMENT SCALE

This is a form of scale expressed. In statements i.e. the map distance and actual ground distances are represented in form of scale. A scale statement should describe the map distances and their corresponding ground distances accurately.

E.g. 2 centimeters to represent 1 kilometer on survey maps, commonly used, statement scale is 1:50.000. This therefore means that 1 centimeter on the paper or map is equivalent to 50.000 centimeters on actual ground.

2. REPRESENTATIVE FRACTION SCALE

This refers to the expressions of the map distances to ground distance as a fraction.

$$Rf. = \frac{\text{Map distance}}{\text{Ground distance}}$$

Both ratios must use the same units e.g. meters, kilometer.

e.g. Representative fraction can be expressed as $RF = \frac{1}{50.000}$ or $1/50.000$

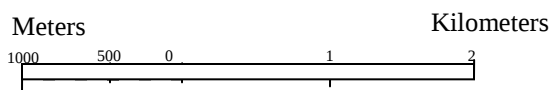
3. LINEAR SCALE

This is usually made from statement scale. It is suitable means of converting map distances into ground distances.

The linear scale is divided into two. The primary scale and secondary scale. Each of the divisions right of zero is called primary scale and each division is 1 kilometer.

While the small divisions on the left of zero is called secondary scale and each small division is 100 meters.

Illustration



NOTE: The linear scale is widely used for measuring distances like that of rivers, roads, railway, pipeline etc.

(THE GRID REFERENCE SYSTEM)

MAP GRID REFERENCES

On map face, there is vertical line running from top to bottom and horizontal lines running from left to right. This makes squares. These squares are known as the grid squares.

EASTINGS

The vertical lines are known as Eastings. They are called eastings because the value of the lines increases East wards.

Eastings				Northings	
				13	_____
				12	_____
				11	_____
				10	_____
3	4	5	6		

NORTHINGS

These are horizontal lines running from West to the East. They are called northings because their values increase northwards or upwards.

NOTE: The values are written on the grid in such a way that Eastings increases eastwards and the Northings increases northwards. This places the point of Grid origin in south western corner. Of the map or each grid square.

It is important to note that the Easting values are written against the vertical lines and the northing values written against horizontal lines. Hence, the south west corner of a map grid is always the base of all the measurements on the map.

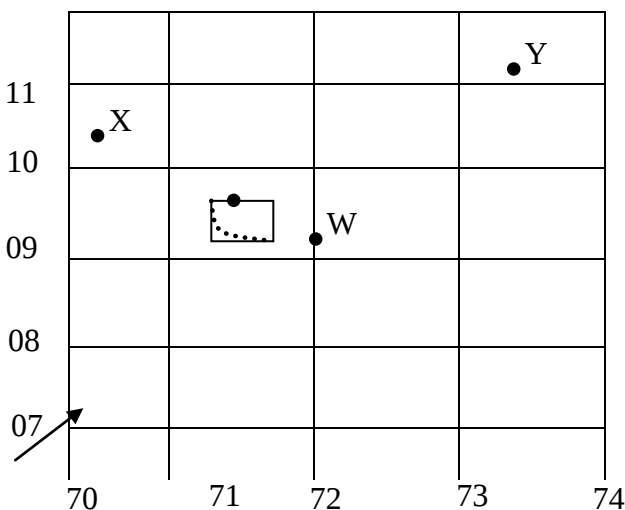
Likewise the Southwest corner of a square on a map grid is the base for all references inside the square or on its edges.

LOCATING FEATURES ON A MAP USING GRID REFERENCE

SIX FIGURE GRID REFERENCE

The position of any place on a map is given by its coordinates according to the grid system. Coordinates specify the points at which two lines at right angle to one another meet .where the lines meet is the feature to be located.

For example, the coordinates of Z is the point at which easting 71.4 and northing 09.5 are found as worked out below.



Point of grid origin

This coordinate gives the grid reference as 714095.

Note: To obtain six figure grid reference as above, we have to;

- Read the eastings first
- Eliminate both decimal points and comma in the coordinates.
- Write the coordinates as one single continuous figure with six digits.

EXERCISE

Find the grid reference of the points W, X and Y.

OTHER METHODS OF LOCATING FEATURES ON A MAP

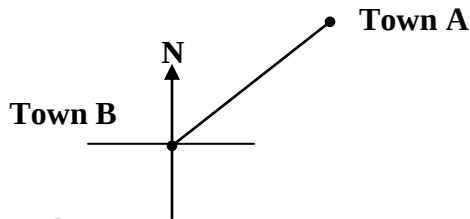
Measuring Direction

Direction is measured from the north in a clockwise direction and is given using compass direction.

Example: Find the direction of Town A from Town B.

Procedure

- Identify the two towns
- Draw four points of compass at town B making sure that the North South line is parallel to grid lines (easting)
- Join the towns with a straight line.
- The line joining from B – A gives the direction of A from B in the Northeast.



BEARING

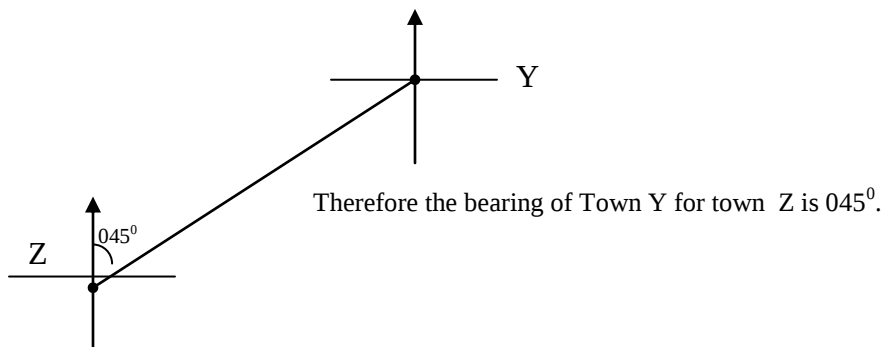
This is another important method of locating features on maps. Students should be well conversant with directions.

Bearing is measured from the north in a clockwise direction and given in degrees. You can use grid lines to measure bearing. Every easting is an accurate north line.

EXAMPLE: Find the bearing of town Y from Z.

Procedure:

- Join the two towns together with straight line
- Notice that line YZ makes corresponding angle with all the easting i.e. draw compass direction at both towns.
- Measure angle from the point mentioned last in the statement i.e point Z.



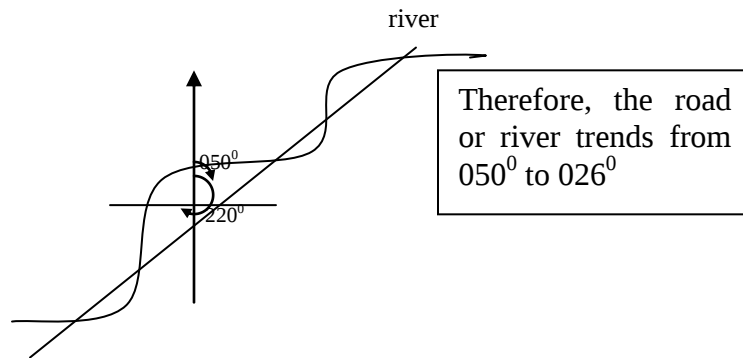
NOTE: Bearing is always given in three digits e.g. 006°, 045°, 180°, 345° etc.

Question: find the bearing of town Z from Y using the above illustration

MEASURING THE TREND OF A COASTLINE OR A ROAD OR A RIVER

To measure the trend of such winding features;-

- Took carefully at the river or coastline etc.
- Draw a straight pencil line to show its general direction.
- Roughly half way along the pencil line, mark or draw a compass point.
- At this point, measure both direction in degree along which the line trends.



MEASUREMENTS ON MAPS

(A) Measuring ground distance from a map

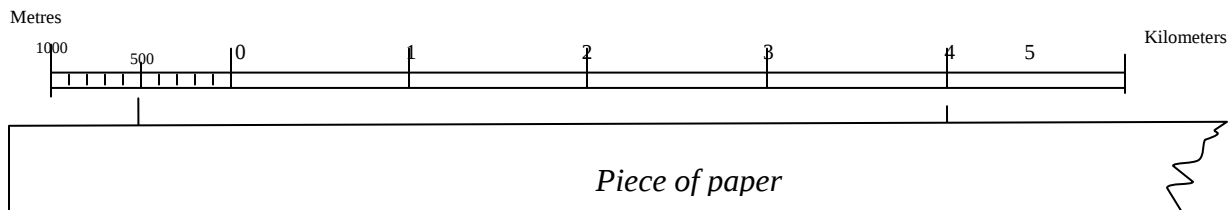
(1) Distances along straight line

This can be a straight portion of road without bends. For such cases, open dividers to cover the required distance along the length of the straight feature.

Alternatively, mark the end points of the required distance on the edge of a piece of paper. Then hold the dividers or the paper edge against linear scale and read off the actual ground distance.

Note: In using linear scale, it is recommended that you should read the values from right towards left, so that after all, the full units have been read up to zero mark, the other parts of the units can read to the left of zero mark, where the secondary units are shown. The unit of the measurement is in kilometers.

For the diagram below, the distance is 4.5km.



(2) Distances along winding features

These are several suitable methods for measuring distances of winding feature e.g. railway line, road etc. These methods are;

(a) Thread method (use cotton thread)

- Mark one end of the thread
- Place the marked thread from the start point after these points have been identified.
- Lay the piece of the thread and carefully follow the road or railway following all the minor bends, until you reach the end point. Mark the piece of the thread at the end point.
- Now straighten the thread and hold it against the linear scale and read it off.

(b) Paper method

This is the most accurate method which is less subjected to errors.

Procedure

- Identify the start point and the end point.
- Mark off the straightest parts of the road or railway.
- Get the straight edge of the paper. Mark the start point. Continue to trace it up. As each part is marked on the edge of the paper, the paper is kept parallel with the part being marked.
- After marking off all the required part of the feature, the total length marked on the paper edge is read off from the linear scale.

NB. After getting the correct measurement in kilometer. Then in bracket, state the method you have used e.g. 4.5km (paper method). This will guide the examiner and gives some consideration.

B) MEASURING GROUND AREAS FROM A MAP

This is common for examinations as the question may require you to calculate areas from a map.

(a) Regular shapes

Areas for regular shapes have formulas for calculating them.

Examples are:

(i) Rectangles

Areas is length x breadth

(ii) Triangle ($\frac{1}{2}$ base x height)

(iii) Circle (πr^2)

(b) Irregular Shape

The irregular shapes do not have readily available formula for calculations. For example, the shape of a plantation, forest reserve, a lake, swamps are often irregular.

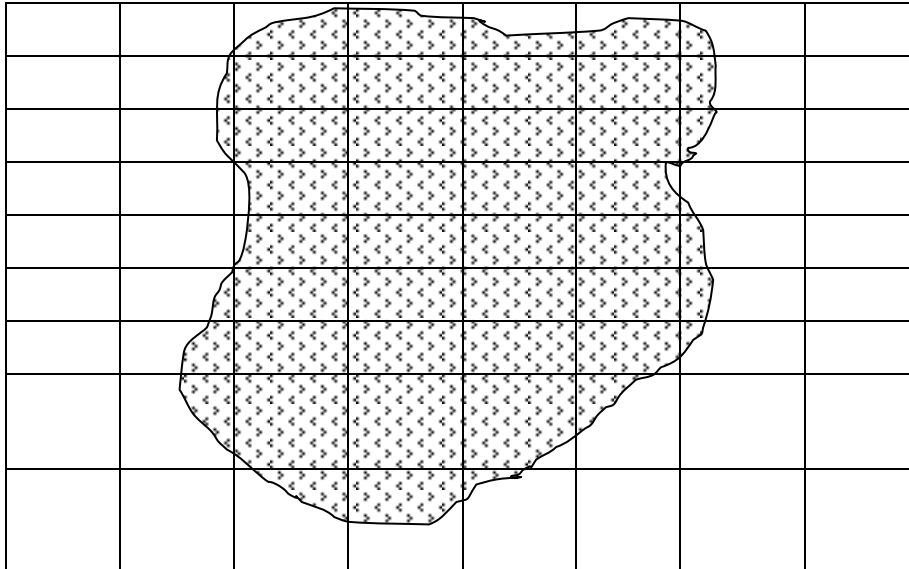
The best method to be used is the grid square method.

Note that each grid interval is 1km and therefore each grid square is 1km^2 .

Procedure

- Count the number of squares fully covered by the feature to be calculated. Record it down.
- Count the number of partly squares (i.e. squares which are not fully covered) and record it.
- Divide the number of partly squares by (2) two to convert them into full squares.
- Then sum up, the full squares and the answer derived from division of partly squares.
- Give your answer in kilometer square (km^2)

Example: Calculate the area covered by the swamp below;



Areas of full square = 21

Areas of partly square = $\frac{26}{2}$
13

Total Area of the swamp = $\frac{21+13}{2}$
But 1 square = 1km^2

Therefore, $34 \times 1\text{km} = 34\text{km}^2$

RELIEF OF A MAP

Relief is a general term to refer to the surface of the land i.e. appearance of landscape.

METHODS OF REPRESENTING RELIEF

1. Layer tinting

This method involves use of several colours. Usually the intensity of shadings increases with increasing elevation or height. It is common on Atlas maps.

2. Spot height.

This is stating of height at a specific point or spot on the area covered by a map. The position of spot height is shown with a dot and height figure. On your map extracts, usually check on the hilltops.

3. Hatching

Is a method of showing contour on topographical maps. It is used for showing slopes in hilly areas. The concentration of the lines shows steepness of the relief.

4. Form lines

These are like contour but their values are usually not given. But they also join places with the same height. By use of form line, the map reader can easily tell the relief of the area.

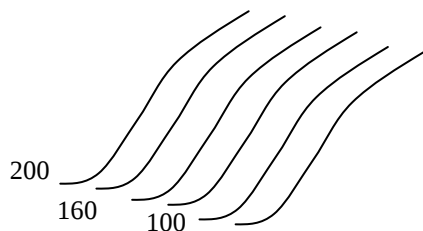
5. Contours

Are lines drawn on maps to join together places of the same elevation i.e. the same height. The contours that have not been marked with values can be deduced from those that are given either in ascending or descending orders. It is however important to know the vertical interval to make the deduction easier.

DEPICTING RELIEF

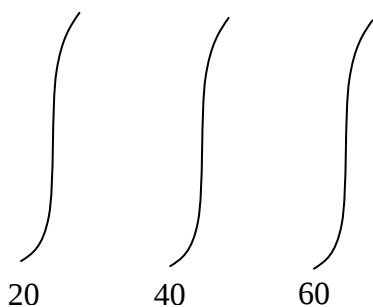
(i) Steep slopes

The steep slope is shown by concentration of contours.



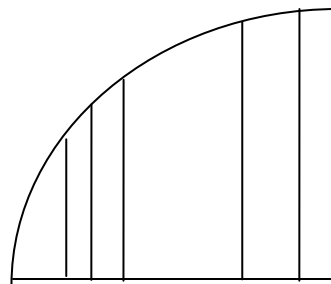
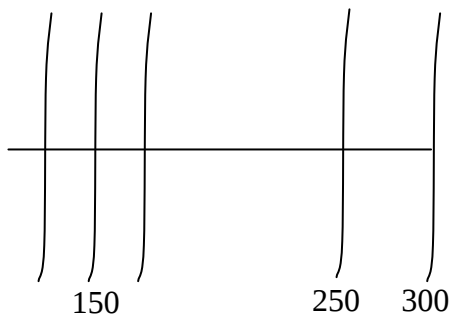
ii) Even slope / Gentle slope

Contours are evenly or spread at reasonable interval



(iii) Convex slopes

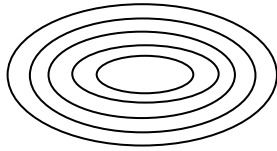
Contours are closest near the bottom of the slope where it is steeper and curve like a ball.



IDENTIFYING RELIEF LAND FORMS

(a) Mountain Cones

The mountain cones are shown by concentric circles which are often continuous



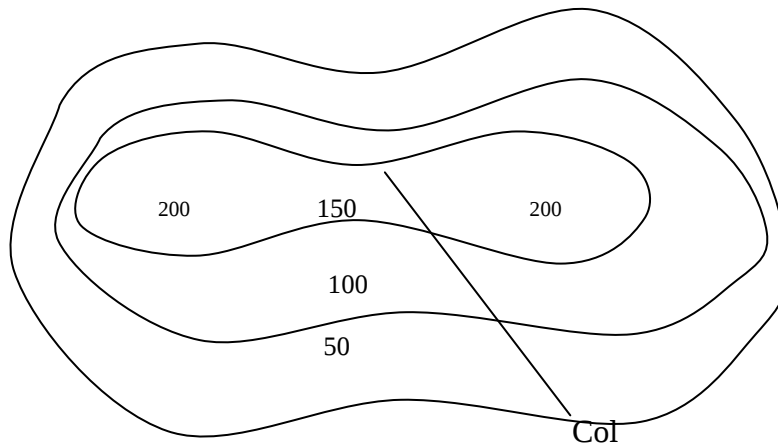
(b) Hill

Here, the contour pattern is made up of continuous but less concentric contours.



(c) Ridge

Here the contour values of both sides increase towards the top of the hill. A ridge is normally formed when hills are joined together.

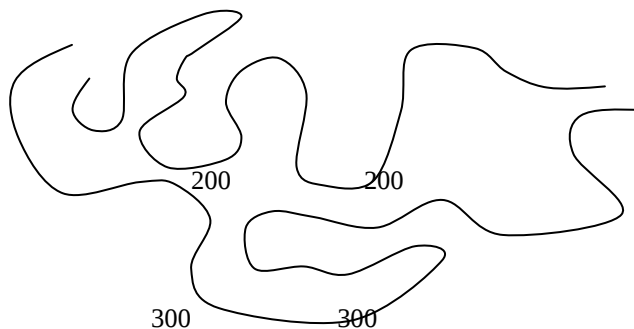


Illustration

NB. A col is part of ground separating two equal contours usually in hilly areas

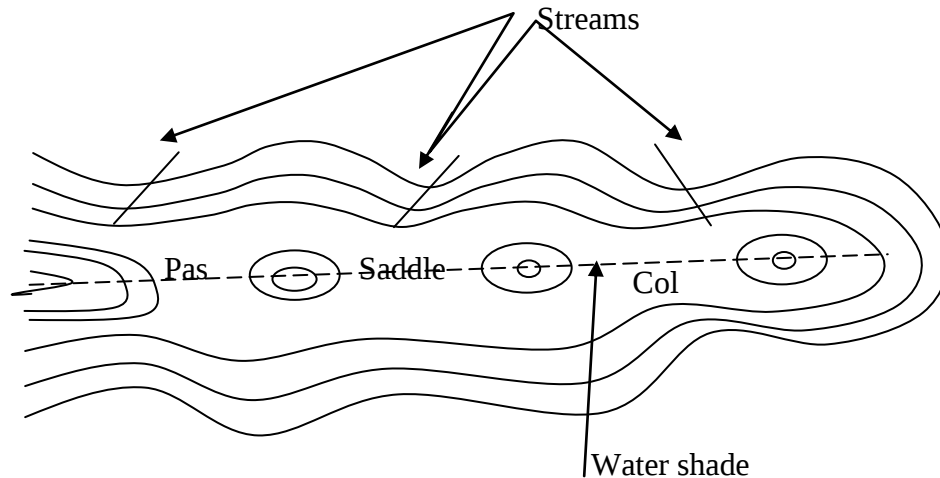
(d) Flat land

This is shown by presence of contours swinging haphazardly.



A Water Shade

Is a ridge that divides water flowing in different direction towards different basins?



The col, saddle and pass are gaps between the hills and the mountain ranges.

The saddle and col are the same only that the saddle is broader.

A pass is a narrow passage separating mountain ranges.

HOW TO DESCRIBE RELIEF SHOWN ON A MAP

While describing relief of a given area on a map; be keen to identify heights or landforms.

Note to use this formulae to describe relief of a place

R+E+E (Relief+evidence+example of evidence/location of the evidence should be included)

For example, there is a ridge at Kyalugaba in south west Kakuto.

When you see river valley, you could state there are several river valley in (name the region on the map).

When lakes are seen, you could state that, there is a basin, e.g. Bisina Lake in Kapiri.

Base other descriptions basing on the height. For instance, say the lowest part of Ntoma is 450metres while the highest is 2250 meters above sea level. All these should depend on your observations.

NB. Never deceive and give wrong features in geography because what you give is subject to close scrutiny.

Usually, you can use spot heights, contours, trigonometrical stations to get the highest point.

Go ahead to even get the amplitude.

The **amplitude** is the difference between the highest point and lowest point e.g. if the highest point is 5000 feets and the lowest point is 2300 feets

The amplitude shall be highest point-lowest point. Which is 5,000-2,300 feets = 2700 feets.

You can also conclude by saying the height of Kakuto ranges from 2300 to 5000 feet. Above sea level.

CROSS SECTION

A cross section is a representation of landform between two points on contoured map.

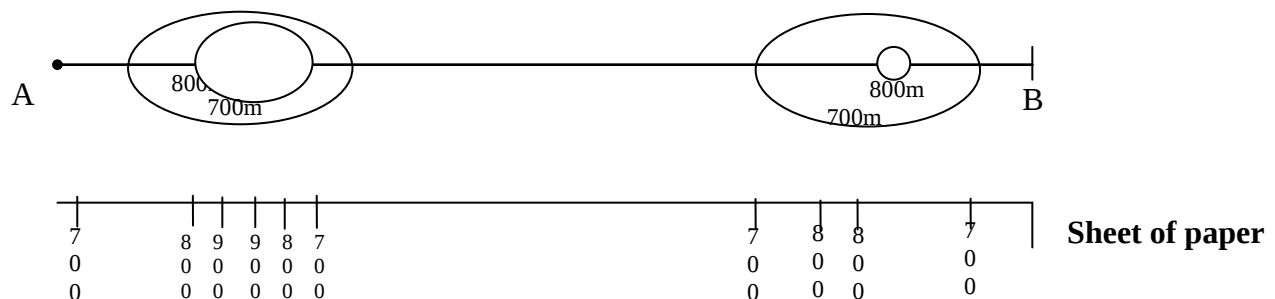
PROCEDURE

- Identify the two given points say A and B joint those points with a straight line.
- Place a straight line edge of a paper on the line drawn.
- Mark the contours that crosses the straight line joining the two points.
Remember to number the heights of these contours on the piece of paper used.
- Features to mark on the cross section are also marked on the sheet of the paper e.g. roads, hill tops, forests, settlements etc.
- Look for the horizontal and vertical scale. The horizontal scale is that usually that represented on the map i.e. 1:50,000
 - * The vertical scale is given as 1cm to vertical scale denominator. The denominator of vertical scale should be a factor or multiple of the contour interval.

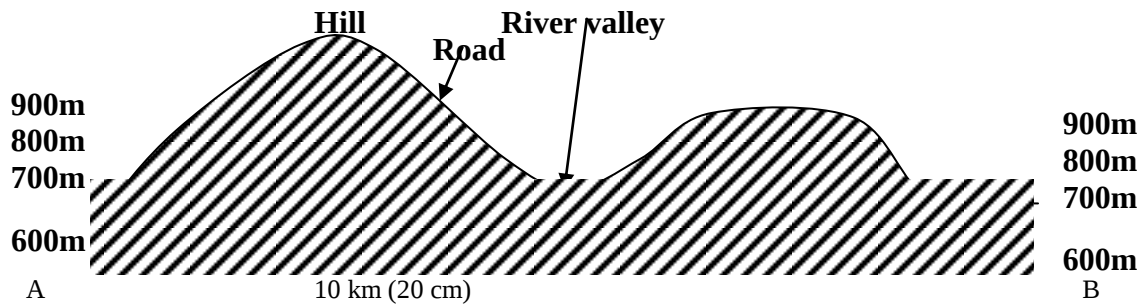
NOTE:

- On piece of paper, preferably graph paper, draw a horizontal line of the same length with that of the cross section to be drawn. This will provide the base line for cross section.
- At each end point, draw a vertical line on the paper to serve as vertical scale line and should be numbered on both sides i.e. point of start and end of cross section e.g. A and B.
- Place the paper edge along the base line so that position of each end point on that piece of paper coincide with their respective position on the paper. Write the values on the paper edge already noted are then transferred vertically above the position using faint dots.
- All the dots are joined in a smooth curve using a free hand and shaded.
- The cross section should have a title, vertical scale, horizontal scale, vertical exaggeration should be calculated and the features labeled.

Illustration



A Cross Section along A B Showing hill, rivers and road.



Amplitude of the above cross section is $900 - 700 = 200$ meters.

VERTICAL EXAGGERATION

The vertical exaggeration is the number of times that the horizontal scale has been enlarged to obtain the vertical scale of the section.

$$VE = \frac{\text{Vertical scale}}{\text{Horizontal scale}}$$

For the above cross section

1cm represents 100 meters but 1 meter = 100cm

$$\text{Therefore} = \frac{1\text{cm rep. } 100 \times 100}{1:50000}$$

$$= \frac{1\text{cm} : 10000}{1 : 50000}$$

$$= \frac{1}{10000} \times \frac{1}{50000}$$

$$= \frac{1}{10000} \times \frac{50000}{1}$$

$$VE = 5$$

INTERVISIBILITY

To know from a map, if one place can be seen from another is called intervisibility. This can be determined using the following methods.

- (a) The first way of determining intervisibility is drawing a cross section. In between the cross section, if the whole ground section falls on or below the straight line, the two places are intervisible. Example is the above cross section.

However, if any part of the ground surface projects above the straight line then the two places are not intervisible.

- (b) The intervisibility can also be determined by on reading the contours and spot heights on the map. It is faster than the cross section procedure.

Join the two points with a pencil line and closely read the contours to determine intervisibility.

IDENTIFYING RELATIONSHIPS

A. RELATIONSHIP BETWEEN DRAINAGE AND RELIEF

- Water shade is found in uplands/highlands
- Streams flow from high altitude to low altitude.
- Basins and low lands are occupied by permanent swamps, seasonal swamps and lakes etc.
- Highlands are well drained
- while low lands are poorly drained or water logged.
- Rivers and streams tends to meander in flat areas.

NB. remember to give name of places you are describing.

B. RELATIONSHIP BETWEEN RELIEF AND COMMUNICATION

- Roads and railway develop on gentle relief because of easy in construction. Give example always
- Valleys discourage development of infrastructures because of flooding possibilities.
- Steep slopes are remote i.e. discourage road and railway constructions.

C. RELATIONSHIP BETWEEN TRANSPORT / COMMUNICATION AND SETTLEMENT

- People settle along roads because roads facilitate movement of people and goods. This type of settlement is known as linear settlement.
- Remote areas discourage settlement due to inaccessibility poor services.
- Areas with very many roads develop nuclear settlement.

RELATIONSHIP BETWEEN DRAINAGE AND COMMUNICATION / TRANSPORT

- Roads cross rivers and streams using culvert and bridges.

- Roads, motorable tracks and railway cross swamps by use of bridges and culverts.
- Swampy areas discourage transport development.
- Ferries are used in openwater as means of transport.
- Foot paths cross seasonal swamps.

IDENTIFICATION OF ECONOMIC ACTIVITIES ON MAPS

For correct identification of economic activities. Check the symbols on the map and then refer to those according to the legend.

A. Under Agriculture - we have:

1. Plantation farming: Indicated by presence of green stripes.
2. Livestock farming: Grazing field, labelled, look for cattle dips, veterinary clinics etc
3. Subsistence farming: Lack of communication, absence of large farms, rural settlement.
4. Commercial farming: Presence of plantation, processing factories, cooperatives, railways in plantations etc.

Others

B. Fishing - is indicated by presence of landing sites, roads ending by the lakes or rivers, presence of permanent swamps etc.

C. Mining - Presence of iron working, these are indicated on the legend (key)

D. Industrialization - Indicated by factories presence, ginnery etc.

E. Transport - Presence of roads, railways, steamer, ferry services as well as air dromes or air ports.

F. Tourism - Presence of antiquity or historical sites, rest houses or hotels, game reserves, national parks, zoos etc.

G. Forestry - Is indicated by presence of planted and natural forests labeled as CFR (Central Forest Reserves).

H. Wild life conservation

- Presence of animals in zoos, game reserves, wild animals, grazing aggressively etc.
- Usually labeled as hunting areas on map extracts.

I. For Art and craft, look at clay works, papyrus swamps etc.

NOTE: students are advised not to confuse schools, hospitals, administrative headquarters etc. as economic activities. Besides, presence of dam may not necessarily reflect generation of Hydro Electric power.

IDENTIFYING PROBLEMS FACED ON MAPS

Use the following clues

1. Deforestation - Presence of huge population and lack of vegetation.
2. Remoteness - Fewer trunk roads, hilly
- terrain (relief) scattered settlements, thick vegetation.
3. Flooding - Presence of contours swinging haphazardly with a lot of seasonal swamps.
4. Poor infrastructures: - Presence of hilly relief with no meaningful infrastructures like roads, railway etc.
5. Poor climate - Dry climate is indicated by presence of bare grounds dominated by scrubs.
6. Shortage of social services – Presence of many settlements, lack of schools, hospitals, dispensaries, boreholes etc.
7. Pests and diseases – Presence of breeding grounds like heavy forests, swamps etc.

GRADED MAP WORK EXERCISES

1. COMPULSORY QUESTION: MAPWORK (20 MARKS)

Answer all parts of this question.

Study the 1:50,000 UGANDA: LAKE NAKIVALI map extract, part of sheet 86/4 series Y732, Edition 4-U.S.D and answer the questions that follow:

- (a) i) State the grid reference of the borehole north of Nyamiyongo. (01 marks)
.....
- ii) Identify the man-made feature found at grid reference 611166. (01 marks)
.....
- (b) Measure and state the distance (in kilometres) of the dry weather road from Musirira road junction (grid reference 610082) to Ijumuriro road junction (grid reference 736109). (02 marks)
.....
.....
- (c) Draw a cross section along Northing 02 between grid references 600020 and 670020 and on it, mark and name:
- (i) gentle slope,
 - (ii) any two rivers,
 - (iii) dry weather road,
 - (iv) broad valley,
 - (v) settlements. (08 marks)
- (d) Describe the relationship between relief and communication in the area shown on the map.

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2. Study the 1:50,000 (UGANDA) NYARWEYO Map extract, part of sheet 48/4, Series Y732, Edition 1-U.S.D and answer the questions that follow:

- (a) i) State the grid reference of the borehole south of Kigudura. (01 mark)
.....
- ii) Name the relief feature found at grid reference 174 328. (01 mark)
.....
- (b) What is the bearing of Luhunga trigonometrical station? (Grid reference 081358) from Kichobino grid reference 164262? (02 marks)

- (c) Draw a cross-section from grid reference 090350 and 150350 and on it mark and name:

- | | | |
|-------|---------------------|------------|
| (i) | a dry weather road, | (01 mark) |
| (ii) | river Mugoro, | (01 mark) |
| (iii) | Count boundary, | (01 mark) |
| (iv) | swamp, | (01 mark) |
| (v) | forests. | (02 marks) |

- (d) Describe the:

- (i) relief of the area, (03 marks)
.....
.....
.....
.....
.....

- (ii) relationship between relief and vegetation of the area show on the map. (06 marks)

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3. Study the 1:50000 (KAKUTO) Map and answer the following questions:

(a) State the grid reference of;

- (i) Kyagago road junction. (01 mark)

.....

- (ii) Culvert at Lukoma (01 mark)

.....

(b) Identify the features found at the following references.

- (i) 288959 (01 mark)

.....

- (ii) 232916 (01 mark)

.....

(c) Calculate the;

- (i) area of the plantation at Kakuto. (01 mark)

.....

.....

.....

- (ii) amplitude of relief of the area shown on the map extract. (01 mark)

.....

.....

.....

- (iii) vertical interval (01 mark)

.....

.....

- (d) Draw a cross section of the area along easting 18 between Northing 93 to 00 and on it mark and name:
- (i) streams,
 - (ii) boundary line,
 - (iii) foot path,
 - (iv) settlements,
 - (v) a slope, (07 marks)
- (e) Explain the relationship between relief and land use in the area shown on the map extract. (06 marks)

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4. Study the EAST AFRICA 1:50,000 (Uganda) ALOI Map extract, part of sheet 33/1, series Y732, Edition 1-U.S.D and answer the questions that follow.

- (a) (i) Name the man-made feature found at grid-reference 219506. (01 mark)

.....

- (ii) State the grid reference of the bridge on River Moroto. (01 mark)

.....

- (b) Determine the bearing of Lira-Soroti level-crossing (Grid ref. 110487) from the Mission East of Anyanga (grid ref. 220580). (02 marks)

(c) Draw a cross section from grid ref097560 and 171550 and on it mark and name:

- (i) Ongom River/Kai river,
- (ii) a hill,
- (iii) settlements,
- (iv) country boundary,
- (v) all weather loose-surface road. (07 marks)

(d) Describe the:

- (i) relief of the area, (03 marks)

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- (ii) relationship between relief and drainage. (06 marks)

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PHOTOGRAPHY INTERPRETATION

This is the identification and interpretation of geographical aspects from a photograph. The study of photographs plays an important role in summarizing geographical information.

When interpreting photographs, relationships between physical and human features must be put into consideration.

Parts of a photograph

Photographs are divided into three major parts:

- i) **Fore ground:** This is the part of the photo that is nearest to the cameraman. Features in this parts of the pho appear to be larger in size than features in other parts of the photo.
- ii) **Middle ground:** This is the part which is in the middle of the photograph. Features in this part appear to be large enough compared to those in the back ground.
- iii) **Background:** This is the part of the photo which is furthest from the cameraman. It's the part of the photo that contains the skyline or the horizon. The features here tend to be smaller than their real size. Some features here might even be invisible.

BACK GROUND
MIDDLE GROUND
FORE GROUND

N.B: When interpreting a photograph, the three major parts are further subdivided into nine parts.

LEFT BACK GROUND	MIDDLE BACK GROUND	RIGHT BACK GROUND
LEFT MIDDLE GROUND	MIDDLE MIDDLE GROUND	RIGHT MIDDLE GROUND
LEFT FORE GROUND	MIDDLE FORE GROUND	RIGHT FORE GROUND

Types of photographs

- a) **Ground horizontal photograph:** this is the type of photograph taken when the cameraman is standing at the same level with the feature of interest. These photographs will always be more detailed, mainly show the front part of the objects, cover a small area as compared to other types of photographs and objects appear in their right shapes and sizes.

1.1: Refrigerated trucks being loaded with fish at Kasenyi Landing site on the shores of Lake Victoria.

1.2: Mombasa town with artistic impression of ivory tusks.

- b) **Ground oblique photograph/Terrestrial photograph:** this is the type of photograph taken when the cameraman is standing on a raised ground like on a hill top, sitting on a tree branch or even from the top floor of a raised building. The camera is tilted at an angle.

Such photos show features which seem to be below the cameraman, they also show the tops of the objects, also show the horizon in the back ground of the photograph and the size and heights of objects are greatly reduced.

1.3: A nucleated settlement on a hillside in Ntungamo district, Western Uganda.

1.4: Open cast mining at Kasokoso in Kireka.

- c) **Aerial photographs:** these photographs are taken from a flying aircraft that is above the object or feature of interest. They cover a very wide area, they show the tops of features, objects are very small, objects appears to be below the cameraman and they don't show the skyline/horizon.

Oblique aerial view of Bujagali power station.



Note the small size of features e.g. the vehicles parked in the middle ground.

Important aspects of photograph interpretation

1. Identification of relief features/photographic features

- These include highlands/uplands, hills, steep slopes, gentle slopes, lowlands and valleys.

2. Describing types of vegetation

- Vegetation types includes trees, grass, shrubs, thickets, papyrus and scrub.
- Do not say savannah or equatorial vegetation.

3. Describing land uses on a photograph

Summary for identifying economic activity/Land uses

Economic activity	Evidence on photographs
-------------------	-------------------------

Agriculture (a) Plantation agriculture (b) Livestock farming (c) Subsistence farming	Extensive stretch of the same crop (often reaching horizon). Be keen to identify correctly crops such as tea, coffee, sugar cane etc. - Pastoralism (presence of many animals grazing aggressively, animals struggling at few water points etc. - Ranching (Animals in paddocks are seen, animals shed constructed etc. - Dairy farming – presence of exotic Fresian animals, presence of milking parlor, animal shade, feeding trough etc. - Evidences are presence of huts, animal kraals, use of simple tools, sometimes evidences of poverty, growing crops on small scale usually mixed cropping.
Fishing	- Presence of fish processing plants - Marketing fish - Fishermen catching fish using nets, basket trawling. - Using simple canoes etc.
Lumbering	- People pit sawing - Use of electrified saws - Lorries transporting logs. - Presence of people felling trees. - Evidence of abandoned logs etc.
Trade	- Evidence of people selling in markets. - Selling items along road e.g. fruits, Irish potatoes. - Display of goods for auctions
Mining	- Workers dressed in protective gears e.g. helmet over all - Presence of derricks - Excavation of ground for minerals - Presence of power transmission lines
Quarrying	- Breaking the stones - Loading stones into trucks - Usually done by unskilled labour-identify them - Pilling of aggregates ready for sale etc.
Transport	- Presence of people carrying goods (human portorage) - Presence of trucks, railways, buses etc. transporting cargo and passengers. - Presence of ferry and motorized boats transporting people and goods (applicable to water transport). - Airport evidenced with well-developed handling facilities, presence of plans etc.
Tourism	Presence of - Well managed rest houses / hotels - People enjoying mountain climbing - Trekking into forest with cameras - People watching wild game in reserves and at balcony of lodges. - Presence of endangered animal species e.g. chimpanzees, while Rhino (wild life conservation) etc.
Industrialization	-presence of large factories -evidence of fumes from chimneys -workers packing manufactured goods etc.

N.B There are more economic activities do not restrict yourself to the above. It is always important to be keen in observing and interpreting the activities.

Factors influencing land-use types in an area.

- When the influence is positive, use statements like attracted, favoured, encouraged.
- When the influence is negative, use statements like discouraged, limited.

E.g. Hilly areas in the background have discouraged settlement due to occurrence of landslides.

- The swampy areas in the foreground has discouraged settlement because of periodic flooding
- The gentle slope in the middle ground has favoured construction of settlement since it does not require a lot of leveling.

Identification of problems faced by people living in the area.

- Problems should be supported by evidence from the photograph.

E.g. there is soil erosion due to the presence of steep slopes in the background of the photograph.

N.B: Satellite photographs: These are vertical aerial photographs that are taken in the air with the use of satellites. They cover a much wider area and are very difficult to interpret. The roof tops appear white due to reflection of camera light while forests and water bodies appear black due to absorption of camera light. Objects appear to be very small, far away and below the cameraman. They don't show the skyline/horizon



A guide to answering photograph interpretation questions



- a) i) State the type of photograph shown.
ii) Identify the activity taking place in the photograph.
- b) With evidence from the photograph, describe the factors that favour the activity identified in (ii) above.
- c) i) Explain the importance/benefits of the activity to the people living in the area.
ii) Outline the effects of the activity on the environment.
- d) Giving reasons for your answer, identify an area in East Africa where the photograph could have been taken.

Expected answer

- a) i) Type of photograph is Ground horizontal photograph/close-up photograph because;
 - ✓ Objects appear in their right shape and sizes.
 - ✓ it covers a small area.
 - ✓ shows the horizon/skyline.
ii) Activity is Tea picking/tea harvesting.
N.B: the answer you give must be that activity people are doing at that material moment. Therefore one might consider the activity to be **tea growing** but that is **irrelevant** but what taking place at this time is **tea picking**.
- b) This question has 3 major components that one must reflect in the answer
Component 1: Identify the major factor that favours the activity.
Component 2: Describe the factor by using an adjective or qualifier e.g large, Ready Wide and Favourable.

Component 3: Give evidence from the photograph which supports the factor described.

Below is an example showing how factors are to describe the points.

- Availability of **skilled** labour to work provided by the men in the middle ground.
 - Availability of **adequate** capital for investment e.g buying the baskets used for harvesting tea.
 - Presence of **extensive/vast** land in the fore, middle and back ground which allows large scale growing of tea.
 - The presence of **gently sloping** landscape in the fore and middle ground which favours use of tractors.
 - The availability of **heavy** rainfall which favours luxuriant growth of quality tea yields.
 - The existence of **well drained fertile alluvial** soils which favours luxuriant growth of tea yields
 - The presence of **warm** temperatures which allows fast growth and maturity of high quality tea.
- c) This question requires one to give the expected contribution which benefit the ordinary person.
- The plantation employs many people who earn income leading to improved standards of living.
 - Farmers in the area acquire modern skills of farming as the estate educates them.
 - It leads to development of roads leading to the plantation which improves transport in the area.
 - The estate provides ready market for the local people when they sell their tea to the plantation under the out growers scheme.
 - Tea growing leads to development of urban centers near the plantation hence provide social services.
 - It leads to development of tea processing industries which provide more employment opportunities to the people.
 - The exports have earned government foreign exchange used for setting up social infrastructures like roads.
 - The government earns revenue through taxing tea growers which is used to set up roads.
- d) **This question doesn't require listing points but they should have meaning explanations. These are usually negative impacts.**
- ❖ The activity leads to destruction of vegetation (deforestation) as trees are cleared for tea planting.
 - ❖ Tea curing leads to air pollution by releasing dangerous fumes in the atmosphere.
 - ❖ It leads to loss of bio-diversity as habitats for wildlife are destroyed through deforestation.

- ❖ There is loss of natural beauty of landscape as the forests are cleared to create land for tea planting.
 - ❖ The reduction of forest cover through tree clearance leads to global warming.
 - ❖ Application of fertilizers pollutes the water bodies when it rains and also damages the soil ecosystem.
 - ❖ Monoculture leads to loss of soil fertility and hence soil exhaustion.
- e) **The area must not be geographically too large for example, Western Uganda, Buganda or Tanzania. It should be reduced to at least a district, town or country e.g;**
- In Uganda, likely areas includes; Kasaku, Kakonde, Bushenyi, Kasese, Fort portal, Nakigalala.
- In Kenya, area include; Kericho, Kakamega, Muranga and Limuru.
- In Tanzania, area include; Mponde, Iringa, Usambara mountains, Mbeya and Southern highlands

Reasons:

1. Areas have fertile alluvial soils that supports tea growing.
2. Areas have gentle slopes that allows the establishment of plantation farms.
3. Areas have extensive land and small population which allows establishment of plantations.
- 4.the area is well known for tea growing.

HOW TO DRAW LANDSCAPE SKETCH FROM A PHOTOGRAPH

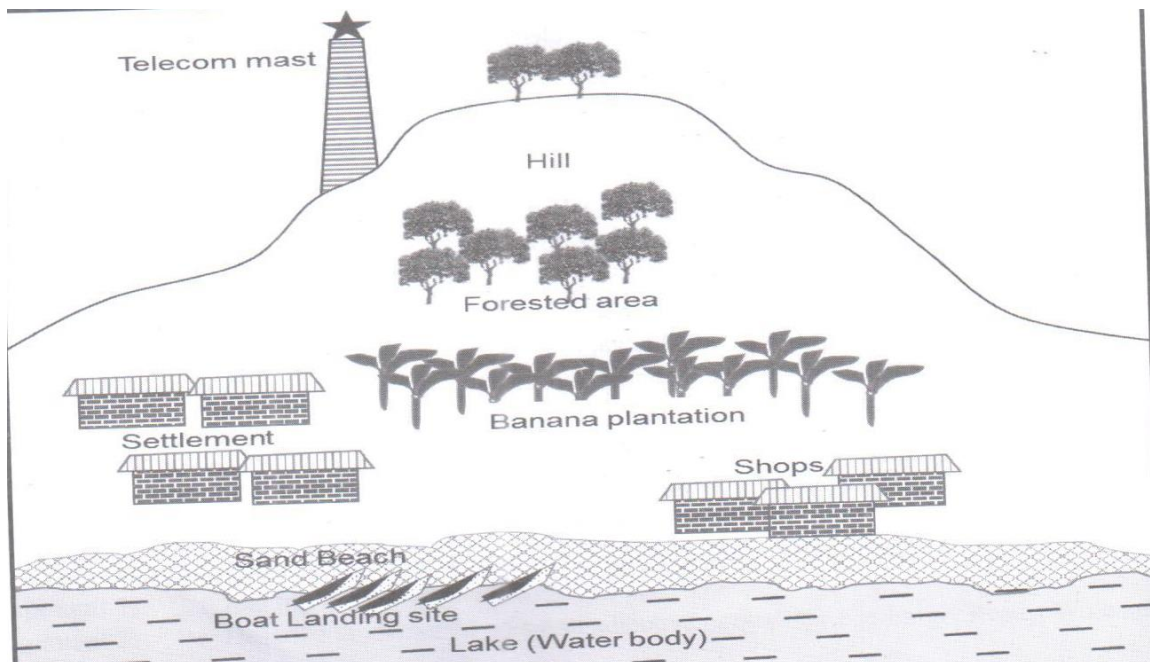
- Measure the dimensions (length and width) of the photograph and draw a frame of the sketch.
- Sketch the real appearance of the features in their right positions as they appear.
- A landscape sketch must have a title and must be accurate.
- A key is necessary but labeling/markings on the sketch is the best alternative.

Demonstration test: Using the photo provided below, draw a landscape sketch and on it, mark and label;

- i) Physical features, ii) Human features, iii) Water body.



A landscape sketch of the photograph showing physical and man-made features



REVISION EXERCISE

Study **photograph A** and use it to answer the questions that follow.



- a) What type of photograph is this? (give a reason for your answer)
- b) Name any three types of vegetation show in the photograph.
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- c) Identify the activity being carried out in the foreground of the photograph.
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- d) Explain the factors which have favoured the activity identified in (c) above.
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- e) Giving reasons for your answer, suggest an area in East Africa where this photograph could have been taken.
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Study photograph B and answer the questions that follow.



- a) Identify the crop being transported in the middle ground of the photograph
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- b) Describe the conditions which have favoured the growing of the crop identified in (a) above.
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- c) Explain the importance of the activity to the people living in the area.
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- d) Giving reasons for your answer, suggest an area in East Africa where this photograph could have been taken.

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Study the **photograph C** and answer the questions that follows



- a) Identify the economic activity taking place in the photograph.
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b) Explain the problems faced by the people carrying out the activity named in (a) above

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- c) Outline the benefits of the activity to the people living in the area shown in the photograph.

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- d) Suggest one area in East Africa where this photograph could have been taken.

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Study **photograph D** and answer the questions that follow;



a) Draw a landscape sketch of the area shown on the photograph and on it mark and name:

- i) physical features
- ii) Man-made features

b) Giving reasons for your answer;

- i) Name the type of photograph

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- ii) Identify the land-use type in the middle ground of the photograph.

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c) Explain the factors which have favoured the land-use type identified in (a) above

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d) Outline the problems faced by the people carrying out the land-use identified in (a) above.

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e) Suggest possible solutions to the above mentioned problems.

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f) Giving reasons for your answer, suggest one area in East Africa where this photograph could have been taken.

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FIELDWORK GUIDE

What is field work?.

It is practical part of Geography done outside classroom boundaries.involves use of Geographical skills such observation,recording,analyzing and interpretation of geographical phenomena as they are in the field.

1.PRE FIELD PREPARATION

For any field work study to be undertaken preparation should be taken seriously and the following is crucial:

1.Need for adequate planning

The pre-field work preparation in the organisation of fieldwork is very important. The success and failure of the fieldwork study will largely depend on how well pre-field preparations were made.(Similar to success of a party or wedding feast which depends on how well wedding meetings are conducted)

Thus,both technical and organisational decisions should be considered.

Technical Decisions

These include the following:

- Identifying the topic to work on.
- Setting up the objectives of the study.
- Identifying the area where to carry out fieldwork.
- Conducting a pilot study of the fieldwork area.
- Determining methods to be used in carrying out fieldwork.
- Determining the equipment(s) to be used in the field.
- Seeking permission to carry out fieldwork.

Organisational Decisions

These include the following:

- Determining the route plan.

- Estimating of time required for the fieldwork.
- Deciding on what activities to carry out, where and how.
- Estimating how much time to spend on each activity in the field.
- Marking particular areas of interest.
- Determining what instructions to give to students.
- Identifying the essential equipment(s) needed for fieldwork.
- Deciding the date to carry out the fieldwork.

2. EXCURSION

This is the actual field work. It involves actual data collection using the various method of research.

In excursion ,incase the class is big,it may bre divided into groups who are assigned tasks to do

FOLLOW UP ACTIVITIES

Follow up activities (analysing data and presenting results of fieldwork)

This is done after the fieldwork.The main purpose of the follow up exercise is to re-organise and discuss results, concerning the topic and the objectives of fieldwork as spelt out from the beginning.

Follow up activities may involve the following;

- Students discuss and compare data (is sharing information through group discussion).
- Polish up diagrams and sketches drawn during the study.
- Organize the data/findings, analyses and interprete the data and show the different geographical relationships studied from the field.
- Comparison of data from different groups to find variations i.e what some group skipped and include them to come up with comprehensive work.
- Drawing conclusions. This may account for the relationships established from the field.
- After compiling each group report their findings (data presentation).
- Students write/compilea report on the entire fieldwork exercise.
- Giving recommendations for instance suggesting solutions to problems facing land use in the area studied.
- Presenting the compiled report to various stake holders e.g. LCs,teachers etc.

Report writing (this report is based on field experiences and data (information) gathered according to the objectives)

The report should include the following sections:

- The topic of study.
- The objectives of the study.
- Methods used while carrying out fieldwork.
- The findings obtained as per objective and appropriate sketches and diagrams that are used to illustrate information. Findings could be both positive and negative.
- Problems faced while carrying out fieldwork.
- Conclusion. Draw meaningful conclusions and recommendations, basing on the topic and findings obtained in the fieldwork study.

METHODS OF DATA COLLECTION

These are techniques used to gather information from the field.

They include;

- Observation
- Recording
- Interview schedules
- Questionnaires
- Measurement
- Sampling
- Map orientation

OBSERVATION

This involves the use of naked eyes to see or identify geographical phenomena from the field. It is one of the cheapest method of data collection. A student is expected to give the kind of information gathered through observation so as to score marks. e.g. in study of market a student can see the types of goods sold, number of people involved in activities etc.

Advantages

- It is fast to use it
- It is used to get first-hand information.
- It is cheaper compared to other methods of study.
- The method overcomes the problem of language barrier
- It may not require contact with the respondents.

Disadvantages

- Some features may be obstructed.
- It may be affected by bad weather i.e. poor visibility during fog, rain, heavy wind etc.
- Some information are difficult to observe such as historical background, income, amount of sales, level of income, etc.
- Important information may be left out when the student lacks proper observation skills.
- Certain information may be observed and misinterpreted.
- It requires one physical presence yet some places are not accessible due to waterfalls, flooding etc.

- Information are largely subjective depending on researchers' preference

INTERVIEW.

This method involves getting information by verbally asking questions to people in the field(respondents) and they answer the questions.it is used to find information that cannot be observed such as organizational structure, historical back ground of a market, factors for growth of a given phenomenon etc.

Example . For field work on market.

Interviewer. When was the market started?

Interviewee. The market was started in 1986 after refugees came from Exile.

Interviewer. Has the location of the market changed?

Interviewee.no it has not changed.

Interviewer. What are the prices of the items?

Interviewee. Sugar is 3400/=, a bar of soap is 2000/=, packet of salt is 1000 etc.

Advantages.

- Suitable for getting information that cannot be observed.
- It is fast and builds on relationship between researcher and respondents
- Fast hand information is obtained hence accurate.
- It is easy to get supplementary answers when those given are inadequate.
- It is easy to detect individual feelings from the interview.
- It is fast method of tracking information.
- It covers both literate and the illiterate.
- The blind also benefits from interview schedules.

Disadvantages

- Language barrier
- Some respondents are no patient to give such information.
- It is time consuming when many people may have to be interviewed.
- There is tendency of biasness and exaggeration.
- Some people may feel reluctant to give certain information.

RECORDING.

This is writing down the information got from the field by use of pen paper ,pencil. All the information got by use of various methods were written down.

Recording may involve the use of sketch maps, diagrams tables.

Advantages.

- The information written down is not forgotten.
- The information written down is used for future reference.

Disadvantages

- Problem of quick respondents when telling the information hence, failure to write down.
- Heavy rainfall affected recording processes as our papers were washed by rain.

QUESTIONNAIRES.

This involves writing down questions related to the topic of study and objectives. Then the questions are sent to respondents in advance so as to give required at their free time. The questionnaires may be sent through mail, post or hand delivered to the respondents. The questionnaires should have open ended questions

e.g questionnaires for market field work

Qn.when was Afoji market started?

.....

Qn.what are the major economic activities taking place in the market?

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.....

Advantages.

- Suitable for busy people
- Eliminates researcher from the site ie does not require presence.
- It saves time as the questionnaires can be administered to 20 people at a time
- Can be used to collect information from distant people. Be got on spot.

Disadvantages.

- This method only apply to the literate members of the society.
- Few people may be willing to give their time to answer the questionnaires.
- It is time consuming in formulation of questionnaires.
- It is expensive method as it requires stationery,secretarial services etc
- The required information may not be got immediately.
- In case of mistakes, it may be difficult to correct in absence of interviewee.

Measurements

This is finding distances, volumes, quantities by use of calibrated devices such as tape measure, meter rules,jerrycans,weighing scales etc.it is used to determine distances covered,volumes,depth,quantity etc.

Advantages.

- It is easy to obtain accurate information.
- It is an efficient way of getting information.

- Develops skills of measurements

Disadvantages

- It is expensive method as it requires several instruments.
- It is time consuming.
- Physical obstacles prevent the use of measurements e.g rocks, thick forests
- The instruments used may be faulty.

Field Sketching

It is a technique of getting information from the field by a way of drawing sketch maps, transects, panoramas. It requires pencils, paper, compass, direction etc.

Panorama

This is drawing sketches of geographical phenomena while standing at a view point. It shows both man-made and physical features e.g. relief, landforms, settlements, vegetations and other land uses.

Transect

Transect is like cross section drawn in map reading. It is drawn along the area studied in the field work.

It should have the following;

- Must have a frame
- Have direction but not compass point i.e. East to west, north to south, THE CROSS SECTION OF Abi ZARDI from Rimgbwea hill in the south west to Aia Stream in the North East showing selected features..
- Should be shaded like cross section in map work
- Should have key.
- Etc.

Geographical significance of fieldwork.

It is important that the field study establish relationship between

- Physical and physical features. e.g. influence of relief on drainage. e.g. existence of lea stream is due to lea valley, Influence of drainage on vegetation such as swamp vegetation along the Nile is due to water logging.
- Physical to human feature. e.g. influence of rock outcrop on quarrying like existence of rock outcrop at Olobo hill favours quarrying, existence of river Nile favours fishing activities etc.
- Human to human. Like the influence of transport on trade. The existence of Afoji market is due to presence of Moyo –Keji Keji all-weather road. The existence of Laropi market is due to dense population in the area.

The findings or results may also help us to understand the geography of the area in the following ways:

- Update the information about the area of study (current situation).
- Highlight the new problems facing the people in the area (threats).
- Shows new solutions and prospects of developing the area (opportunities).

- Help in the understanding of geographical relationship existing in the area.

FIELDWORK SAMPLE TOPICS.

State topics for field study should fulfill the following conditions

- What was studied and where the actual study was conducted.
- The topic must be geographical and should show a relationship

Sample topics

- Influence of relief on land use around District farm institute in Moyo District.
- Influence of physical features on the growth and development of Forohwa landing site in Moyo District.
- The study of relationship between physical features and land use around St. Andrew's College in Moyo District
- The growth and development of Laropi market in Moyo district and its influence on the surrounding.

STATING FIELDWORK OBJECTIVES.

The fieldwork objectives should have the following features.

- Must be specific and measurable
- Must be related and relevant to the topic.
- Should not repeat the content of the topic
- Avoid verbs like to understand, appreciate, see admire etc.
- Remember not to explain the objectives. Simply state them.

FIELD WORK ON A FARM

(A)Topic of study: The growth and development of ABI ZARDI in Manibe,Sub county Ayivu County , Arua District.

(B)Objectives of the study.

1. To find the location of Abi ZARDI
2. To find the historical background of Abi ZARDI
3. To identify the types of soils and relief of Abi ZARDI
4. To identify the different agriculture Units in Abi ZARDI
5. To establish the factors for the location and growth of the farm
6. To find out the influence of Abi farm on the surrounding areas.
7. To establish the problems facing Abi ZARDI
8. To find out the steps being taken to solve the problems faces by Abi ZARDI

(C): Factors that favoured location and growth of Abi ZARDI.

- Availability of large stance of land along Arua Rhino Camp road favoured the establishment of the farm
- Dedicated leadership and staff employed by the farm institute favoured growth of the farm.

- Abundance of semi skilled and skilled local labour from the neighboring communities surrounding the institute Eg from Oboopi and Adroi clans
- Gently sloping terrain of the farm land from Rimgbwea hill which is ideal for Mechanization

Availability of electricity (Generator and WENRECO

- Reliable supply of water (water pump and national water) used for irrigation
- Occasionally reliable rainfall of above 800 mm per annum favoured crop growing.
- Location of Abi close to the border with Southern Sudan and democratic republic of Congo. This creates more market for farm products
- Availability of technical expertise skilled personnel such as researchers
- Adequate funding from the government to the institute by donating cars, paying salaries, facilitating seminars etc.
- Availability of information Communication technology services such as internet led to more research

(d): Benefits of the farm to the surrounding people/surrounding areas.

- Job creation through provision of employment opportunities to the locals from Oboopi ,Adroi etc.
- Avenue for marketing of their products
- Easy access to new technologies and new crop varieties by the communities
- Free transport services for locals coming to and fro Arua town due to many service vans for the farm.
- The farm offers extensive grazing land for their animals for the surrounding communities
- Use farm land for recreation services.
- Local farmers are able to access free training on modern farming and fish farming from the institute.
- Fetch water, firewood and harvest thatching grass from farm land .

(e): Findings of the study

Physical to physical relationship.

- The presence of Aia valley in the north east led to Aia stream which provides water for fish pond and drinking from the well.
- The well drained soils on slopes of Rimgbwea hill favoured growth of pasture for the animals.

Physical to human relationship.

- The constant water supply from Aia stream provides water for the fish pond.

- The gentle slopes from Rimgbwea hill north wards favoured mechanization of the farm.
- The well drained soils in the north of Arua Rhino camp road favoured crop growing and orchards.
- The gentle slope favoured construction of Arua Rhino camp road which is used to transport farm produce.
- The presence of Rimgbwea hill in the south west favoured the construction of water tank used as reservoir for the farm.

Human to Human relationship.

- The presence of Arua Rhino camp road favoured the transportation of farm produce.
- The presence of Abi ZARDI has attracted dense settlement by providing employments and food items.
- The presence of Abi ZARDI has led to establishment of accommodation and conference facilities for those coming from distant areas.

EXAMPLE OF FIELD EXCURSION

THE GROWTH AND DEVELOPMENT OF LAROPI MARKET IN MOYO DISTRICT AND ITS INFLUENCE ON THE SARROUNDING

Objectives

These are exact statements of the activity and what is supposed to be observed.

The objectives of the study are as follows:

- To find the location of Laropi market.
- To establish the historical and physical background of the market.
- To identify the type of commodities sold in the market
- To identify problems facing the market in the contemporary period
- To find out future prospects/plans of the market

GROUP 1

- Find where you are standing-refer to the survey map. In terms of latitude and longitude
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- Where is the market located?.

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District.....county.....
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.....,sub county parish..... village.....
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.....include the distance of the market from the nearest min town.

- Find out the historical background of the market.....
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- Where was the original site of the market? Has it changed?
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- Draw a sketch map of the site of the market.

- Find out the activities in the market e.g. bicycle repairing, food vendors etc
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- Find out the type of goods sold, quantity and their origin.
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- How are some of the commodities in the market processed?
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- When are the commodities abundant and why?

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GROUP II

- Find the reasons for the establishment of the market here.

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- What is the influence of the market to the surrounding? e.g. attracted settlements,
building lodges, construction of video halls etc.

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- Establish the physical background of the market.i.e the influence of physical factors to
land use around the market. Look at factors like climate, relief ,soil, vegetation etc.

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- What are the factors for the growth and development of the market?

E.g.reasonablehinterland, land for expansion, security, availability of items etc.

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- What are the government plans about the market/future prospects?.

GROUP III

1. Is the location of the market suitable?

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2. Discuss the problems of its growth like: negative culture to development, limited space for expansion, accident along the road,theft,capital short fall etc.

The above problems should be specific to a market and with evidence. Interview people concerned to get real issues on ground.

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3. State the solutions to the problems enumerated.

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4. Look at security matters in the market

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What about government involvement

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5. Are the customers sufficient to buy the goods

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6. What sanitary problems are experienced? Like toilet facilities, Dust bin ,Safety of drinking waterPollution etc.

7. Attempts to solve these problems.....

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Give conclusions and recommendations in light of success of the field work

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Common qualifiers used when describing geographical factors/phenomena

S/N	Factor	suitable adjective to use	Avoid using
01	Labour	• Skilled • Cheap • Abundant • Inadequate Supply • Shortage Of Labour	• Enough • Good/Bad Labour • Poor Labour • Lack Of Labour
02	Market	➤ Ready ➤ Reliable ➤ Large/Small Market Size	• Good Market • Poor Market • Low Market
03	Raw Materials	❖ Wide Variety ❖ Abundant Supply ❖ Adequate/Inadequate ❖ Regular Supply	• Enough Raw Materials • Good/Poor
04	Capital	◇ Adequate/Inadequate ◇ Reliable Source ◇ Readily Available ◇ Sufficient	◇ High/ Low Capital ◇ Enough Capital ◇ Good/Poor Capital
05	Land	• Extensive • Vast • Large Tracts Of Land	• Big Land • Enough Land • Good/ Bad Land
06	Transport	○ Well Developed ○ Efficient ○ Flexible ○ Reliable	○ Enough Transport ○ Poor Transport ○ Good Transport
07	Energy/Power Sources	○ Wide Variety/Large Supply ○ Cheap Source ○ Readily Available ○ Adequate/Inadequate	○ Good Supply ○ Poor ○ Little Supply
08	Government Policy	❖ Supportive/Positive ❖ Favourable	○ Bad
09	Relief	❖ Gently Sloping ❖ Steep/Rugged/Hilly	❖ Good/Enough Relief
10	Technology	◇ Advanced/Modern ◇ Cheap ◇ Appropriate/Inappropriate	◇ Good/Bad ◇ Enough

11	Rainfall	• Above 1500mm Very Heavy • 1000-1500mm Heavy • 500-1000mm Moderate • 250-500 Low Rainfall Total • <250 Very Low	• Much Rainfall • Little Rainfall • Enough Rainfall
12	Temperature	• Above 30°C Very Hot • 20-29 Hot • 10-19 Warm • 0-9 Cold/Very Cold • Below 0 Cold/Very Cold	• Good/Bad Temperature
13	Soil	• Deep • Well Drained • Acidic/Volcanic/Loam/Clay	• Good Soil • Bad Soil

About the author

Simon Waigo holds MAED Leadership from Walsh University (USA), Bachelor of Education from Makerere University and Diploma in Education (secondary) from Kyambogo University. He has taught geography for 18 years in secondary schools. He is also the Principal of St. Andrew's College Moyo.

