WAKISSHA JOINT MOCK EXAMINATIONS
MARKING GUIDE
Uganda Advanced Certificate of Education
UACE August
PHYSICAL GEOGRAPHY P250/1

Examiners are guided by the following standards.
Marking is by impression unless otherwise stated.
For purposes of impression marking please consider the following awards.

00 – completely irrelevant.	**15 – 17 Good but not outstanding.**
1 – 8 Rudimentary facts / scattered facts.	**18 – 20 V. Good answer.**
9 – 11 'O' level answer.	**21 ++ Excellent answer.**
12 – 14 Basic 'A' level answer.	

SECTION A (MAP WORK)

1. (a) (i) Manmade feature at grid reference 308542 is other trigometrical station. **(1 mark)**

(ii) GR of the Island at Habukara is 248558 **(1 mark)**

(b) (i) Height of the hill top at Hamushanje is 7501 feet **(02 marks)**

(ii) Vertical interval
VI = Difference between two contours At Kashenyi 6500ft - 6400ft
VI = 100ft **(02 marks)**

(iii) Functions of Kabale town
- Transport center because of roads
- Industrial center because of soap and floor factory.
- Educational center because of Rutooma technical center
- Administrative center because of ministry of works, prison and police
- Residential center because of the hotels
- Burial center because of the cemetery

Any 3x1 (03 marks)

(c) (i) **A REDUCED SKETCH MAP OF KABALE BY 1/3 TIMES SHOWING LAKE BUNYOYI, RELIEF REGIONS, BOUNDARY TYPES AND KABALE TOWN.**

KEY: International boundary; County / Municipality boundary; Sub-County boundary

RELIEF REGIO
Upland/hilly area
Gently sloping ar
Low land area

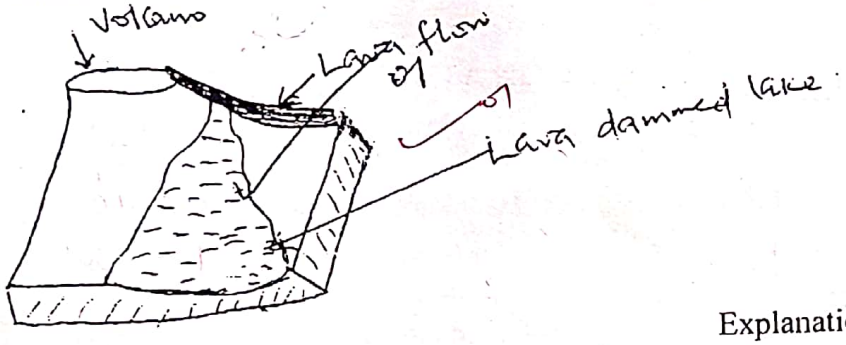
Marginal informati
Tittle – 01
Frame – 01
WL = 01
Compass direction-
Features = 06 / 10 mark

(d) The dominant drainage feature is;

- Lake. Bunyoyi
- It is a lava dammed lake.
- It is formed by the process of volcanicity.
- Due to radio activity, geophysical and geochemical reaction.
- Lava was ejected through fissue/cracks.
- Lava was deposited in the river valley to form a ridge/dam.
- The river water was back ponded up stream hence locked behind the lava barrier to form a lava dammed lake.

(01 mark)

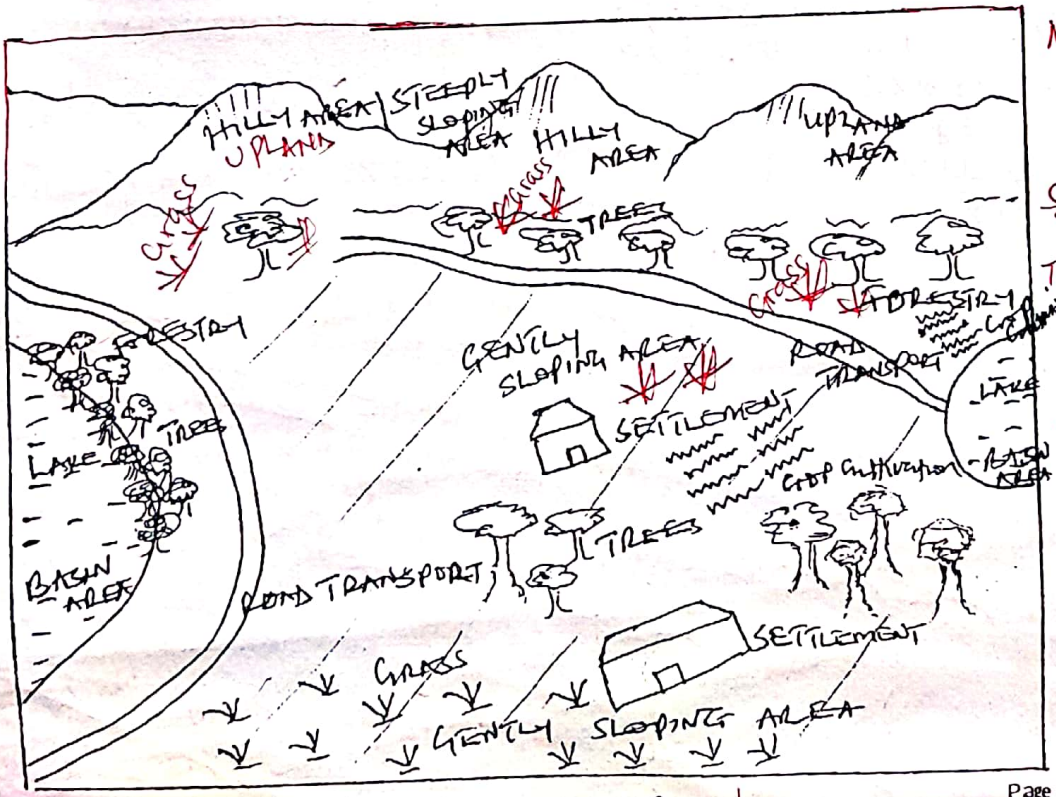
Illustration



Identification -
Type -
Process -
Origins -
Explanation/illustration -

Factual marking = 06 marks
TOTAL = 25 MARKS

2. (a) **A LAND SCAPE SKETCH OF THE AREA SHOWN ON THE PHOTOGRAPH SHOWING RELIEF REGIONS, DRAINAGE FEATURE, LAND USE PATTERNS AND VEGETATION TYPES**



- Gently sloping area
- Upland/Hilly /steeply sloping area
- Basin area.

VEGETATION
- Trees
- Grass

- Settlement
- Fore stry
- Road transport
- Crop cultivation

MI = 03marks

E = 07marks

DRAINAGE **10 MARKS**

Lake

(b) Drainage has influenced land use pattern in the following ways;
- The lake /well drained have encouraged road transport in the middle and fore ground of the photograph.
- The lake/ well drained have favoured forestry in the fore ground and middle ground of the photograph.
- Well drained area have encouraged settlement in the fore ground and middle ground of the photograph.
- Well drained area/ lake have encouraged crop cultivation in the middle ground.

Any 2x2 = 4 marks

(c) (i) Relief description;
- The back ground is hilly/ upland/ high land area.
- The hilly back ground has a ridge
- The back ground has saddles/cols
- The middle ground and fore ground are gently sloping.
- The fore ground and middle ground have basins/ lake basins
- The hilly background has steepslopes

Any 4x1 = 4 marks

(ii) Challenges caused by the nature of the landscape.
- Hilly/up lands/steep slopes in the background are associated with;
- Soil erosion
- Land slides
- Difficulty in construction of communication lines.
- Difficulty in mechanization of agriculture.
- Difficulty in construction of settlements.
- Coldness
- Lake basin in the foreground and middle ground are associated with;
- Drowning/ water accident
- Dangerous aquatic animals.
- Flooding.
- Waterborne diseases.

Any 5x1 = 5 mark

Note: Challenges must be linked to the nature of landscape.

(d) Areas
- Kabarole
- Rubirizi
- Kasese
- Kisoro

Reasons:

- Presence of explosion craters/craters.
- Existence of the hilly upland landscape.
- Existence of numerous explosion crater lakes.

Area – 01 mark
Reason – 01 mark
02 marks
TOTAL = 25 marks.

3. **Explain the processes responsible for the formation of intensive volcanic land forms in East Africa.**

Candidates should define intensive volcanicity as total process through which molten rock materials are injected, cool, crystallize and solidify within the earth's crust.

Give / origins

- Originates with the earth's interior. (Mantle)
- Due to spontaneous heating by radioactivity and geochemical reaction.
- The heating causes melting of mantle rocks hence convective currents.
- Convective currents and tetomic movements create lines of weakness within the earth's crust.
- The lines of weakness are then filled by ~~magnetic~~ magmatic materials/injected from the interior due to intense pressure.
- The injection is due to viscosity/low or insufficient pressure hence cool and solidify within the earth's crust at different depth levels to form different volcanic features.
- These features do not have a direct effect/influence on relief unless they are exposed by denudational processes i.e. weathering, erosion, mass wasting.

Batholith; very lager dome shaped intrusion made up of granitic material.

- Formed at a great depth within the earth's crust due to deep seating of acidic magma.
- Over time the batholith is exposed to form rocky highland where it is harder than the surrounding area.
- These resistant hills /out crop rocks stand out as inselbergs/residential hills Eg's include Mubende, Nakasongola, Singo, Kachunbala, Parabong etc.
- Where the batholith is weaker/softer than the surrounding ~~walls~~ rocks, an Arena develops Eg's include the Rubanda Arena.

Dyke;

- Is a vertical/wall like/steepling inclined ~~inelude~~ intruded rocks ~~intended~~ across the ~~wall~~ rock strata.
- Results from intrusion of igneous rocks along a vertical ~~tissue~~ fissures.
- Where the dyke is harder than the surrounding rocks, an elongated hill/ridge develops e.g Isingiro ridges,sukuru ridges, ridges in Busia and Kisumu-Rungwa complex.
- While, where the dyke is softer, linear trenches evolve e.g. around Lake Turkana. in Kenya.

Sills;

- Tabular sheet of Igneous rocks lying along the bedding plane. of the rock strata
- Formed when magma rises and spreads horizontally in between the bedding planes of the rock strata or beneath the earth's surface.
- When exposed, Escarpments/cliffs or flat topped hills are formed e.g. Kakinzi in Luwero, the Thika falls as sills are crossed by river Thika in Kenya.

Laccolith;

- Dome shaped intrusion with a flat base.
- Formed from injection of viscous magma into the earth's ~~layer~~ crust.
- Since viscous (magma), it forces the over lying rocks to ~~heave~~ leave /bend upwards.
- On exposure, laccolith form uplands e.g. Voi and Kitui in Kenya.

Lapolith;

- Saucer/ "bowl"- shaped intrusion of igneous rock structures.
- Formed when viscous molten rock spreads horizontally between the rock strata.
- Heavy weight depresses the ~~inderling~~ underlying rocks causing sagging/sinking.
- When the overlying rocks are exposed a shallow, wide, ~~sancer~~ saucer shaped depression results e.g. Rubanda in Kabale, Kisoro etc.

NB.

- Identification of feature.
- ~~Description~~ | Definition
- Explanation/formation
- Illustration/diagrams.
- Examples.

Impressional marking (25 marks)

4. Candidates are expected;
   - Define drainage patterns,
   - Identify and describe the different drainage patterns.
   - Describe the factors for the development of the drainage patterns.

Drainage patterns refers to the arrangement | plan of the river and its tributaries on the land scape where the river flows.

The major drainage pattern, include;

- Dendritic drainage pattern,
  Is a pattern where a river and its tributaries make a tree- like plan with tributaries joining the main river at more or less acute angles.
  - Examples include R. Apwac in Kalongo area, R. Tana and R. Rufigi
  - Illustration.

- Trellis drainage pattern;
  - Is a pattern where tributaries join the main river at almost right angles.
  - The main stream takes sharp/more or less rectangular bends.
  - Eg's include R. Pager and its tributaries in Kitgum town,R.Mayanja, Kato and Wasswa in Mityana – Mubende area ,R.Athi eti
  - Illustration

- Radial drainage pattern;
  - Is a pattern in which rivers and their tributaries flow from one common peak/dome shaped ~~of a bicycle wheel~~ upland and flow like the spokes of a bicycle wheel.
  - It's common on the dome shaped uplands like Elgon, Kenya, Kilimanjaro and Muhavura.
  - Illustration

- Centripetal drainage pattern;
  - Is a pattern which develops where rivers flow from several directions and coverage into one place which is normally a basin/depression.
  - Eg's include Lake Victoria, Lake Naivasha etc
  - Illustration

- Parallel drainage pattern;
  - Is where stream and their tributaries flow for long distances down slope more or less parallel to each other.
  - It is common in areas with ridge, escarpments, areas of alternate soft and hard rcks etc.
  - Eg's R.Nkusi and R.Hoima on Butiaba Escarpment, R.Chalaga, R. Rukooki and Kamulikwizi in Kasese area.
  - Illustration

- Annular drainage pattern;
  - Is a pattern where tributaries join the main stream at sharp angles but in series of curves.
  - The existence of dissected plateau, crater,caldera, dome sharped uplands, faulted zones and volcanoes.
  - Eg's Ngorongoro Caldera and Bukigai hill in Bududa.
  - Illustration

- Hooked/Barbed drainage pattern;
  - Is a pattern where stream tributaries flow in the opposite direction to the main stream before joining it, at more or less acute angles.
  - Eg's include the reversed rivers of Katonga and Rwizi
  - Illustration

- Rectangular drainage pattern;
  - Is a pattern where tributary junctions are generally at ~~night~~ right angles and all streams major or minor are approximately of the same length.
  - Illustration

Candidates are expected to bring the factors as follows;

- Relief
  - Steep slopes of volcanic cones e.g. Elgon have favoured the development of radial drainage pattern.
  - The steep slopes accelerate downstream movement of water.
  - Steep slopes such as escarpments have led to the development of parallel drainage pattern e.g.R. Nkusi and R. Hoima.
  - Gentle slopes ~~far on~~ favour the development of dendrific drainage pattern as the gentle slopes encourage the development both the major and minor streams.
  - Existence of hill separated by wide valleys lead to the development of ~~treths~~ trellis drainage pattern e.g R. Mayanja, Kato and Wasswa in Mityana – Mubende area.

- Rock structure;
  - Jointed rocks have encouraged the development of ~~treths~~ trellis drainage pattern.
  - Alternate soft and hard rocks demarcated by joints at almost right angles to the general slope encourage treths trellis drainage pattern.
  - Soft and hard rocks lying side by side encourage development of parallel drainage where rivers flow by side of each other with limited chances of joining.
  - Uniform/Homogeneous rocks lead to development of dendirts dendritic, radial drainage pattern because uniform rocks enable rivers to erode uniformly forming a variety of tributaries.

- Tectonism;
  - Warping ie area affected by up warping and down warping such as Victoria, Kyoga basins later encourage several rivers flowing from different directions into basin and this has led to centripetal drainage pattern.
  - Faulting has encouraged formation of joint and fainlthines which later promoted treth and parallel drainage pattern.

- River capture;
  - This encourages development of drainage pattern overtime especially where a stronger river arrests the water of a weaker neighbouring river into its own channel.
  - This encourages the development of dendintic drainage pattern.

- Climate;
  - This is in form of rain fall. The existence of reliable rainfall in a drainage basin is necessary to support the evolution and continued flow of the river and its tributaries which may form several patterns like treths, parallel and hooked drainage patterns.

  Note: definition of a drainage pattern
  - Description of the drainage pattern.
  - Factors the development of drainage patters.

Impressional marking = 25 marks

5. Candidates are expected to;
   - Define marine erosional
   - Describe the marine erosional process
   - Identify and describe the land forms resulting from the marine erosional processes.
     - Marine erosion /wave erosion is the progressive remolar of the weather rock materials along the coastline/shore line.
     - These materials are eroded using the waves and materials transported by the waves.
     - Marine erosion is experienced through the following mecahanism.
     - Abrasion / corassion, in the weaving away of the coast line using materials that are being transported by the wave. It involves the load eroding the shore line e.g. bonlders, shingle, pebbles etc.
     - Attrition; is a process by which materials transport by waves are worn down.
     - It involves the load eroding the load. Materials constantly collide with each other reducing in size and are moved swiftly.
     - Solution/corrosion; Is a process by which water dissolve the rock materials along the coast. It is common in areas where the coastline is composed of minerals such as rock salt and limestone.
     - Hydraulic action; This refers to the sheer force of waves to remove the loose materials from the shore line and the sea floor-e.g. sand, pebbles, gravel and silt

   - Candidates are expected to bring the manne erosional land forms as;
   - Cliff; Is a steep slope over facing the sea.
     - It forms when a notch develops along the coastline due to abrasion and hydratic action
     - Repeated marine erosion through abrasion and hydraulic action causes the notch to widen and enlarge, retreating landwards to form a steep face of the rock.

- The retreat of the sea water exposes the steep face of the rock.
- The treat of the sea water exposes the steep face of the rock as a cliff.
- Eg's are found at Entebbe bofanical sardens, Kasenyi landing site on L.victoria, fort Jesus at Mombasa etc.
- Illustration

- Wave cut platform;
  - Is a wide plat form that dips genthy into the sea.
  - It is formed as a cliff retreat further in land, a gently sloping platform in left behind.
  - Its length increase as a cliff retreat further in land.
  - Eg's are found at Tiwi beach, Mombasa, Kasenyi on L. Victoria.
  - Illustration.

- Bays;
  - Is a wide extension of the sea into land.
  - A bay forms along a coastline with alternate soft and hard rocks
  - Soft rocks are eroded away by abrassion solution and hydrantic action.
  - The soft rocks are removed because they are un resistant creating a wide extension of the sea into the land called a bay.
  - Eg's Kasenyi bay, Murchsion bay, Napleon bay, Sango bay, Malindi bay etc.
  - Illustration.

- Headland;
  - Is a piece of land are found along coastline with alternate sot and hard rocks.
  - Soft rocks are eroded away by abrasion and hydrallic action as the hard and resistant rocks protrude into the sea to form a headland.
  - Eg's include Entebbe peninsular, Mweya peninsular, Nakasunda headline at Kasenyi etc.
  - Illustration.

- Cave;
  - Is a cylindrical tunnel drilled through a jointed cliff or coastal line.
  - It forms where there are joint, weak rocks relatively soft rocks.
  - Wave abrassional materials scratch themselves against the shore line breaking the weak/jointed to form a cave.
  - Eg's are found at Kasenyi on L. Victoria, Entebbe resort beach, Tiwi beach along the east African coast etc.
  - Illustration

- Blow hole,
  - Is a vertical opening from the end of the cave up to the cliff.
  - Hydrallic action within the cave creates great pressure.
  - Pressure opens up a hole slowly that opens up onto the cliff.
  - The opening is called a blow hole.
  - Eg's are found at Kasenyi on L. Victoria, Entebbe resort beach and Malindi along the East African coast.
  - Illustration

- Geo;
  - Is a narrow steep sided inlet along a cliff.
  - It is a triangular extension into a cliff.

- It is formed by hydratic action that pushes water into a blow hole, exerts pressure and leading to the collapse of the roof of the cave.
- This results into an extension called a geo.
- Eg's are found at Kasenyi landing site on L. Victoria
- Illustration.

- An arch;
  - Is a whole or an inlet that drives through the headland or it is a bridge like feature that is seen mitin the head land.
  - It is formed when there are lines of weakness that go night through the headlines or existence of a cave on one side of the headline.
  - Due to abrasion and hydrantic action, acave is drilled from one side of the head land until it connects to the cave roof occurs; the natural bridge is called an arch
  - An example is the Vasco Da Gama pillar at Mombasa.
  - Illustration

- Stack;
  - Is an isolated rock pillar/ feature completely detached from the main land
  - Due to abrasion, solution and hydratie action, over time an arch which is just the long roof the cave becomes thinner.
  - It eventually collapse leading the outer support of the arch as a pillar of the rock separated from the main land /head land.
  - This is called a stack
  - Eg's are found at Kasenyi on Lake Victoria and near Entebbe airport on lake Victoria.
  - Illustration

- Stump;
  - This is residue formed when a stack is worn down.
  - A stack will gradually be eroded by abrassions, attrition and hydrantic action until it is worn down.
  - Eg's are found at Kasenyi landing site on L.Victoria and near Entebbe airport.
  - Illustration.

  Candidates are expected to;
  - Identify the feature.
  - Describe the feature.
  - Illustrate.
  - Give examples.

Impressional marking = 25 marks

6. Candidates are expected to;
   - Define land and sea breezes.
   - Give areas where they occur
   - Give the causes of land and sea breezes.
   - Give the effects of land and sea breezes
   - Land and sea breeze are local winds which occur in areas where land is lying in close proximity to a water body.
   - Examples include; around the shores of L. Victoria, the coastal areas of East Africa, shore of Lake Kyoga etc.
   - Land breeze blows from land to the sea/ lake and occurs during the night.

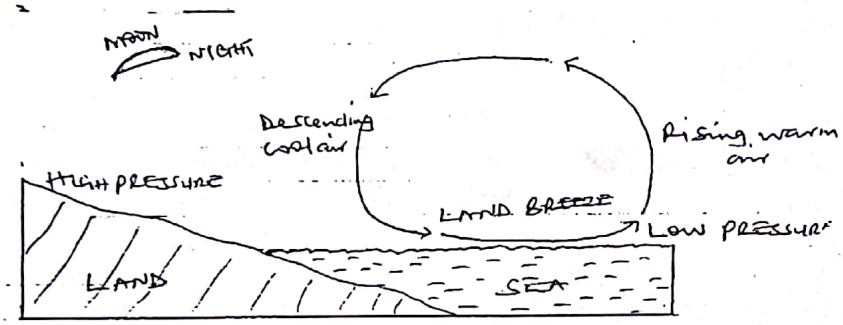
- Sea breeze blows from the sea to the land occurs during the day.

Causes of land breeze (occurs during the night)

- Loss of terrestrial radiation at coastal lands at night. Land cools faster than the sea/water hence temperature are cooler over land than the sea/ water which retains much of its heat.
- Water loss heat more slowly such that the air above it also warms up.
- Low pressure is created over the warm sea and high pressure over the cold land.
- Cool air from the land under high pressure blow towards the sea to replace the warm rising air hence land breeze.

The causes of the land and sea breeze is embed in the descriptions

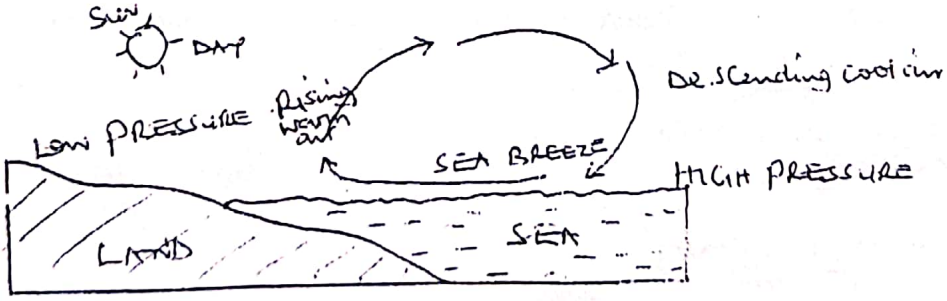
Diagram to show land breeze.



Causes of sea breeze(occurs during the day)

- There is intensive heating of coastal areas during the day.
- Land warms faster than the sea hence temperature are high over the land and colder over the sea.
- Convective currents of warm air rise over the land and create low pressure at the surface.
- Cool and moist winds from the sea blow towards land to replace the rising air i.e. from high pressure to low pressure on land.

Diagram to show sea breeze



General factors of land and sea breeze.

- Differences in specific heat capacities of land and sea.
- Mobilizing of water compared to solid land.
- Heat transmission through transparent water as opposed to opaque land.
- Differences in reflecting capacity of land and water/sea

Impressional marking 17marks

Effects of land breeze.

- Lowering of temperature over the sea.

- Lead to formation of foggy/misty conditions over the lake which results into poor visibility.
- Off-shore rainfall is formed.
- Dry conditions on land because of little or no rainfall received.
- It results into violent thunderstorms.
- It results into high humidity in the sea/ lake.
- There is formation of cloud cover over the sea.

Factual marking 04 marks

Effects of sea breeze.

- Lowering of temperatures on land especially in the afternoons.
- It leads to formation of foggy/misty conditions on land which results into poor visibility.
- On- shore rainfall is formed which is usually received in early mornings and afternoons.
- It results into violent thunderstorms.
- It result into high humidity on land.
- There is also formation of cloud cover over land.

Factual marking 04 marks.

Candidates are expected to illustrate their answer with valid examples.

Maximum 08 marks

Total = 25 marks

7. Candidates are expected to;
   - Identify area in East Africa that experience semi- desert vegetation.
   - Describe the characteristics of semi-desert vegetation.
   - Bring out the physical conditions that have influenced semi-desert vegetation.
   - Bring out the other factors.
   - Conclude with a judgment.
     - Semi- desert is found in Northern Kenya, North Eastern Uganda, Albert flats, Ankole- ~~Mukasa~~ Masaka corridor etc.
     - Semi – desert vegetation is characterised by;
     - The vegetation has bushy, thorny trees with scrubs growing between them.
     - Trees have waxy leaves to prevent moisture loss.
     - Trees have deep/tap roots that enable them to draw water from the underground sources given the limited surface moisture.
     - Many plants have tiny, thorny leaves which help them to reduce the rate of water loss.
     - Trees have swollen trunks in which they store water for use during the dry season.
     - Many plants produce seeds which are dormant for years until little rainfall is received then they germinate.
     - Thickets are separated by patches of bare grounds and short grass.
     - Many plants complete their cycle within a few weeks before the soils completely dry up.
     - The bushy thorny trees have a height of 5-10 M tall.
     - Some plants are halophytic growing in areas of saline soils.
     - The most dominant plants xerophtes. These are plants that are highly tolerant to drought and can survive in dry areas e.g Emphobia, cacti.

- Trees have thick fleshy appearance on the leaves and stems.
- Some plants such as cactus are widely spaced to avoid competition for water.
- Trees have thick barks to control loss of water through transpiration.
- Trees are fire resistant because of the thick barks.
- Seeds of semi- desert plants have a thick ~~cause~~ coat that protects the inner center from bush fires.
- Grasses are short.
- Grasses turn yellow in the dry seasons.

- Candidates should bring out the role of physical conditions in the distribution of semi ~~and~~ arid vegetation as; To a greater extent

  - **Climate;**
  - Hot temperature above 30^0C with dry winds and high rates of evaporation favour growth of short grasses and scattered trees.
  - Prevalence of low rainfall ranging from 250 – 625mm which is unreliable that can't support luxuriant ~~vegetable~~ vegetation cover.
  - Very low levels of humidity due to absence of a big water surfaces.
  - Long/~~existence~~ extensive periods of drought hence growth of short, stunted, scattered trees.
  - **Soils;**
  - Existence of infertile, sandy, skeletal soils with limited humus content discourage the growth of luxuriant vegetation.
  - Highly porous soils with low moisture retention capacity hence scattered trees and short grass.
  - **Relief;**
  - Semi – desert vegetation generally grows in area of low lying relief with less than 1000m a.s.l without ~~out~~ hot temperature and low rainfall.
  The lee-ward side of mountains has led to growth of drought resistant trees in area of Turkana land.
  - **Drainage;**
  - Due to limited surface drainage, dwarft, small, brittle plants grow in scattered patterns.
  - In areas of salt depressions, halophytic plants such as salt bushes grow.
  - **Biotic factors;**
  - Wild animals feed and destroy woodlands and grass lands into dry bushes.
  - Termites and locusts also destroy grass lands leading to emergence of dry scurbs.
  - Altitude below 1000masl ∴ little rff and very hot temperatures. However,

- Candidates should bring out other non- physical factors as;
  - Conservation policies by the government have encouraged the growth of semi-arid vegetation ~~eg~~
  - Overgrazing and overstocking.
  - Bush burning.
  - Sinking of bore holes.
  - Deforestation.
  - Charcoal burning
  - Mining and quarrying.
  - Construction works ie. ~~Wards~~ Roads, settlement etc.
  - Agricultural activities etc
  - Conclude with a judgment.

Overgrazing by wild animals like in Q.E.N.P

Wildbush fires caused by lightening.

N·B
Zonal soils are entirely formed by physical factors.

No man
No burrowing animals

Impressional marking.
Content = 23 marks
Evaluation = 02 marks
Total = 25 marks

8. (a) Chernozerms are zonal soils **rich in calcium** carbonate.
- They develop in areas of **seasonal rainfall.**
- They are associated with **less leaching.**
- Common in ~~Nyakasura and tororo areas~~
- Factual marking 03 marks.
- Sierozerms are zonal soils that have **high salt content,** they are inconolidated.
- They develop in **semi- arid and areas** associated with **hot absolute temperatures and very low rainfall.**
- They are also associated with **less leaching.**
- Common in Katwe, Magabi and Nothern Kenya.

Factual marking 03 marking
06 marks

(b) **Account for the formation of zonal soils**

- Candidates are expected to;
- Define zonal soils
- Classify the zonal soils.
- Provide factors for the zonal soils.
- Zonal soils are largely a result of climate types /factors which contribute to the soil forming processes.
- They are mature soils with well-developed profiles due to prolonged action of climate and vegetation.
- Zonal soils develop under conditions of food drainage i.e. they are well drained soils
- They also develop gentle slopes, flatlands and sometimes underlating land scape.
- Zonal soils are divided into two i.e pedalfers and pedocals.
- The resultant soil type are closely related to the nature of weathering that takes place under specific type of climate. The resultant soil types include;
- In how latitude areas that experience hot hymid conditions. This encouraged leaching and elliviation giving rise to latosols, the tropical black earth soils (basisols) e.g. the flat topped hills of Buganda land scape.
- In mid latitude areas/climate associated with Savanah climate of alternate wet and dry seasons, this has resulted into the development of tropical brown earth soils and the podsols e.g. in parts of Northern Uganda.
- In areas receiving seasonal rainfall and where there is less leaching, chernozerm or praire soils have developed.
- In semi – arid and arid areas associate with hot absolute temperature and very low rainfall have resulted into the development of sierozerms (chestutt coloured) soils that have high salt content e.g in katwe areas, Magadi and Northern Kenya.
- In high latitude climate (cold climate regions), the cold temperatures are associated with the development of artic brown soil tundra soil e.g. the upper slopes of the Rwenzori, Kenya and Kilimanjaro mountains.

- The factors for the formation of zonal soils include the following;
  - **Climate;**
    - Low latitude areas experience hot and wet conditions associated with heavy rainfall that leads to leaching of silica while iron and aluminium accumulates leading to the formation of reddish brown ~~soils~~ soil called laterials e.g. the flat topped hills of Buganda landscape. laterites
    - Humid sub- tropical and temperate lead to formation of brown earth soils /podsols due to leaching that result from humid conditions and humification due to thick vegetation.
    - Seasonal rainfall leads to formation of chernozerms that tend to be black with a lot of humus due to limited leaching.
    - In semi – arid areas, there are sierozerms/chestnut coloured soils due to high evaporation rates and limited leaching.
    - Cold conditions in high latitude areas result into the tundra/arctic brown soils due to limited leaching and other soil forming processes.
  - **Nature of the parent rock**
    - Rocks with calcium carbonate give rise to pedocals mainly in the dry areas and areas of seasonal rainall.
    - Rocks with iron and aluminium have led to the formation of pedalfers which form in hot humid conditions
    - Rock permeability ie permeable rocks such as limestone allow leaching, elliviation resulting into removal of Silica while iron and aluminium are deposited on the ~~layer~~ leading to laterites. horizon
    - Soft rocks like limestone are wealthered by physical and chemical means which encourage the development of mature soils like laterites.
  - **Relief;**
    - Laterites form on gentle slopes, low lands and flat topped hills where there is water percolapion leading to leaching and elliviation.
    - Gentle slpoes are well drained which characterises zonal soils as well ~~developed~~ soils. drained
  - **Drainage;**
    - Zonal soils are found in well drained areas allowing leaching, eilluviation leading to the formation of laterites.
    - The good drainage conditions allow accumulation of salts and calcium in the top soils leaching to the formation of pedocals.
  - **Biotic factors;**
    - Thick vegetation under hot and wet conditions leads to decay of the leaf liter dissolving it and leaching of silica lead to laterites.
    - Thick vegetation cover binds soil particles together and encourages infilteration of water leaching to the formation of zonal soils like podsols.
    - Brown earth soils (podsols) are found in deciduous and coniferous forested areas.
  - **Time**
    - Zonal soils form over a long period of time which leads to formation of mature soils like latosols

NB;

- Emphasis should be ~~piton~~ put
- Factor
- Process of soil formation.
- Resultant zonal soils

Impressional marking 19 marks
Total 25 marks

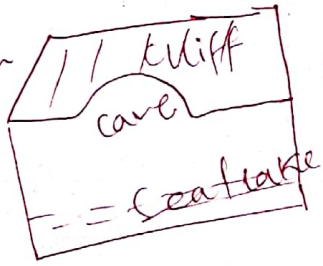
END

Clarity in expression

No 7.

J·B The humanfactors must give a transition from the near by savana vegetation into semi-arid vegetation

cliff
cave



cave.

✓ Physical factors remain physical.

✓ Human factors are generaly negative changing surrounding vegetation into semi-arid vegetation.

TAKE SERIOUS NOTICE ON

✓ Endogenic processes
✓ Weathering.
✓ Vegetation.
✓ Drainage patterns.
✓ Coastal geomorphology.

WAKISSHA JOINT MOCK EXAMINATIONS
MARKING GUIDE
Uganda Advanced Certificate of Education
GEOGRAPHY P250/2

- power + energy
- Fishing
- Tourism
- Transport
- Agriculture (and rural)
- Agric problem.

GUIDELINE FOR AWARDS

Marking is done by impression as below

Mark		Comment
0	.....	Irrelevant answer
1-5	.....	Rudimentary/primary answer
6-9	.....	Outline/O' level essay
10-11	.....	Marginal/unbalanced
12-13	.....	Basic/General answer
14-16	.....	Average essay/answer
17-19	.....	Good answer/essay
20-22	.....	V. Good points, Good explanations. Examples
23-25	.....	Excellent introduction examples balanced conclusion sketch maps.

GRADING SYSTEM

80-100.....D_1

75-79.....D_2

70-74.....C_3

60-69.....C_4

55-59.....C_5

50-54.....C_6

45-49.....P_7

35-44.....P_8

0-34.....F_9

SECTION A

1.

(a) Total

Angola: 3,109 + 3,179 + 3,795 + 4,316 = 14,399

Sudan: 1,933 + 1,826 + 2,269 + 2,790 = 8,818

Calculating radius

$r = \sqrt{\frac{A}{\pi}}$

Angola:

$r = \sqrt{\frac{14,399}{3.14}}$

$= \frac{67.7}{10} = 6.8$

Sudan;

$r = \sqrt{\frac{8,818}{3.14}}$

$= \frac{52.9}{10} = 5.3$

Cal. 2mks

The scale should be stated.

Calculating degrees

Year	Angola	Sudan
2000	$\frac{3,109}{14,399} \times 360^0 = 77.7^0$	$\frac{1,933}{8,818} \times 360^0 = 78.9^0$
2001	$\frac{3,179}{14,399} \times 360^0 = 79.5^0$	$\frac{1,826}{8,818} \times 360^0 = 74.5^0$
2002	$\frac{3,795}{14,399} \times 360^0 = 94.8^0$	$\frac{2269}{8,818} \times 360^0 = 92.6^0$
2003	$\frac{4,316}{14,399} \times 360^0 = 107.9^0$	$\frac{2790}{8,818} \times 360^0 = 113.9^0$

T= 1

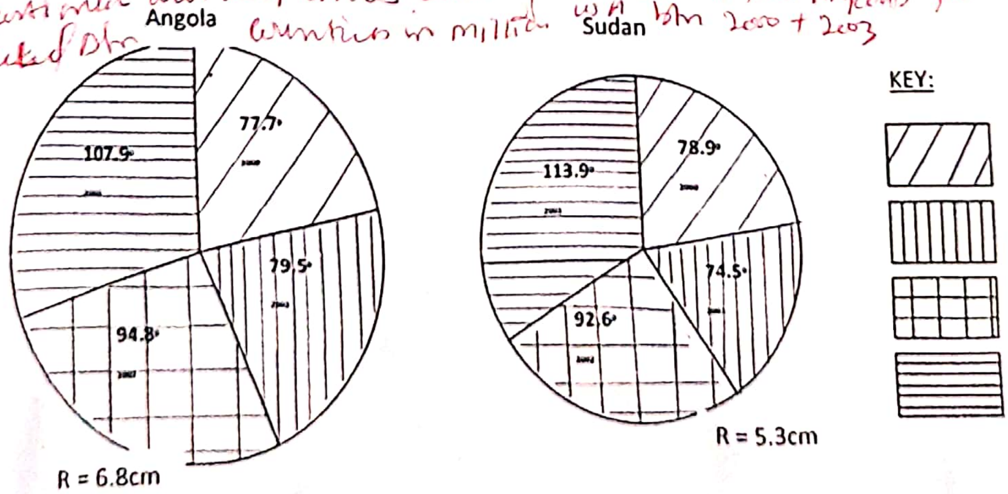
A = 4

N = 1

KI = 1

S = 01

A proportional divided circles showing the value of food imports for selected Afr countries in millions US $ btn 2000 + 2003



b) **Merits**

- Easy to draw / construct
- Good for visual impression
- Can be super imposed
- Good for comparison
- Has simple calculations
- Represents a lot of information
- Easy to read and interpret

Demerits

- Time consuming with many calculations
- Uses secondary information
- Can be congested with many items
- Difficult to get scales with big range
- Has many tedious calculations
- Hard to maintain accuracy **(2marks)**

(3marks)

c) **physical factors**

- The poor climatic conditions discouraging agriculture thus promoting importation of food products.
- The rugged nature of the landscape which hinder crop growth.
- The presence of pests and diseases which attack crops and therefore reduce food production
- Infertile soils causing poor agricultural production
- Shortage of land for agriculture causing low production
- Poor breeds causing low agricultural production
- Occurrence of natural calamities and hazards destroying crops and livestock
- Presence of other resources diverting labour and capital
- Presence of obstacles discouraging agricultural production
-
-
-
-

Nb: choose a case study. **5marks**

d) **Steps taken**

- Use of artificial fertilizers and composite manure on exhausted soils to allow maximum crop growth and yields.
- Control of pests and diseases, by spraying, dipping, crop rotation, etc.
- Introduction of drought resistant crops and animal breeds or varieties.
- Introduction of better crop and animal varieties i.e drought resistant, quick maturing and high yielding.
- Proper animal husbandry which will involve keeping good animal breeds and development of disease resistant breeds through cross breeding, dipping and spraying.
- Use of better and modern farming methods and agricultural practices e.g. irrigation, plantation, dairy farming etc.

- Use of modern and better storage facilities e.g. silos encouraging continuous production without any rest in farm operations.
- Improved technology by use of modern equipment like tractors, weeders etc.
- Increased available land for agriculture through; irrigation in arid and semi-arid lands. These areas have good soils but they only lack water, swamp reclamation so as to bring the neglected poorly drained areas into agricultural
- Established settlement and resettlement schemes in the neglected areas hence reduce population pressure on land giving way for agriculture.
- Improved transport and communication in rural agricultural areas linking them to existing markets.
- Changed the land tenure system especially where communalism and customary land ownership exist
- Encouraged land consolidation where land fragmentation exists to allow easy mechanization for improved yields
- Availed agricultural credit (soft loans) to farmers for investment in agriculture.
- Encouraged agricultural diversification by growing different varieties of crops and keeping Various types of animals.
-
-
-
-
-
-

Nb: follow the tense used.

5 marks
Total 25 marks

SECTION B:

2. To what extent can nomadic pastoralism be regarded as the best land use of the semi-arid areas of Africa?

Approach:

- Define nomadic pastoralism.
- Locate the areas.
- Give its characteristics.
- Asses favourable factors.
- Problems caused.
- Other possible land use patterns.

Subsistance

Nomadic pastoralism is the keeping of animals for substance, involving movement from one place to another with animals searching for water and pastures. It is characterized by keeping local breeds, in area with low population using traditional methods of farming valuing quantity rather than quality. Areas important for nomadic pastrolism include.

- The Fulani region.
- Turages Berbers in the Southern desert of Sahara.
- Karamoja in North Eastern Uganda.
- Masai Kenya and Tanzania.
- Somalia
- Karahali Desert (Bushmen and Hottentos).
- Southern Sudan (Nuers and Dinkas)
- S. Africa (Koikois)
- Turkana in Northern Kenya

They have made the best use of semi-arid environment areas as follows.

- The areas have low population giving enough land available for nomadic pastoralism e.g the Fulani in the Sahel region.
- Savanah grass lands provide natural pasture for animals in nomadic regions e.g Ankole, Masaka, Karamoja and Turkana.
- Low rainfall, with dry conditions and prolonged droughts in semi-arid areas are not good for other economic activities hence influencing or attracting nomadic pastoralism.
- The relief is flat and gently slopping leading to easy movement of people with their animals.
- The communal land ownership allows free movement of people with their animals.
- The cultural attitude of valuing quantity rather than quality leads to a nomadic culture of keeping large numbers of animals e.g the Karamojong, Turkana, Nuers and Dinkas.
- Keeping local breeds e.g the short horned for Karamojong which are resistant to diseases and can survive the dry conditions.
- Presence of pests and diseases like rinderpest, foot and mouth, east coast fever and anthrax in Masai land giving room for only keeping local breeds.
- Limited water bodies like lakes, rivers, swamps etc hence keeping breeds like long horned cows in Ankole-Masaka dry corridor which can survive such hard conditions.
- Poor infrastructure like roads, railways etc affecting marketing hence keeping animal for subsistence purposes.
- Limited government support keeping the areas backwards and occupied by backward people with their traditional methods of agriculture.
- The problem of cattle ~~rusting~~ mating has scared other people leaving only nomads to occupy the land like Turkana, Karamojong, Masai, Dinkas, Nuers etc.
- Limited market for their animal products
- Limited capital
-
-

However the nomadic pastoralists have not made the best use because they destroy the environment as follows.

- Overgrazing caused by overstocking leading to soil exhaustion like in Masailand Karamoja, etc.
- Bush burning in anticipation to get fresh pastures has led to growth of poor vegetation like shrubs and thickets e.g in Ankole-Masaka dry corridor, Karamoja, Turkana, Masai etc.
- Environmental degradation because of deforestation, bush burning and using poor methods of farming.
- Easy spread of diseases due to communal grazing
-
-

On the other hand there are other land use patterns which have not been given a chance in the areas.

- Arable farming like the growing of maize, millet, which are drought resistant crops in Sahel region.
- Development of the tourism industry. The dry areas could be gazzetted for animals and plants e.g at Kidepo valley national park, Tsavo, Serengati, L. Mburo, Limpopo in South Africa.
- Mining sand which is used for building and construction purposes like Sahara desert.
- Bee keeping (epiculture) because of its savannah climate with savannah grassland and scattered trees like the Miombo wood land in central Tanzania.
- Charcoal burning due to the presence of savannah woodland like acacia which is good for fuel on commercial and subsistence basis like central Tanzania.
- Development of resettlement schemes, irrigation schemes keeping the landless people like Mubuku.
- Development of industries like amunition manufacturing, space crafts because of low population and open space.
- Promoting forestry industry because of low population leading to afforestation programmes.
- Fish farming (aqua culture)
- Development of traditional & Ranches to reduce easy spread
-
- development of local transport infrastructure for easy accessibility.
-
-

Impression marking 25 marks

3. **Explain the factors which have favoured the development of forestry industry in the temperate region of Canada or Tropical Equatorial Region of Gabon.**

Approach: **(25 marks)**

- Candidates should select a case study.
- Define forestry / characteristics
- Give areas / species
- Factors which are physical and human

- Forestry is the scientific management of forests involving exploitation, conservation and a forest is a concentration of trees and vegetation.
- Boreal forests in Canada are found in Bulish Colombia around Alaska R. Frazer, R. Skeena, R. Shkine, Highlands, mountains. Coastal ranges, Rocky mtn
- Have soft wood species like Cedar, pine, lypress, spruce with short gestation pure stand, small needle shaped leaves.
- Equatorial forests in Gabon are found near R. Ogouwe, R. Livindo, Mt. Ibugi, Port Gentle, Port Qwento, Port Libraille areas of Masaku Mekambako.
- Have hard wood species like Mahogany Ozigo, Ozobe, Muvule Ebony, Iron wood with long gestation Buttres roots, broad leaves, impure stand.
- B.C / Canada found in N.A | Gabon found in West Afr
- Trees: western hemlock, cedars, spruce | Trees: Aroke, Ozigo, Okoume, Mahogany
- Towns: Vancouver, Ontario, ... | Towns: Libreville, Gentile, Owendo, Franceville
- X-tics: short gestation, Needle leaves, pure, homogeneous | X-tcs: long gestation, impure stand, - Heterogeneous.

The factors for forest exploitation are physical and human.

- Nature of the forests making exploitation easy like short gestation.
- Relief of the landscape/topography ~~relief~~, features like lowlands, ~~highlands~~, ~~mountains~~, lowlands Gabon ~~Mordam Canada~~. H/land for Canada
- The climate and weather conditions of the place like Equatorial Gabon/temperate Canada.
- Presence of commercial and variety of species for high production, marketing.
- Limited resources like mineral discouraging other activities.
- Presence of drainage features for water transport, fertile soils.
- Extensive land because of sparse population giving a wide area commercial forests.
- Strategic location near ports, transport routes, markets and industries.
- The soil types like fertile soils for Gabon and infertile soils for Canada.
- Limited physical obstacles, landforms making exploitation easy and cheap.
- Latitudinal location like Gabon near Equator, wet conditions, Canada far with (climate) cold conditions.
- Political stability and security for investment, infrastructure and social service.
- Government policies like gazetting, giving loans and conservation.
- Wide market both internal in towns and external exporting to other countries.
- Adequate capital for investment like equipment industries, transport, research.
- Labour supply skilled, unskilled for lumbering, industries like immigrant labour.
- Good relations with other countries for marketing, loan, transport.

- Improved transport like roads, railway lines, ports, water ways.
- Research stations for afforestation, reafforestation processing marketing.
- Presence of industries like Saw mills, Carpentry, furniture, art and craft.
- Power supply by using coal HEP oil for lumbering processing.
- Improved technology helping in lumbering, processing, conservation for sustainable development.
- Nature of the population being hardworking, innovative, good planners.
- Presence of entrepreneurs and big companies for good management, better services and high population.
-
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-

Impression marking 25 marks

4. **Explain the problems faced by the mining industry in either Democratic Republic of Congo or USA.** **(25marks)**

Approach:

- Choose a case study
- Define mining
- Give types, areas, methods
- Problems – physical and human

Mining is the extraction or exploitation of earth resources found in rocks as organic, inorganic, substances naturally like metallic minerals, none metallic minerals and mineral fuels.

DRC

DRC is a developing country found in Central Africa Congo basin Tropical Africa.
It has mineral resources like copper, gold, diamond, uranium, oil, led, zinc, iron ore, cobalt.
The mining areas include Shaba province, Katanga region, around River Congo, Mt, Rwenzori, Ituli forest, Kivu province. Kolwezi, Kambove, Kipush
The mining methods include open cast, adit mining, drilling, alluvial mining

There are physical and human problems hindering the development of mining.

- Poor science and technology affecting exploitation and processing and causing low production.
- Limited market because of few industries and competition with other countries like DRC, China.
- Over exploitation of minerals causing exhaustion especially the exposed minerals.
- Minerals found in deeper layers (concealed minerals) increasing on cost for exploitation by using adit mining.

- Limited skilled labour to help in the exploitation of minerals and to work in processing factories leading to high costs of using expatriates.
- Occurrence of accidents causing destruction of people and property, scaring the miners because of floods, landslides, power problems.
- Presence of minerals in small quantities e.g. lead, zinc, aluminum, manganese.
- High transport costs because of minerals in deeper layers and for exporting minerals because ~~Zambia~~ DRC is landlocked.
- Presence of physical obstacles affecting exploitation like relief features, land forms, thick vegetation, drainage features.
- Limited power supply because of depending on HEP affecting exploitation and processing.
- Limited capital to purchase modern equipment to construct processing factories, transport routes because of low income which leads to low production.
- Presence of other economic activities depending on other resources causing diversion of labour and capital like into agriculture, trade.
- Poor government policies like high taxes, not giving loans affecting the mining sector.
- Profit repatriation by foreign investors like Anglo-American company causing capital outflow and lowering the national income.
- Marketing problems because of price fluctuations on the world market, poor advertisement, having substitutes.
- Pollution of air and land around the mining areas, processing factories, affecting labour supply.
- High costs of living around mining areas because of dense population leading to high costs of labour like in the mining towns of ~~Ndola, Kitwe~~.
- Political instabilities and insecurity in neighbouring countries like ~~DRC~~ Zambia, Burundi, Zimbabwe, Angola scaring foreign investors and attracting transport routes.
- Presence of wild animals, pests and diseases scaring off workers and investors.
- Wet equatorial climate like heavy rainfall affecting transport causing accidents.
- Presence of thick impenetrable equatorial forests discouraging mineral exploitation.
- Presence of hostile tribes like the pigmies, shifting cultivators, hunters scaring the workers.
- Smuggling of minerals by neighbouring countries causing over exploitation, mineral exhaustion, loss of taxes.
- Limited Research
- Poor mgt of the mining sector leading to poor svcs, corruption
-
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-
-

USA

USA is a developed country in North America and it is rich with mineral resources like iron ore, phosphates, aluminum. Mining areas in USA are the Great Lakes, Mesabi region, California desert, Tennessee valley, Rocky mountains, and Appalacian mountains, New England, Mbanca, ~~New~~ Birmingham

- High transport costs because of minerals in deeper layers like concealed coal and iron ore transported by using railway wagons moving on conveyor belts.
- Temperate climate like winter and snow affecting transport and labour productivity because the roads are frozen and people keep indoors.
- Over exploitation using leading to mineral exhaustion like exposed coal and iron ore leading to high costs of using Adit mining.
- Competition with other countries like coal from S. Africa using other substitutes i.e. Nuclear energy for powers, scrap for iron and steel reducing market for minerals.
- Limited and unskilled labour like casual workers to work in the mines, factories because of increased standard of living, low population growth rate leading to increased costs of using immigrants.
- Accidents in the mines destroying people and property caused by floods, power problems, landslides making the mining sector risky.
- Increased costs of living because of death population in the mining areas of ~~Ruhr~~ Nevada, Alaska ~~conurbation~~ leading to expensive labour.
- Poor quality minerals in small quantities and scattered not good for commercial exploitation like gold, lead, zinc.
- Minerals in deeper layers like concealed coal, iron ore, leading to high costs for exploitation, transport and causing many accidents.
- Presence of physical obstacles like relief features, drainage features, thick vegetation affecting exploitation and transport in the ~~Rhine rift valley.~~ Great Lakes regio
- Government policies like gazetting mining areas for environmental conservation discouraging mineral exploitation.
- Pollution in the mining areas and industries because of wastes and sewage discouraging labour supply.
- Presence of other resources leading to other economic activities like industrialization, agriculture, trade, transport, causing diversion of labour and capital.
- Marketing problems because of competition, price fluctuations, having other substitutes like using scrap affecting planning.
- Conflicts and tensions like labour strikes in the mines causing destruction of people and property.
- Limited power supply due to exhaustion of coal, oil, natural gas, limited potentials of HEP and limiting the use of nuclear by United Nations.
-

Impression marking 25 marks

Examine the impact of rapid industrial development on the environment in either the Ruhr region of Germany or China. **(25 marks)**

Approach:

- Candidates should select a case study.
- Define industrialization
- Give types and areas
- Explain effects – positive and negative

N.B. You can even talk about the Stages of hubs

Industrialization is the use of raw materials into finished products using labour and capital.

Ruhr region of Germany ~~found~~ along R. Ruhr, R. Lippe, R. Wupper with types like Engineering, Iron and Steel chemical electronics, Machinery, Food processing, Transport equipment, Towns like Duisburg, Essen, Bochum, Dunsdolf Cologne, Wuppetal Liverkusen Dortmond.

China is found in S E Monsoon Asia with high rate of industrial growth.

Types electronics, chemical, vehicle assembling, food processing, home appliances.

Towns; Beijing, Tianjin, Shangai, Machuria, Canton valley, Hong Kong.

The effects impact on the physical and human envir….. are positive and negative.

Positive effects:

- Employment opportunities leading to high standard of living
- Government revenue by taxing people, companies, improving national income.
- Improvement in transport like roads, railway lines, ports.
- Provision of social services like water, power, health
- Provision of market for other sectors like agriculture, mining
- Economic diversification like trade, mining, fishing, transport, reducing dependency.
- Capital accumulation by attracting investors.
- Promotion of international relations leading to international trade and security.
- Education and skills through experiments, research for better skills and technology.
- Development of tourism industry earning foreign exchange.
- Self sufficiency by producing basic needs i.e. food, clothes
- Reduced pressure on land and agriculture
- Resource exploitation like mineral, forests, water for economic growth and development.
- Alternative land use by using limited land.

However, there are negative effects;

- Pollution of air, water and land by wastes and sewerage.
- Profit repatriation for China causing capital outflow.
- Environmental degradation through construction, getting raw materials.

Social infrastructure / social services

- Over exploitation of resources like mineral, forests, water.
- Urban problems like high cost of living.
- Regional imbalance causing economic problems
- Accidents destroying people and property by machine cut, fire outbreak.
- Unemployment because of capital intensive technology.
- Diversion of labour and capital affecting other sectors.
- Displacement of people and activities by gazetting area.

– Pollution / ozon layer

Impression marking 25 marks

6. **For either New York or Rotterdam discuss the factors that have led to its development as an urban centre.** **(25 marks)**

Approach:

- Choose the case study.
- Define urbanization. / Ytics of urbn
- Locate the areas covered.
- Give factors for urban development.

Y-tics
- Dense popn
- gazetted by the gov't
- many activities

Dense

Rotterdam
– An international port (inland port) (entry port) along the shores of North Sea / Atlantic Ocean with NL as her hinterland.

Answer - NEW YORK.

Urbanization is the growth and development of towns and ports with increasing population living in urban areas. New York is found in North America. It is a town, industrial centre, and a leading port in USA. It covers areas like Manhattan Island, Bronx, Brooklyn, Queen's ~~Station~~ Staten and Long Island.

Its growth and development is due to physical factors and human activities as discussed below:

- Presence of a natural harbour and port protected from strong waves by islands and being indented and irregular with less accidents.
- It is ice/frost free with no winter and snow therefore used throughout the year because of its tropical location.
- It has a low tidal range with weak waves causing fewer accidents.
- Availability of a rich hinterland of USA and Canada with many exports like wheat from Canadian prairies, industrial products from the great lakes making it busy throughout. year
- It is strategically located near the Atlantic Ocean having its own port and using cheap water for navigation easily connected to other continents like Europe, Asia and South America.
- Improvement of transport infrastructure and communication with roads, railway lines, port facilities, airports, canals, pipe lines, connecting New York internally like St. Lawrence sea way, Kennedy airport, New York airport etc.
- Relief which is flat and gently sloping e.g Manhattan Island leading to easy construction, transport, mechanisation and drainage.
- Presence of hard granite basement rocks giving a firm foundation for the

construction of skyscrapers like the world trade centre, UNO building on Manhattan island etc.

- Water supply like from Atlantic Ocean used for domestic purposes, industrial establishments and for dumping wastes and sewerage.
- Presence of deep water accommodating large ocean vessels like oil tankers, ships carrying exports and inputs like wheat from Canadian prairies, minerals from the Rockies, Appalachian montains and Mesabi region.
- Availability of capital for purchasing modern equipment and building modern facilities like airports and canals.
- Favourable government policies like developing infrastructure, construction, maintenance and rehabilitation.
- Political stability since independence attracting local and foreign investors limiting defense budgets and supporting development.
- Presence of a high population providing enough labour supply and market for economic activities like trade and industrialisation.
- Good social services like health centres, schools and power supply attracting many people for settlement because of high standards of living. Colombia University is one great attraction.
- Improved science and technology leading to skilled labour for resource exploitation and putting up modern facilities like skyscrapers on Manhattan Island.
- Good international relations with neighboring countries e.g Canada and foreign countries using it as a port and making it busy.
- Alternative land use because of its limited resources, land therefore is not good for other economic activities leading to ports, towns and industrial areas.
economic activities leading to ports, towns and industrial areas.
- The soil types being marrum and lateritic helping in construction of buildings and transport routes by giving a hard basement.
- Presence of many economic activities like industries, trade, tourism and transport attracting many for employment and investment contributing to its economic development.
- It has a good shoreline with limited impediments like swamps, papyrus and water hyacinth making it a good international port. and approachable
- Historical and cultural factors like the early settlers of New York from Europe who came with enough skills which were used to transform and develop New York.
- Availability of land gazetted by the government for establishment of ports, towns and industrial centres contributing to its development.
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-
-

Impression marking 25 marks

7. **Assess the role of railway transport to the economic development of either Zambia or Switzerland.** **(25 marks)**

Approach:

- Choose a case study
- Define railway transport
- Give railway routes
- Explain the advantages and disadvantages

Transport refers to the physical movement of people goods and services from one place to another. Railway transport is by use of trains using railway lines mostly for transporting bulky and heavy goods for long distances.

- Zambia – Railway transport runs from Kapirimposhi Dar-es-salam and also connects to other areas like Lusaka and Zimbabwe.
- Switzerland – areas include the Alps and Jura and connects to towns Basel, Zurich, Lucern, Geneva, St. Gallen Winterthur and others.

Positive effects

- Facilitated mineral exploitation hence improvement of the economy.
- Stimulated / development / import in T.P
- Urbanization / settlement
- Encourage international relations
- Agricultural development has been stimulated as agricultural imports can conveniently be moved.
- It facilitates forest exploitation by conveniently transporting timber.
- Development of tourism industry by transporting tourists to major tourists centers
- ~~Fishing has developed near~~ Cape town, Port Elizabeth, Durban
- Industrialization has been facilitated through convenient marketing of industrial imports.
- Attraction of foreign investors
- Provision of employment to individuals
- Remote areas especially in the north, forested have been opened up.
- Foreign exchange has been earned through taxing on imports and services.
- Government revenue is earned by taxing employees on the railway systems and related projects.
- Trade and commerce have been stimulated as railway transports goods and services to world market like Mozambique, Zimbabwe, Namibia, etc.
- Economic diversification
- Promotion of research and education
- Connection to other transport routes
-
-
-
-

Negative effects

- Congestion of vessels and wagons at railway terminals.
- Displacement of people during the construction of railways
- Resource exhaustion thus increased exploitation e.g. gold mining / copper
- It has promoted urban problems like prostitution, poor sanitation
- It has promoted accidents along the railways leading to destruction of property.
- Influences environmental degradation through construction.
- Promotion of regional imbalances in economic development in areas served by railway lines.
- Promotion of landslides and mass wasting as rocks and steep terrain are exposed.
- Rural urban migration affecting agricultural sector
- Soil erosion causing soil exhaustion.
- Less flexible and convenient
- Landslides and mass wasting causing destruction
- Urban problems by high population
- High expenses diverting labour and capital
- Slow and not suitable for perishable goods eg vegetables and fruits.
- ~~Different goods~~
- Cheap transport destroys other means of transport
- Pollution because of wastes
- High costs of maintenance | Loading and offloading, Transport
-
-
-
-
-

Impression marking 25 marks

8. (a) Differentiate between renewable and non-renewable natural resources. (5marks)

(b) With specific examples from any one Tropical African country, examine the measures being taken to conserve the renewable natural resources. (20 marks)

Approach:

- Define and differentiate with examples.
- Choose a case study.
- Give the measures and solutions.

- Defn
- egs
- Means } of means.

Answer - UGANDA

(a) Natural resources are gifts from nature which are exploited to produce further wealth and improve the standards of living leading to economic development. Renewable natural resources are those which are continuously being exploited without

exhaustion and when exhausted can be regenerated like soils, animals, vegetation, water bodies etc. Non-renewable natural resources are those which when exploited can not be replaced e.g minerals.

(b) The measures being taken for conserving natural resources in Uganda include:

Forest resources:

- Carrying out afforestation and re-afforestation programmes with soft wood species like red cedar in Bugamba, Magamaga, Nakasongola, Mafagga. Kafuuga mafuga
- Using alternative sources of fuel, power and energy supply e.g biogas in Kakira, biomass, HEP at Nalubale dam. thermal energy Kampala, geothermal, solar energy reducing on forest destruction for firewood and charcoal.
- Controlling of bush burning by putting heavy fines and laws scaring people.
- Gazetting areas as national parks, game reserves and forest reserves and wetlands reducing on destruction by man like Kabalega NP, Mabira FR and Katonga GR.
- Controlling population using modern methods of family planning e.g using pills, condoms sterilization etc.
- Treating wastes before discharge and recycling by removing plastics, metallic objects and pothelyne papers which do not decompose.
- Promoting mass education and mobilization using formal and informal education helping in creating awareness for conservation.
- Getting fire fighting equipment like control towers, water bombers, and extinguishers etc.
- Promoting eesearch on tree planting species of high demand like the molinga tree, neem tree, bark cloth tree etc which are even multi purpose.
- Training skilled labour like forest officers and environmental officers helping in conservati education.
- Government supporting by giving loans, insecticides, pesticides hence helping conservation.
-
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-
-

Water resources:

- Controlling fishing like using big sized nets and giving licenses to fishermen.
- Checking on water pollution through recycling and treatment of wastes by NEMA.
- Establishing hatcheries with young ones in overfished and exhausted areas like at Kajjansi and Entebbe fisheries.
- Limiting swamp reclamation through gazetting them as wetlands like the shores of L. Victoria and the banks of R. Rwizi.
- Carrying out water harvesting using valley dam and tanks in Nyabushozi,

Nakasongola and water tanks near homesteads.

- Removing the floating vegetation like papyrus, water hycinth using biological, chemical and physical means e.g on L.Victoria.
- Gazetting areas near water bodies as wetlands reducing on activities which cause sedimentation and ~~siltatkm~~. Siltation
- Strengthening laws and fines against overfishing using small nets and bad use of water bodies.
- Promoting mass education and mobilization using formal and informal education on proper resource management and water resources.
- Setting up proper boundaries between national parks, fishing grounds and checking predators.
- Training skilled labour like fisheries officers, environmental officers helping in education, supervision and monitoring.
-
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-
-

Soil resources:

- Using soil conservation measures like terracing in Kigezi, mulching in Kasaku tea estate etc.
- Applying modern methods of farming like ranching, intensive farming in Mbarara.
- Training skilled labour like environmental officers helping in education and monitormg.
- Controlling population using modern methods of family planning like using condoms, pills *etc.*
- Carrying out mass education and mobilization using formal and informal education like UPE.
- Separating industrial areas and residential areas, controlling pollution like Naalya housing and Namanve industrial area.
- Controlling pollution by recycling treatment of wastes and proper waste management.
- Gazetting areas as national parks, game reserves, forests and wetlands reducing on human activity which accelerate degradation e.g Mt. Elgon forest, Bwindi and Mughahinga forest etc.
- Practicing afforestation and re-afforestation programmes with soft wood species which take short time to mature e.g pine, western hemlock, Cyprus etc.
- Formating government agencies and non government organizations helping in supervision and monitoring like NEMA, UTB and UWA.
-
-
-
-

Fish resources

- Restocking of over fished areas with young ones and new types.
- Strengthening laws and regulations for controlling illegal activities.
- Gazetting fishing areas to reduce over exploitation
- Diversifying the economy reducing dependency on fishing.
- Carrying out proper waste management for controlling pollution.
- Giving licenses to fishermen reducing on over exploitation.
- Forming cooperatives and management committees for supervision.
- Encouraging fish farming in ponds for increasing production
- Using fish holidays for controlling over fishing.
- Training skilled labour for supervision and monitoring,
- Using marine police for controlling illegal fishing.
- Removing water weed for easy growth of fish and planktons.
- Using big size nets and modern methods of fishing for getting mature fish.
- Promoting mass education and mobilization about the causes, effects and solutions
-
-
-

Wild life resources

- Restocking with new animals and young ones for animal conservation.
- Gazetting national parks, game reserves, forest reserves, wetlands for environmental conservation.
- Promoting mass education and mobilization about the causes, effects and solutions.
- Strengthening laws and regulations for controlling illegal activities
- Training skilled labour for supervision and monitoring.
- Promoting political stability and security for animal conservation.
- Promoting research for sustainable development and planning
- Controlling population growth reducing on encroachment
- Planting trees for conserving the environment
- Using proper waste management for controlling pollution.
- Promoting good international relations for joint conservation
- Treating animals in areas with pests and diseases.
- Economic diversification reducing dependency.
- Promoting proper exploitation of resources reducing wild life conflicts.
- Training game rangers for supervision and controlling poaching
- Forming government agencies and non-government organizations
- Helping in supervision, education and monitoring

Total = 25 marks

Nb: mind on the tense.

END

WAKISSHA JOINT MOCK EXAMINATIONS
MARKING GUIDE
Uganda Advanced Certificate of Education
UACE August
GEOGRAPHY P250/3
STANDARDS:

Standards:

Marking should be guided by the following principles:

1. The whole paper is to be marked by impression unless otherwise stated for a particular question? Part of a question.
2. Candidate should exhibit ability to explain, discuss and illustrate the points raised.
3. A mere outline of points should not attract more than half ($^1/_2$) of the marks allocated to question / section

Awards:

An excellent answer5 scores	21 - 25 marks.
A very good answer scores	18 - 20 marks.
A good answer scores	15 - 17 marks.
A fairly good answer scores	13 - 14 marks.
An average answer scores	10 - 12 marks.
A below average answer scores	08 - 09 marks
A fail answer scores	01 - 07 marks.
An irrelevant answer scores	00 marks.

SECTION A (FIELD WORK)

1. a) (i) Candidate is expected to state the topic of the study pointing out'
   - What was studied,
   - Where the study was carried out,
   - The geographical relationship investigated during the study.

   2 marks

   (ii) Candidate is expected to come up with the objectives of the study which should be;
   - Closely related to the topic
   - Specific and clear
   - Measurable and achievable.

   NB:
   - No objective should be a mere repetition of the topic.
   - Accept objectives stated using phrases like:
     - To find out
     - To investigates
     - To identify

- To suggest
- To examine
- To discover
- To assess

- Do not accept objectives stated using phrases like:
  - To know
  - To understand
  - To appreciate
  - ~~To suggest~~, etc.

— To admire / Les

Any 3 valid objectives, ~~3x1 = 03 marks~~

b) Methods used

Candidates are expected to describe how they used each of the following methods during the fieldwork study.

i.e. they should

- Define the method (1 mark)
- Describe how it was used and the tool should come out. (1mark)
- Mention the information obtained inusing the method. (1mark)

For example;

i) **Observation:** is the use of eyes and other senses to get / obtain geographical information from the field.

What was used may include goods, land uses, crops, products, relief, etc.

ii) **Interviewing** is a face to face interaction between the research and the respondent, the researcher asks oral questions and the respondent answers orally.

Candidates should explain how they interviewed and the information they got / found out.

iii) **Recording refers to the writing / jotting** information from the field on the piece of paper using a pen, pencil and paper in form of field notes, field diagrams, etc.

Candidates should describe how he/she recorded and show what he/she recorded.

iv) **Measurement** refers to use of calibrated e.g tape measure and non-calibrated instruments like ropes to establish quantified information such as length, volume, size and weight during a fieldwork study to establish the geographical relationship.

v) **Sampling** refers to use of a part of the whole to represent the whole during a fieldwork study.

Questionnaire, Literature review

vi) **Map orientation** refers to the turning of the base / survey map of the area being studied until the features on the map tally with those on the ground.

NB:- Any 3 X3= 09 [mark the 1st three"]

(c) How the field work study helped to understand the geography of the area.
Candidates are expected to come up with the varied relationships under the following categories;
Physical to physical. – 07 X2 = 02.
Physical to human – 07 X2 = 07
Human to human – 07 X2 = 07

NB: Relationships should have proper connecting words such as; Led to, due to, facilitated, encouraged, favoured, promoted, discouraged, hindered, etc.

- The relationships should be illustrated with place names or direction.
- If the relationship lacks the place name or accountability, it scores 1 mark. [without direction] 00 mark

Total 25 marks

(d) recommendations

These are proposals / suggestions by students using future tense with examples.

For example;

- they should build storeyed houses to minimize space
- to plant trees for environmental conservation
- to construct fishing ponds for economic diversification.
- To carryout horticulture for food supply
- To gazette wetlands for sustainable development
- To train skilled labour for job creation, etc

07 X4=

4 marks

2. a) (i) Candidate is expected to state the topic of the study pointing out`

- What was studied,
- Where the study was carried out,

- The geographical relationship investigated during the study.

= 2 marks

(ii) Candidate is expected to come up with the objectives of the study which should be;

- Closely related / relevant to the topic
- Specific and clear,
- Measurable and achievable

NB:

- No objective should a mere/direct repetition of the topic
- To be measurable and achievable they should be stated using phrases/verbs like
  - To find out
  - To investigate
  - To discover
  - To examine, etc

Do not accept objectives with phrases like:-

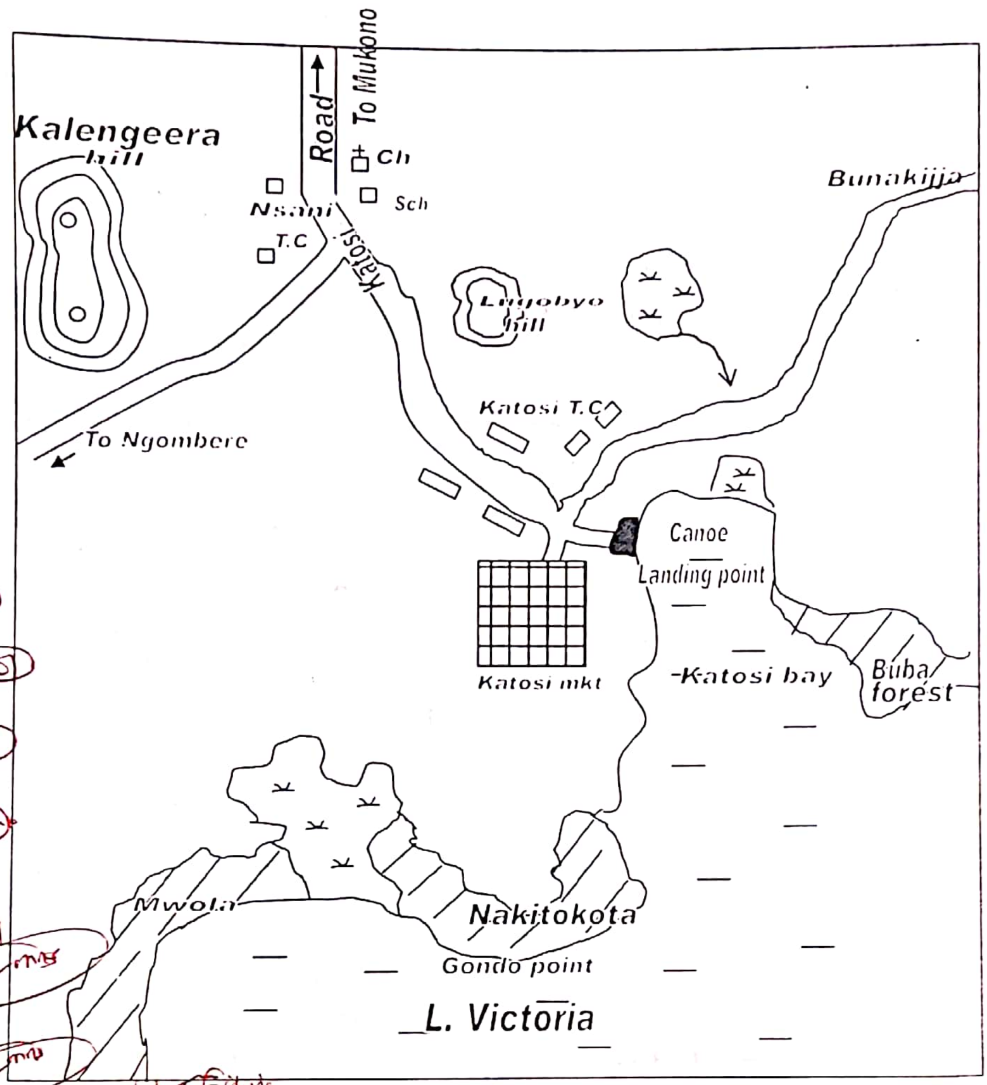
- To know, to understand, to see,
- To suggest, to appreciate etc

Any valid objectives x 1 = 3marks
Max = 5marks

(b) Annotated sketch map for Katosi fish landing site showing physical and manmade features.

(b)

Annotated sketch map for Katosi fish landing site showing physical and manmade features.



Tittle = 01
frame/border 01
compass/direction 01
Labelling/key – 01 mk
Any "2" physical 02 mks
Any 2" Human 02 mks
NB= Ones ... for fishing
– Use symbols not pictures
– physical features should be varied,
– The physical features / like; ...

KEY

Katosi market	Culvert
All-weather road	Water body
Settlement	Natural forest
Katosi landing site	Permanent
Nsania church	Hill

M=2
P=3
H=3
Tt=8mks

Nb: Anointed physical features and man-made features are labeled on the map.

OR A LINE TRANSECT

8 marks

- Tittle – 01
- Labelling/key – 01
- Ending Points – 01 – face ... direction
- Shading – 01
- Any '2' human features
- Any "2" physical features

NOTE: – The title should have ending points/direction [direction should face one direction]
– Arrows should touch the ground & pictures should touch the ground & nothing in space

(c) A candidate is expected to identify and briefly explain the impact of human activities / land use on the physical environment of the area studied.

- The physical environment should be varied and should include; relief / land forms, drainage, vegetation types, soils, the atmosphere / air and climate.
- Land use activities should include; settlement, agriculture, communication, recreation, tourism, nature conservation, forestry, fishing, mining / quarrying, etc.

For example;

- The quarrying of earth materials on the slopes accelerated soil erosion leading to creation of deep gullies.
- Cultivation of crops in the valley has led to the drying up of the swamp.
- The establishment of a livestock farm on the hill has led to the degradation of the natural forest on the slope of the hill.
- The planting of pine and eucalyptus woodlots on the hill has created a cool micro climate in the area.
- The development of industries has caused pollution.
- Lumbering has caused deforestation leading to environmental degradation.
- Road construction has led to destruction of the landscape.
- The use of fertilizers has contributed to soil conservation and fertility.

NB: Accept both positive and negative impacts.

~~Accept not more than 2 impacts on one category of physical~~ environment.

~~Any 7 valid points x 1 =~~ 7 marks

(d) Activities carried out

Candidates are expected to describe the activities they carried out as a follow-up such as;

- We assembled in class and discussed data collected.
- We presented data and compared it with each other.
- There was data analysis.
- There was polishing of the sketches and diagrams.
- There was drawing of conclusions.
- There was making of recommendations.
- There was writing of a final report.
- The report was cross-examined by the teacher.
- There was dissemination of the report to the various stakeholders.

Nb: Any 4 activities described in past tense with some form of explanation = 5 marks.

Mere statement of the activities without a tense = no mark.

Statement of activities in past tense but with no explanation = ½ mark

- **The order of the activities does not matter.**

Total = 25 marks

SECTION B: UGANDA

3. The climate of Uganda is mainly influenced by altitude. Discuss

Approach

- Define climate
- Climatic types, zones and areas characterized
- Sketch map for climatic types/ zones
- Influence of altitude
- Other factors
- Conclusion

Climate is the average weather conditions of a place observed, recorded and taken for a long period of time usually between 30-40 years.

Climate zone, types in Uganda

- Equatorial climate characterized by high rainfall around 1500mm, humidity 70%, high temperatures above 25^0c, double maximum with peaks in march and September, low temperature below 5^0c for example shore of L Victoria like Kala gala, Mpigi, Mukono, Wakiso.

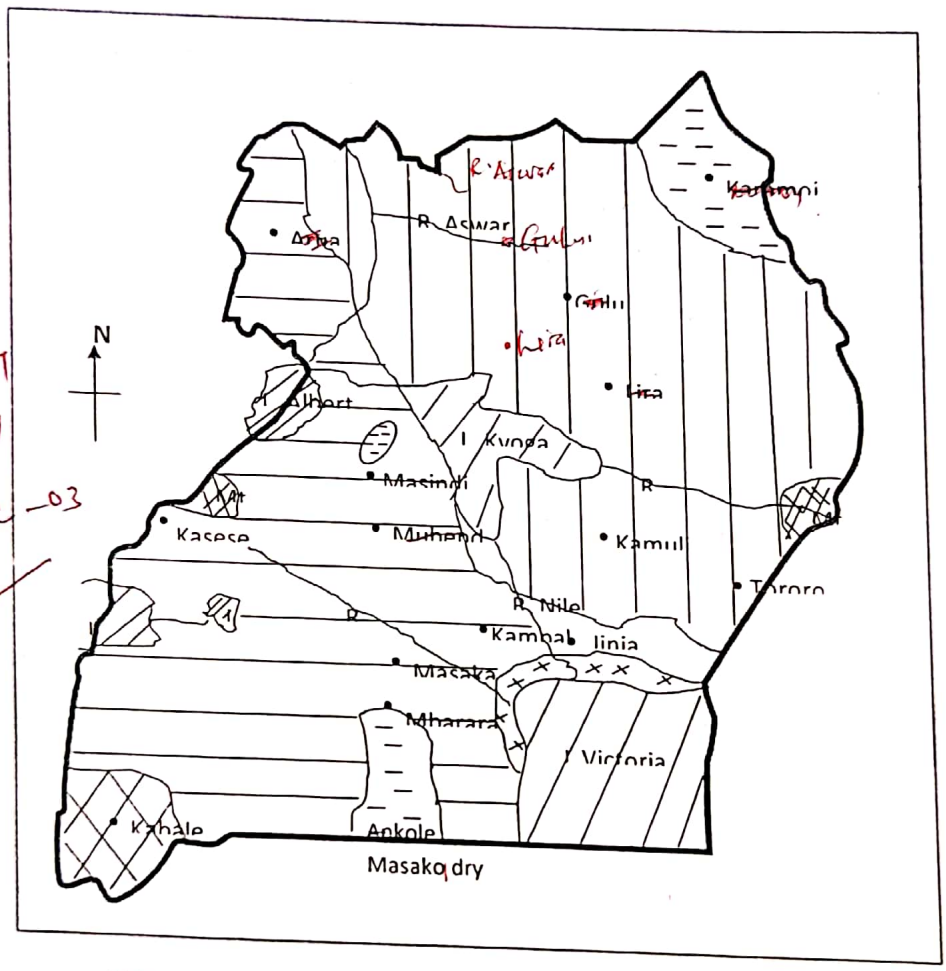
- Savannah / Tropical climate with hot and wet season, rainfall around 1000mm, humidity 50%, one maximum peak, high temperatures above 25^0c, temperature range between 5^0c and 10^0c like in Soroti, Tororo, Gulu, Lira, Luwero, Masindi, Bundibujo.

- Modified equatorial climate characterized by rainfall between 100mm-1500mm, humidity 50%-70%, high temps around 25^0c, wet and dry conditions like Mbarara, Masaka, Bushenyi, Ibanda, Mityana, Hoima, Arua

- Mountainous climate characterized by high relief rainfall around 1500mm high, humidity of 70%, low temperatures between 10^0c-20^0c for example slopes of Mt Elgon, Mt Rwenzori, Mbale, Sironko, Kigezi highlands, Kabale, Kisoro, Karungu

- Semi desert climate characterized by low and unreliable rainfall below 760mm, humidity 30%, high temperatures above 30^0c, prolonged drought, excessive evaporation, high temperature range around 20^0c like Karamoja region in Kitgum, Kotido, Katakwi, Moroto, Ankole, Masaka dry corridor in Rakai, Isingiro, Kabura, Sembabule, Kiruhura, parts of Kasese, Nakasongola, Ntungamo, Masindi.

A sketch map of Uganda showing climatic types/ zones



KEY

- Lake Victoria basin zone equatorial
- Semi desert Karamoja zone
- Mountainee climate Western Uganda
- Modified equatorial Ankole Buganda climate
- Savanna climate Acholi Kyoga zone

M=2
A=3
Tt=5mks

Title – 07
Key – 07
Identification – 03
05

NB:- Candidates are expected to explain the influence of altitude.

Climate is influenced by altitude and other factors

The influence of altitude

- Highland s and mountainous areas had low temperatures due to altitude like low temperatures 10^0c ice because after every 300ft drops by 1^0f for example Kigezi highlands, slopes of Mt Elgon, Mt. Rwenzori.
- Highlands and mountainous areas have low humidity due to low temperatures like Mt Elgon, Mt Rwenzori, Kigezi highlands.
- Lowlands and flat lands have dry conditions like the rift valley floor, Teso region, northern Uganda, Kasese region with rainfall between 500mm-1000mm.
- The areas of the leeward side of mountainous have dry conditions due to cool dry winds which descend and absorb moisture forming a rain shading effect for example Kasese due to Mt rwenzori, Karamoja because of Mt Moroto and Ethiopian highlands, Ankole, Masaka dry corridor due to Mt Rwenzori and Kigezi highlands.

However there are other factors;

1. Presence of water bodies influencing wet conditions because of sea breeze and breeze like L. Victoria basin in Kalangala, Mpigi, Mukono, Wakiso and limit water bodies, dry conditions like Karamoja, Teso region, Karamoja
2. Vegetation cover like forests and swamps for high rainfall, dense clouds and high humidity for example around Mabira, Budongo forests, sese Islands, Mpigi forests and limited vegetation, less effect like Nakasongola, Kasese, Karamoja with poor scarcity herbs and shrubs.
3. Latitude like areas near the equator wet due to ITCZ leading to double maximum rainfall, convectional rainfall like in Buganda region in Mpigi, Wakiso, Mukono and far from the equator dry like northern Uganda, Karamoja.
4. The prevailing winds and wind systems leading to wet conditions like the westerns for Kigezi highlands, local winds like Katabatic and anabatic for L Victoria basin, slopes of Mt Elgon, Kigezi highlands.
   - The NE trade winds bring dry conditions in Karamoja and SE trade winds for wet conditions in Mpigi, Kalangala ,Wakiso and dry conditions in Ankole Masaka dry corridor because of changing direction.
   - Distance from the sea leeds to dry conditions in the interior due to less effect by ocean currents like Ankole , Masaka corridor, Karamoja, northern Uganda.
   - Presence of dense cloud cover leads to low temperature range, high temperatures and rainfall like Karamoja, northern Uganda and dense clouds, wet conditions like in L Victoria basin, Kigezi highlands around Mt Elgon, Mt Rwenzori.
5. Aspect influences low temperatures in mountainous areas and highlands because they receive limited sunshine like kigezi highlands around Mt Elgon.

Mt Rwenzori and high temperatures due to direct sun rays in western rift valley floor. Teso region, Northern Uganda, Kasese, Ankole, Masaka corridor.

Human activities, economic activities and land use patterns in areas with high population lead to environmental degradation causing dry conditions like lumbering in Kigezi, agriculture in slopes of Mt Elgon, mining in Tororo and Kasese, settlement in Buganda and road construction. Human activities lead to environmental protection and wet conditions like forestry in lendu, Namanve, Matuga, Nakasongola, magamaga. The planting of plantational crops lead to wet conditions like Kasaku tea estate, Tororo, Mityana, Mubende, Kyamuhinga, Kayonza agro forestry like at Kawanda, Namulonge, Kabanyoro. The gazetting of areas as national parks, game reserves, wetlands like Rwenzori NP, Katonga GR, Tilinyi swamp.

To a large extent altitude has influenced Uganda's climate in combination with other factors

4. a) **With reference to specific examples, discuss the problems facing urban areas in Uganda.**

Approach

(a) Define urbanization
- Types/ areas
- Status / situation
- Sketch map
- Problems

(b) Solutions

Urbanization is the increasing proportion of population living in towns and cities that is te growth of towns and ports for example Kampala, Entebbe, Jinja, Mbarara, Mbale, Gulu, Masaka, Kasese, Arua.

It is characterized by;
- Having high population of over 1 million
- High population density
- Improved social services like water, power
- Imrpved infrastructure like Airport, railway station, roads, post office.
- Gazetted by the government
- Havinh offices for the government companies, organizations

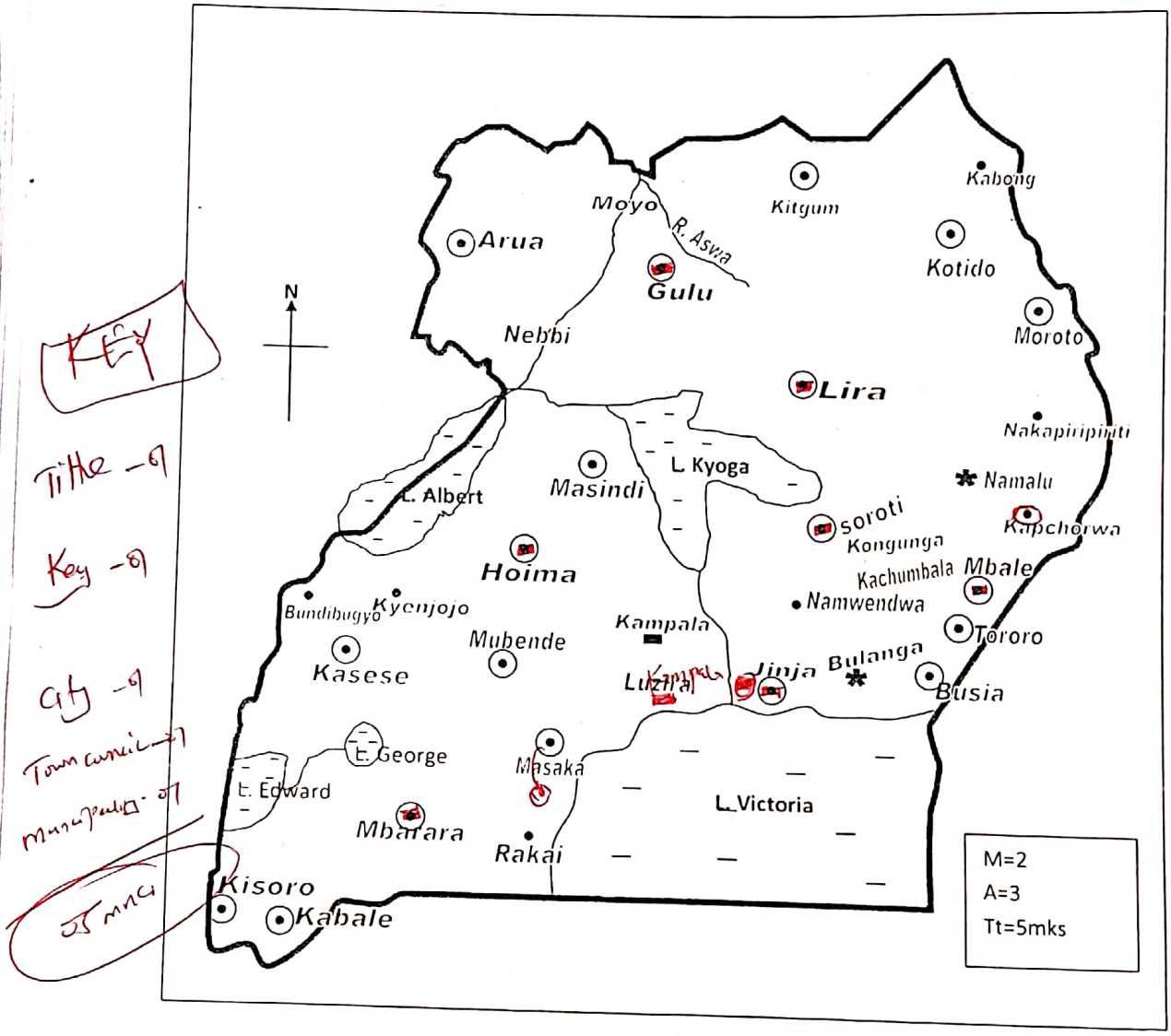
Status / situation
- Urbanization with 10% of the people
- Positive trend in urban development
- Urban areas are mostly headquarters for districts, regions

- Urban areas are centres of economic activities, social services and infrastructure
- Urban areas in Uganda not yet developed

Categories/types

- Cities / ~~capital~~ city e.g Kampala. ; Mbale, Hoima, Soroti, Jinja, Lira, Gulu, Fort portal
- Municipalities e.g. ~~Jinja~~, Masindi, Kabale, ~~Fortportal~~, ~~Arua~~, Tororo, Mukono, Kayunga, Iganga, Kamuli, etc.
- Town councils e.g Buwama, Napak., Pallisa, Katakwi, Kaabong & Lukaya.
- Town boards / trading centres e.g. Kasenyi, Bulopa, Namulesa, Nakyenyi, Ovisoni, etc.

Sketch map of Uganda showing urban areas.



KEY

- Capital city
- Municipalities
- Town councils
- Trading centres / town boards

NB: Answers / points shld be illustrated wi
11 Names of urban centres / areas.

TA

The problems of urban areas in Uganda are physical and human.

- High rates of unemployment and underemployment leading to low standards of living like in Kampala, Jinja, Entebbe.
- Poor accommodation (shortage / poorly developed) and housing in the slums of Bwaise, Natete, Katanga in Kampala, Nyendo in Masaka.
- Social problems and high crime rate like prostitution, drug addiction in slums of Kampala, Jinja, Entebbe.
- Spread of diseases because of many people and limited health facilities like cholera in Kampala.
- Traffic congestion causing inconveniences and delays like at Bwaise, Nakawa in Kampala.
- Poor social services (developed) like water, power, health, education leading to low standards of living like Katanga slum in Kampala.
- Environmental pollution because of many people, industries, heavy traffic like at Nakawa, Nyendo in Masaka.
- High costs of living because of paying basic needs leading to povery like in Kampala, Entebbe.
- Poor urban management because of limited facilities and high population like gabbage collection in Kampala, opening drainage channels.
- Encroachment of gazetted areas like Kyambogo wetland, Namanve forest.
- Limited land for expansion making it expensive and causing conflicts and tensions like Kampala central.
- Poorly (developed) infrastructure like drainage channels, roads like in slums of Kisenyi, Katanga in Kampala.
- Over exploitation of resources causing exhuastio like soils near kampala, fish in L. Victoria.
- Change of cultures by mixing people andcultures like western influence among the youth in Kampala causing social problems.
- Promotion of rural-urban migration leading to low population (food shortage), labour force in rural areas like Masaka, Luwero, Kabarole.
- High costs of urban management like universal education in Kampala.
- Promotion of conflicts and tensions due to limited resources like strikes, demonstrations like Owino marke, Nakasero, Kiseka in Kampala.
- Shortage of lbr force
- Ice street cha
- Displacement from towns
- Higher cost of

Any 10 X 1 = 10

NOTE: Use present - continous tense.

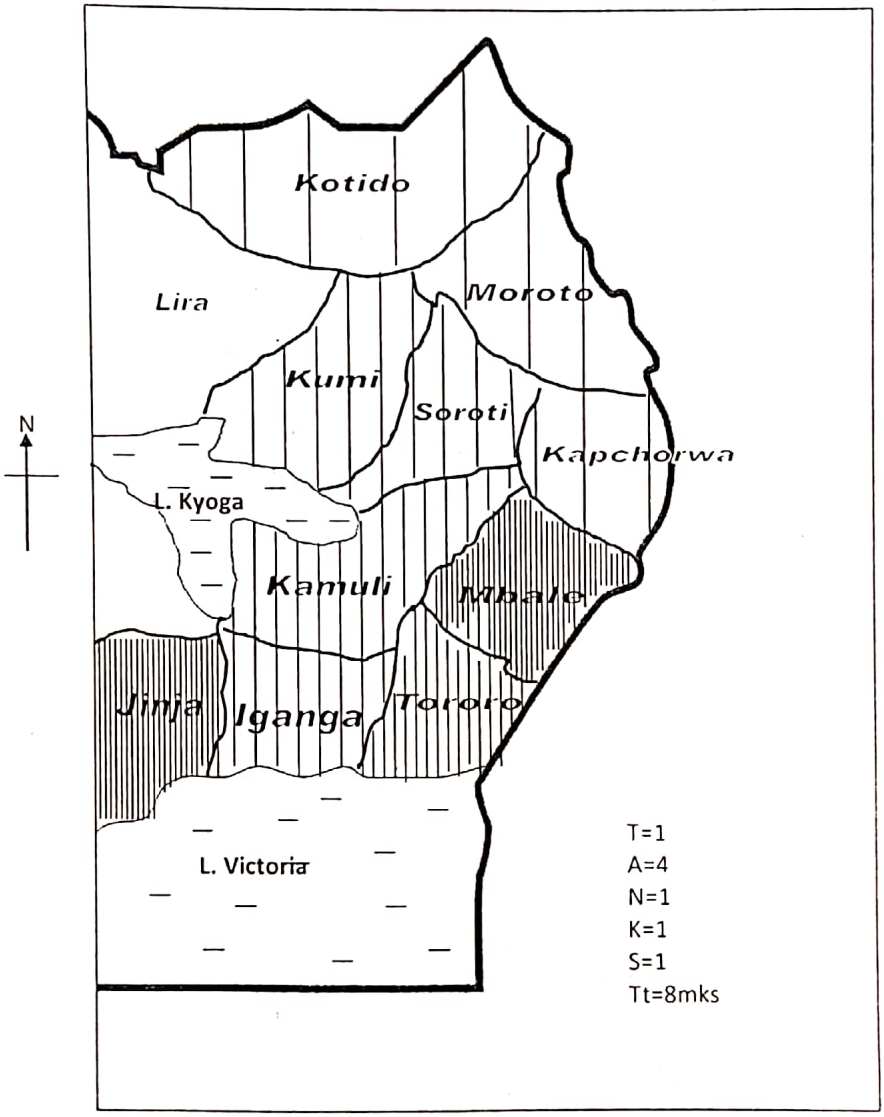
Part B

b. **The solutions, steps,measures and procdures.**

- Improving people's income through experience like Pride Africa like Katwe metal works.
- Proper waste management by using dust bins, recycling and treament of wastes in Kampala, Etebbe,Mbale .
- Development project in rural areas or investiment reducing on rural ubarn migration .
- Constraction of housing estates on accommodation like Bugolobi Estates, Nankya housing estates.
- Improvement of transport and infrastructure like Kampala Mothers By pass, Waka traffic lights.
- Gazetting areas like wetlands, forest reserves like Kyambogo wetland in Kampala, Nyamutyobora forest in Mbarara.
- Population control using modern methods of family planning reducing on activities and rural urban migration.
- Proper land use management by separating industrial and residential areas like Nakawa for industries, Bugolobi flat for settlement.
- Construction of stoyed houses to minimize space like Uganda House, Crested towers.
- Privatization and liberalization of urban services like gabbage collection in Kampala.
- Training skilled labour by promoting sciences for job creators and helping planning and development.
- Mass education and mobilization on the causes, effects, solutions using mass media.
- Changing land tenure systems through land bill, changing the mailo land in Uganda, Ranch restricting in Mbarara.
- Proper planning by gazetting areas for economic activities, settlement and environmental protection like Golf course in Kampala.
- Proper maintenance and rehabilitation like Nakawa Traffic lights, Nakivubo drainage channel.
- Economic diversification for employment and investment opportunities like Owino market.
- Development of slums by improving social services like water, power, drainage channels, toilets like Kawempe division.

5. **(a)**

A cloropleth map showing population densities of Eastern Uganda districts



Key / Scale. Pple /km²

1-50

51-100

101-150

151-200

Over 200

Kotido, Moroto & Kapchorwa

Soroti & Kumi

Iganga & Tororo

Title – 01mk

Key – 01mk

Accuracy – 05mks

NB:- Candidates are expected to draw a choropleth map showing population density.

Tt = 07

(a) **Disadvantages**

- Maintenance of accuracy is not easy.
- It takes time in shading and showing many items.
- Reading and interpreting individual variables is not easy.
- It cannot be imposed or cannot contain additional information.
- It is tiresome in showing many items.

(2 marks)

(b) **Causes of rural-urban migration in Uganda.**

Pull factors to urban areas

- Employment opportunities like owino market, mukwano industries in Kampala.
- Better social services for high standards of living like Mbarara University and hospital in Mbarara.
- Political stability attracting people for settlement and investment like from Gulu to Kampala.
- Improved transport and communication for better social services and investment like Entebbe airport, Kampala railway station.
- Entertainment and urban excitement like Nambole stadium, club silk in Kampala for the youth.
- Investment opportunities attracting traders like owino market, Nakasero, Nakawa.

Push factors from rural areas:

- Land shortage causing conflicts, tensions like land fragmentation from Kabale, Mbale.
- Political instabilities like LRA by Kony in Gulu, ADF Rebels in Bundibujo and Kasese.
- Climatic changes like drought limiting agriculture like Masaka, Luwero.
- Government policies like oil exploration in Bulisa, Bundibujo, Hoima, Masindi.
- Low agricultural production causing famine and hunger like in Karamoja, Masaka. Luwero.
- Cultural problems like circumcision in Mbale, Kapchorwa.
- High crime and social problems like prostitution, robbers, criminals, witchcrafts from rural areas to Kampala after becoming social misfits.
- Poor social services leading to low standards of living like Masindi, Kabarole.

- Poor transport and communication making areas remote and backward like Kalangala, Karamoja, Kisoro, Bundibujo, Kapchorwa.
- Limited economic activities leading to poverty due to limited resources like Mbale, Luwero.
- Natural Calamities/like Landslides/floods.

(8 marks)

(c) **The population distribution is because of physical and human factors.**

- Poor climate with dry conditions leads to low population in Kotido. Moroto and favourable climate hign population like Mbale, Jinja.
- Relief like high lands and mountain slopes have high population e.g Mbale due to favourable climate less diseases and easy drainage while flat areas like Moroto have low population.
- Cultures and traditions lead to low population like Moroto, Kotido occupied by nomadic pastoralists. + Land tenure system like; moderate popn
- Presence of economic activities lead to high population because of attracting people for employment and investment opportunities like Jinja. [Trade & commerce].
- Presence of fertile soils in Mbale, Jinja lead to high population because many people are attractive for agriculture and poor infertile sandy soils lead to low population in Karamoja. , Moroto & Kotido. + Pests & diseases [Tsetse flies in Karamoja].
- Improved transport and infrastructure attracting many people for settlement like Mbale, Jinja district put infrastructure low population like Kapchorwa.
- Availability of resources lead to high population like fishing in Jinja and limited resources few economic activities like in Kotido.
- Political stability ceases to high population in Mbare Jinja because of local and foreign investors conflicts causing low population in Moroto like cattle rustling. + Gov't policy of grazing Nat'l Park

NB:- factors for popn distribution must tally with those 10 districts mentioned on the map.

(8 marks)

- 8X1 = 8 mks

6. Candidates are expected to come up with the current status of mineral exploitation in Uganda e.g. • STATUS - 02 marks
   - There is wide spread exploitation of sand and clay.
   - Large scale commercial mining is limited
   - A variety of minerals with commercial value have been discovered in recent years and processes to exploit are either in advanced stages or they are already being exploited e.g oil in Buliisa, Uranium in Apac, vermiculite in Manafwa.
   - Most of the minerals are exported in raw form.
   - Vermiculite and gold are the leading mineral exports by value.

- Some mines that had been closed have been re-opened e.g. Kilembe copper mine.
- Most of commercial mining is done by foreign companies.
- Mining in Uganda is lowly developed. Etc. *max.02*

Candidates are expected to identify mining areas and the minerals mined.

e.g Kases; Lime stone, copper, salt, cobalt, etc

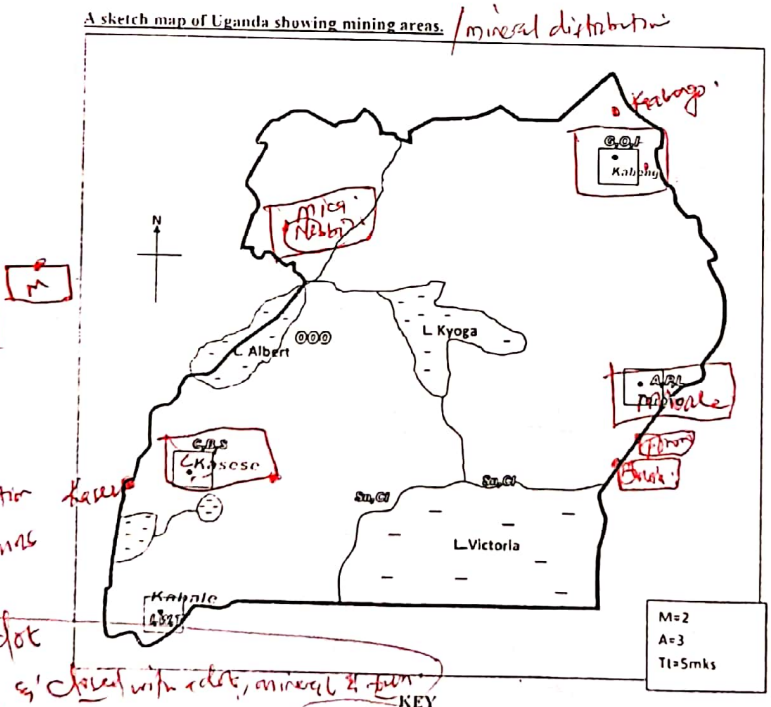
- Busia; gold, sand, etc
- Kaabong; gold, limestone, copper, mica

Manafwa; vermiculite, sand

Kapchorwa; limestone, gypsum

- Kabaale; Iron ore, tin, wolfram, gold
- Nebbi; mica
- Moyo; limestone.
- Hoima; oil, salt, sand
- Mubende; gold
- Bundibugyo; Gypsum
- Bushenyi (Kyamugunga); gold

A sketch map of Uganda showing mining areas.



- *Identification of areas without the minerals. (00mks)*
- *Mere identification of mining areas and the corresponding minerals (3mks)*
- *Identification on a map (5mks)*
- *NB: The learners required to dot for showing their relative position*

Candidates are expected to come up with the extent to which poor technology has contributed to low levels of mineral exploitation.

e.g

- Poor technology has led to the use of crude/rudimentary tools to obtain mineral ores e.g salt pans for salt extraction from lake Katwe. saucepans for gold mining in Busia.
- Poor technology has made it difficult to obtain minierals at deeper levels undergroung e.g oil in Buliisa.
- Poor technology has limited mineral exploration and prospecting e.g oil in Rhino camp was not discovered inspite of earoplane echoes indicating its existence.
- Poor technology has limited the processing of minerals e.g. salt from Lake Katwe.
- Poor technology has made the transport of minerals difficult e.g movement of brine from Lake Katwe to the collecting centres is done on pieces of wood. clay at Kajjansi is transported at times on wheel barrows, salt from Kibiro to Kigorobya (Hoima) is done on bicycles. Partly the delay in exploiting oil in Buliisa is due to the absence of a pipeline. Etc.

any 4 x 2 = 8mks

Candidates are sxpected to come up with other factors responsible for low level of mineral exploitation such as;

- Limited skilled labour to carry out mining e.g. oil in Buliisa.
- Limited capital to invest in buying of equipment e.g gold in Kaabong.
- Some minerals are located in remote areas which makes accessibility difficult e.g. iron ore in Muko (Kabale highlands)
- Competition with other landuses / dense population in mineral rich areas resulting into displacement / sensitive eco systems / environmental activism e.g limestone in Sukullu Hills.
- Low grade minerals discourage investment in mining e.g. cobalt in Kasese.
- Insecurity / hostile tribes makes mineral exploitation risky e.g. gold in Moroto.
- Limited market for some minerals discourage exploitation / price fluctuation/competition from other countries / competition from other substitutes e.g copper from Kasese.
- Diseases have at times made the exploitation of minerals stall e.g. Marburg in Bundibugyo and Kamwenge gold mines.
- Accidents claim lives of the miners and therefore discourage mining e.g. copper form Kasese.

- Climatic changes at times hinder exploitation because they delay the process or make it difficult to find the mineral e.g. salt mining at lake Katwe during the rainy season.
- Smuggling of minerals results into failure to obtain the value in them for example gold in Busia.
- Limited government support makes the mining attempts fail or delayed e.g failure by the government to rehabilitate the processing plant for salt in Kasese.
- Corruption / mismanagement / bureaucracy results into failure or delay in mining e.g oil in Buliisa.
- Land incumberances in case of minerals occurring in privately owned land delays mining e.g. phosphates in Tororo, oil in Hoima.
- Exhaustion of minerals limit mining e.g tin in Ntungamo.
- Some minierals occure in small quantities making it economical e.g. mica in Nebbi and gold in Bushenyi, Ulfram in Kabale.
- Profit repatriation by foreigh companies causing loss of income from mining e.g. limestone mining in Tororo and copper in Kilembe
- Fluctuating power supply limits exploitation e.g. salt in Kibiko and Katwe.

Impression marking – 25 marks

7. a) **What are the causes of rampant environmental degradation in Uganda.**
(15 marks)

Approach

Candidates are expected to define the term land degradation as the decline / reduction / destruction in the productive value of land. (2marks)

Candidates are expected to identify areas experiencing land degradation in Uganda.

They include;

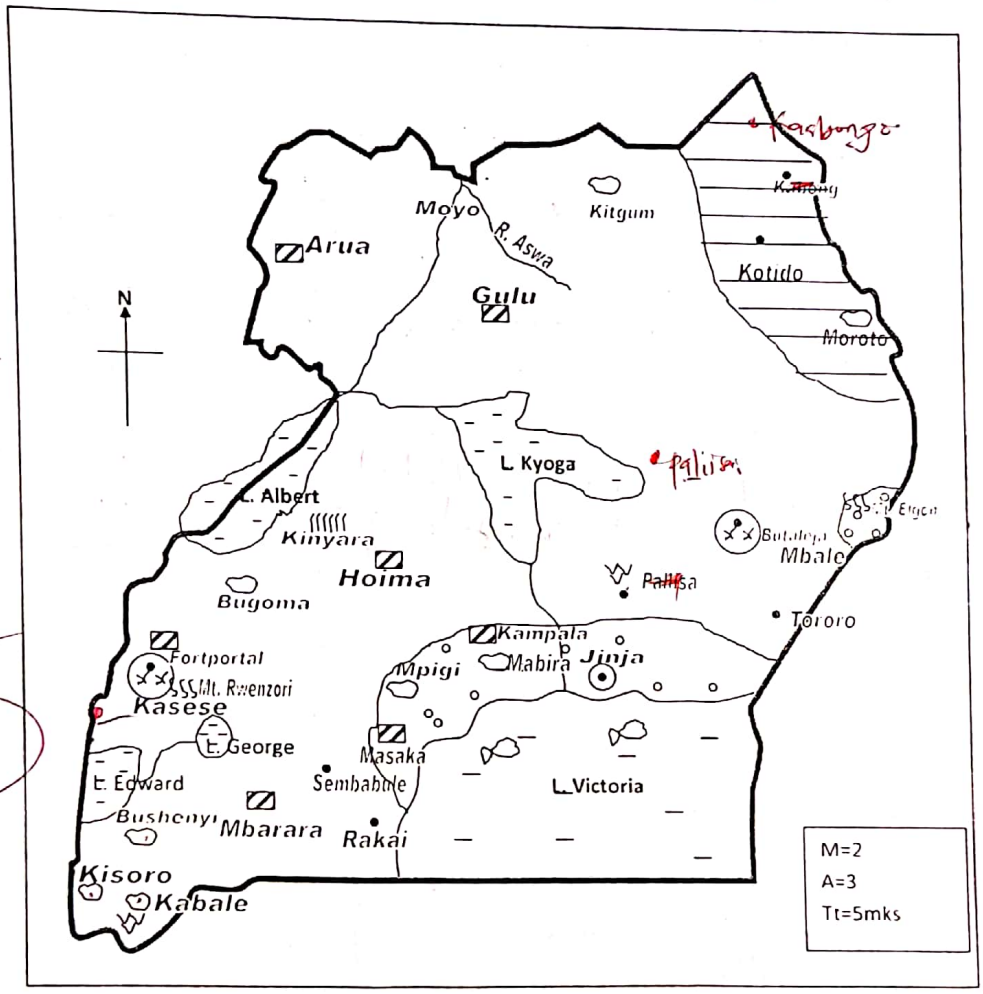
- Eroded areas e.g Bududa, Mbale, Sironko, Kabale, Kisoro, Bundibugyo, etc
- Deforested areas e.g. Kyenjojo, Buikwe, Hoima, etc.
- Overgrazed areas e.g. Kotido, Moroto, Kiruhura, Nakasongola, etc.
- Polluted areas e.g. Kampala, Jinja, Wakiso, Mbale, Gulu, etc.
- Flooded areas / water logged areas e.g Butaleja, Kasese, Serere, Kaberamaido, etc.
- Mined / Quarried areas e.g. Kajjansi, Kamonkoli, ilembe, Lwera, etc.
- Soil exhausted areas e.g Kasaku, Kyamuhunga, Kyenjojo, etc
- Leached areas e.g Buikwe, Mukono, Mpigi, Wakiso, etc.

Candidates are expected to draw a sketchmap of Uganda showing areas experiencing different forms of land degradation.

Mere identification of areas = 3marks

Identification with a sketchmap = 5marks

A sketch map of Uganda showing areas experiencing land degradation.



KEY

- Eroded land
- Polluted land
- Overgrazed land
- Quarried / mined land
- Deforested land
- Flooded / water logged
- Over fishing
- Plantations / soil
- Wetland destruction
- Soil erosion, land slides, mass

Candidates are expected to bring out the causes of land degradation which include:

CAUSES OF ED.

- Climatic causes: Excessive rainfall has led to leaching of soils, soil erosion, e.g Bududa, Wakiso, Mukono, Kabale, Kisoro, etc.
- It has also led to excessive flooding; thus reducing th eproductivity of land in such areas e.g Butaleja, Ntoroko, Kasese, Moroto, etc.
- Hot temperatures cause evaporation and reduce soil moisture; thus reducing soil productivity e.g Kasese, Moroto,
- Nature of relief; very steep relief resulting into the loss of upper layers of soil, reducing productivity e.g. Kasese, Bundibugyo, Kabale, etc
- Wild animals; these overgraze and expose the soils to erosive agents e.g. Bushenyi, Kasese.
- Elephants debark trees, causing destruction of vegetation exposing soils to agents of erosion e.g Mbale, Manafwa, Kasese, etc
- They also trample on land causing soil compaction and limiting water infiltration into the soil, making it less productive.
- Pests and diseases; these destroy vegetation exposing soil to erosion and therefore decreasing soil productivity e.g Amudat, Katakwi, etc.
- Strong winds; these blow over land and carry away soil; which reduces soil productivity e.g. Kotido, MOroto, Amudat, etc.
- Geological causes like volcanic eruptions which deposit materials on land; causing less productive soils such as the porous soils of Kisoro land plains.
- Deforestation; this results into the loss of forest cover; thus exposing soil to erosion and hence reducing its productivity e.g Buikwe, Hoima, Masindi (Budongo), etc.
- Mining / quarrying; this results into the creation of ditches and removal of upper layers of soil causing reduced productivity e.g Tororo, Kasese, Muyenga, etc.
- Indsutrialisation; industries dispose off toxic waste materials onto the land and contaminates the soil. This endagers the crops and therefore decreases the productivity of land e.g. Kampala, Jinja, Tororo, etc.
- Urbanization / settlement; this destroys vegetation and exposising land to erosion and thus making it less productive. It also involves use of concrete which lime water infiltration into the soil, making it less productive e.g. Kampala, Masaka, Entebbe, etc.
- Improper waste disposal; this contaminates and prevents proper water infiltration where there is plastics and polythene e.g Kampala, Mukono, etc.
- Borehole drilling; this lowers the water table and makes it difficult for crops to access underground water e.g. Nakasongola, Moroto.

- Use of agro-chemicals; these include fertilizers, pesticides, herbicides. resulting into contamination of soil layers; exposing crops to dangerous chemicals e.t Kakira, Kasaku, Mubuku, Kawanda, etc.
- Irrigation; this increases the water level in the ground, causing water-logging hence reducing soil productivity e.g Mubuku, Kibimba, Olweny, etc.
- Monoculture; this results into soil exhaustion, which reduces soil productivity e.t. Kasaku. Kyamuhunga, Kakira, etc.
- Overstocking which leads to overgrazing; exposing the soil to erosion and therefore reducing soil productivity e.g Moroto, Kotido, Kiruhura, etc.
- Up and downslope cultivation creates passages for water downstope, leading to heavy erosion and therefore reducing soil productivity e.g. Kabale, Kisoro, etc.
- Bush burning exposes the soil to erosion because it destroys vegetation cover and thus reducing soil productivity e.g Kiruhura, Ntungamo, Amudat, Nakapiripiriti, etc.
- Swamp draining; this makes clay soil dry and less productive e.g Kabale, Rubanda, Katakwi, etc.
- Over cultivation which results in soil exhaustion.

Any 10x1 = 10mks

b) Outline the steps that can be taken to solve the problem of rampant environmental degradation in Uganda. (~~10~~marks)

Candidates are expected to bring out steps that can be taken to address the problem of land degradation in Uganda. These may include;

- Afforestaton and re-afforestation which is the planting of trees being done to control soil erosion e.g. Mubende, Ntungamo, Kabale, etc.
- Paddocking and rotational grazing can be done to control overgrazing e.g Kiruhura, Sembabule, etc.
- Use of organic manure can be carried out to increase soil fertility e.g Wakiso, Mukono, etc.
- Use of cut and fill method in mining / quarrying to cover the ditches / pits left by mining e.g. Kilembe mines.
- Treating of industrial toxic wastes before disposal can be done e.g. in Uganda Breweries at Luzira.
- Terracing can be used on steep slopes to control speed of water in order to control soil erosion e.g. Kabale, Kisoro, Rubanda, etc.
- Eviction of encroaches on wetlands can be done by NEMA to restore wetlands e.g. Bushenyi. Kabale, Gaba, etc.

- Laws / by-laws can be instilled to control bush burning, deforestation and wetland draining e.g Rubanda, Wakiso, Kotido, Kyenjojo, Hoima etc
- Sensitization of masses can be done to create awareness for forest, swamp and land conservation e.g Moroto, Kabale, Kiruhura, etc.
- Recycling of wastes can be done to control pollution e.g. in areas of in Kampala, Mbarara, Jinja, etc.
- Strip cropping to control soil erosion. This involves cultivating a strip around the hill, leaving another strip with grass e.g separating cultivator strips in Kisoro.
- Contour ploughing can be done to control soil erosion. This involves cultivating along a contour on a hill separated by trenches to reduce the speed of water e.g. in Kabale, Rubanda.
- Mulching to conserve soil moisture. This involves covering soil with plant material e.g Wakiso, Mpigi, etc.
- Crop rotation to prevent soil from exhaustion. It involves sub dividing the plot and changing the crops grown in different crops seasonally e.g in Wakiso, Mukono, etc.
- Inter cropping to maintain soil fertility whereby different crops can be growin in the same piece of land e.g in Mukono, Wakiso.
- Use of Gabions to control soil exhaustion. This involves use of mire mesh and stones or sacks and soil as barriers along water passages on slopes e.g Kabale, Kisoro, Bundibugyo, Kapchorwa, etc.
- Sorting gabbage before disposal is being done to prevent pollution and contamination of soil e.g. Kiteezi, Kampala, Mukono.
- Planting of cover crops to control soil erosion. These include pumpkins which protect soils from direct exposure to rain drops e.g in Kabale, Kayunga
- Diversification of resources to control deforestation can be done e.g. in Wakiso, Mbarara, Hoima.
- Establishment of environment protection organizations like UNFA, NEMA. Use of natural gas, solar energy, HEP, etc
- Gazetting forests and swamps
- Planting grass
- Population control measures to control population growth.

Any 8x1 = 8marks

Points should be well explained and illustrated with places, names. The tense in the question should be maintained. Total 25marks

8. Assess the effects of rapid industrial development in Uganda. **(25marks)**

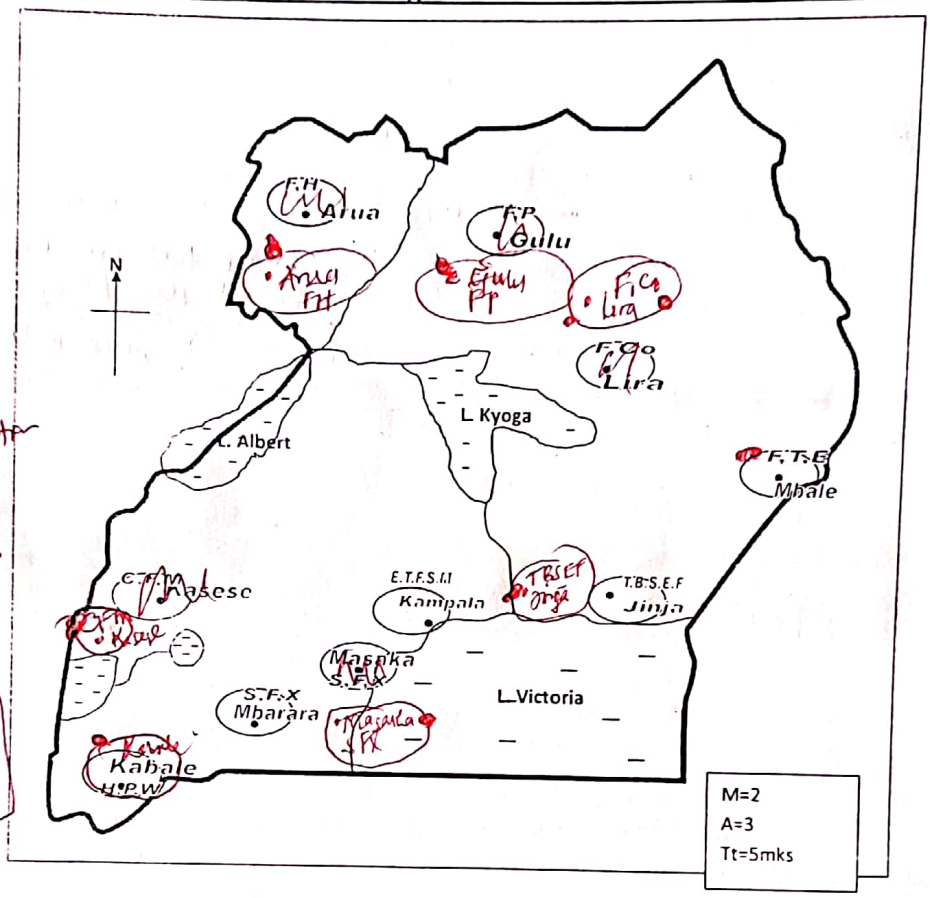
Candidates are expected to come up with a current status of the industrial sector in Uganda.
These may include;

- Most of the industries are owned by foreigners.
- Most the industries are small scale industries.
- They are mainly agro-based industries.
- Industrial parks / zones have been created to provide adequate space for industrial development.
- Most industries are located in urban centres.
- Most industries operate below full capacity.
- Most industries use labour intensive technology. (2mks)

Candidates are expected to come up with a sketch map of Uganda showing industrial centres and the associated industries.

These may include;
Kampala- Food processing, textiles, breweries, chemical, steel rolling, foam, printing and publishing, pharmaceuticals, animal feeds, vehicle assembling, etc.
Jinja – steel rolling, food processing, tectile, breweries, chemical, wood and pulp processing, printing and publishing, animal ffees, etc.
Mbale – food processing, textile, chemical clay works.
Tororo – cement, steel rolling, food processing, chemical industries.
Mbarara – stel rolling, food processing, printing and publishing, beverages.
Kasese – cement, food processing, mattress making, lime processing, chemical industries, cotton ginning, cobalt processing.
Lira – food processing, cotton ginning.
Arua – food processing, water processing, honey processing.
Kabale – pharmaceuticals, wine making, honey processing, etc.

A sketch map of Uganda showing the distribution of manufacturing industries.



- Title - 01
- Key - 01
- Any 3 Identified Industries
- Without map 03mks
- A sketch without data 10 mark

KEY:

T – Textile industries
F – Food processing
B – Breweries
S – Steel rolling
M – Mattress making
C – Cement manufacturing
Co – Cotton ginning
V – Vehicle assembling
W – Wine making
P – Pharmaceuticals
X – Printing and publishing
E – Chamical industries
A - Animal feed manufacturing
O – Wood and pulp processing
H – Honey processing
P – Capentry and furniture

Note: Dot must be at the edge of the box

- *Identification of industries and their place names (towns) on a sketch map = 5mks*
- *Mere identification of the industrial centre and the industries = 3mks*
- *A sketch map without dots to represent the industrial towns = 00mk.*

Candidates are expected to clearly bring out the positive and negative impact of industrialization.

Positive effects may include;

- Provision of market for the agricultural and other raw materials / utilization of natural resources.
- Provision of consumer goods such as sugar, cooking oil, etc.
- Development of social – economic infrastructures like roads, hospitals, schools, HEP stations.
- Employment opportunities for the population in the country.
- Diversification of the economy
- Foreign exchange is obtained through the exportation of manufactured goods.
- Source of revenue through taxation of industries
- Urbanization e.g century bottling company in Namanve.
- Development of international relations between Uganda and other countries.
- Promotion of research / tourism / education
- It attracts advanced foreign technology e.g. textile industry in Jinja.
- Improved skills of labour through industrial trainings / on job training, etc.

Any 10 pointsx1 = 10mks

Negative effects may include;

- Pollution of air, land and water for example breweries in Jinja, cement factory in Kasese.
- Deforestation of forested areas for example Namanve forest for the establishment of cocacola industry.
- Draining of wetlands / swamp reclamation e.g steel rolling in Nakawa and Nalukolongo.
- Development of urban centres and the urban related problems e.g increased crime rates. increased unemployment.
- Rural-urban migration leading to low agricultural productivity in rural areas.
- Profit repatriation due to foreign investment e.g cement factories in Hima and Tororo.
- Displacement of people to increase on industrial land e.g Mukwano food processing industry in Kibule.
- Compensation for labour with other sectors e.g. textile industry in Jinja, Breweries in Kampala and Jinja.
- Leads to regional imbalance e.g cement processing in Kasese.
- Leads to many accidents e.g roofings in Lubowa, steel rolling in Kampala.
- Leads to spread of diseases e.g cement in Tororo and Hima.

~~Any 8 points x 1 = 8mks~~

NB: Points should be explained and illustrated using types or names of industries and the place names.

~~*Impression marking 05 mark*~~

END