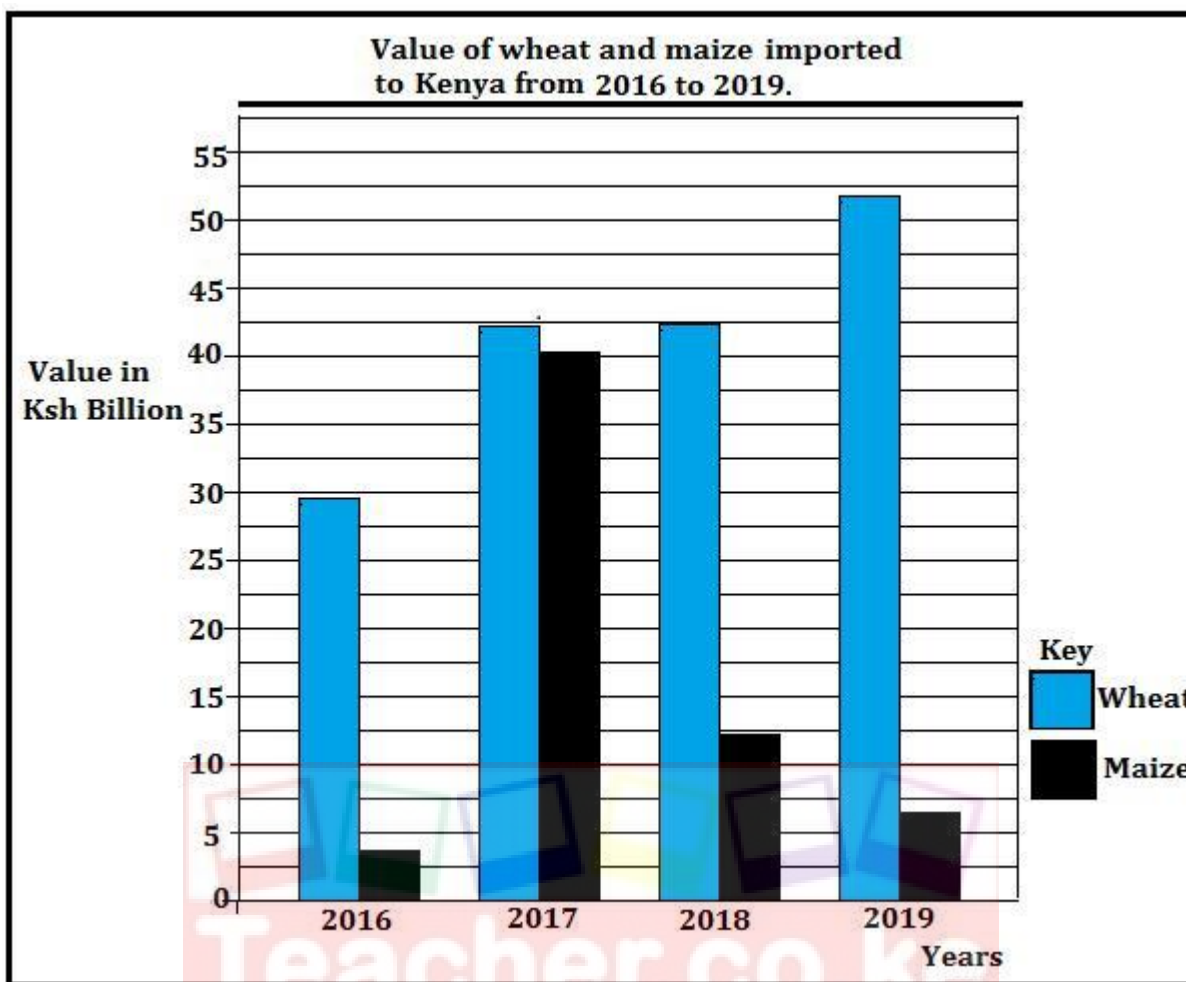


**FORM 4 GEOGRAPHY PAPER 2 (312/2)**  
**TERM 2 2022 OPENER EXAM FORM 4**  
**EXAM MARKING SCHEME**

**SECTION A**

1. (a) Apart from economic Geography, give **three** other sub branches of human Geography. (3 marks)
- *Population Geography*
  - *Historical Geography*
  - *Medical Geography*
  - *Industrial Geography*
  - *Mathematical Geography*
- (b) Explain the relationship between Geography and economics. (2 marks)
- Economics deals with production, distribution and consumption while Geography is interested in the exploitation and distribution of resources*
2. (a) Name **two** methods used in alluvial mining (2marks)
- *Panning*
  - *Dredging*
- (b) State **three** effects of limestone mining at Bamburi in Mombasa County. (3marks)
- *Occurrence of derelict land.*
  - *Dust from the mines causes air pollution.*
  - *Explosives used to blast limestone rock causes sound pollution.*
  - *Loss of vegetation cover*
  - *Severe soil erosion in the limestone quarries*
3. Study the graph below and use it to answer the question (a) and (b).



- (a) Identify the type of graph drawn above. (1 mark)

***Comparative bar graph.***

- (b) State **three** conclusions that can be derived from the graph? (3 marks)

- *The value of wheat imports had been increasing over the four years.*
- *Value of maize imports increased sharply in 2017 then declined in the following years.*
- *Year 2019 had the highest value of wheat imports.*
- *The difference in value of wheat and maize imports was smallest in year 2017.*
- *2016 had the lowest value of maize imports.*

4. (a) What is plantation agriculture. (2 marks)

***Plantation agriculture is the specialized commercial cultivation of cash crops on large tracts of land called estates/plantations.***

- (b) State **three** disadvantages of plantation agriculture. (3 marks)

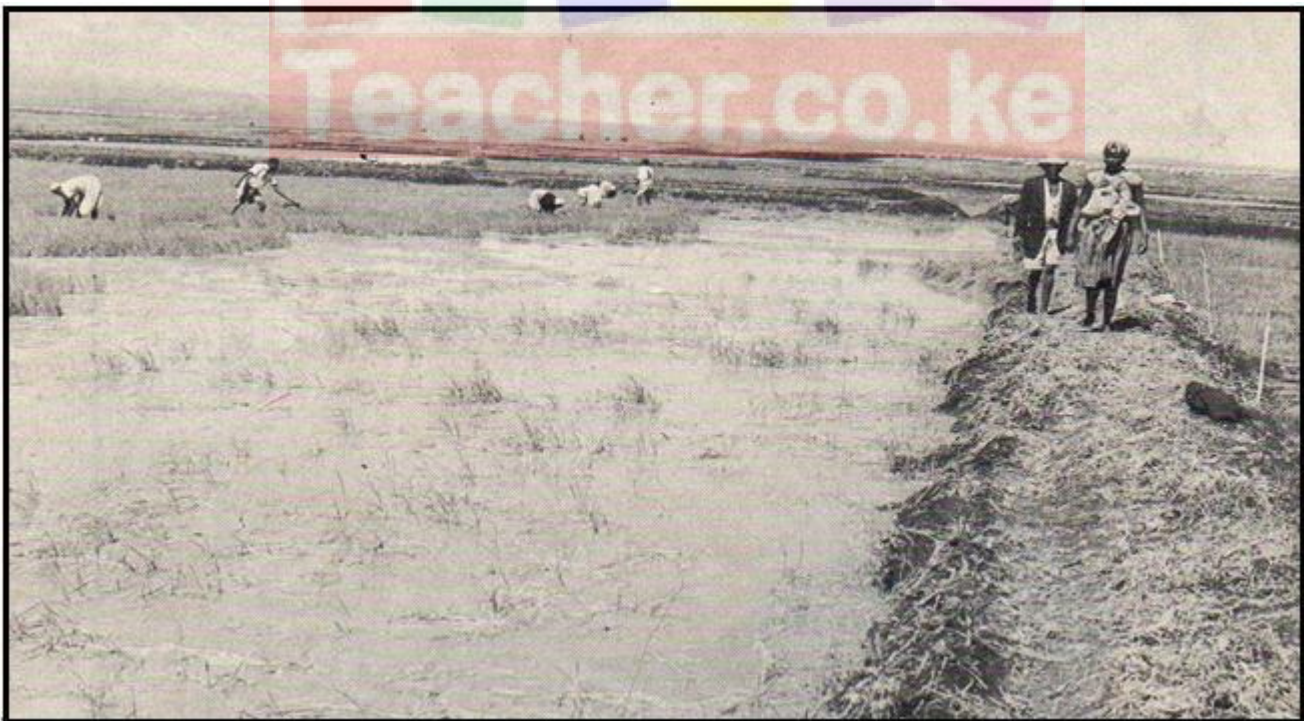
- *Great losses occur in case of crop failure.*
- *Highly skilled labour is required in production and management.*
- *Monoculture results in severe loss of certain nutrients in the soil.*
- *Heavy capital investment is required.*

- *Rapid leaching in the tropics requires the use of expensive chemical fertilizers.*
  - *Over emphasis of cash crops reduces food crops production in a country*
5. (a) State **three** conditions necessary for the formation of petroleum. (3 marks)
- *Accumulation of organic remains in an area.*
  - *Presence of porous rocks*
  - *Occurrence of a non-porous rock cap above and beneath the remains.*
  - *Presence of a water mass where remains accumulate and are buried..*
  - *Presence of intense pressure to compress the remains.*
  - *Presence of sedimentary rocks such as shale.*
- (b) Give **three** disadvantages of petroleum as a source of energy. (3 marks)
- *Crude oil is bulky during transport.*
  - *It is relatively expensive.*
  - *Exploration and refining of petroleum is expensive.*
  - *It is highly inflammable thus dangerous when mishandled.*
  - *It is an exhaustible source of energy.*
  - *Burning of petroleum products cause air pollution.*

## SECTION B

*Answer all questions from this section.*

6. Study the photograph below and use it to answer questions (a) and (b)



- (a) (i) Name the type of photograph shown above. (1 mark)
- Ground general view***

- (ii) Give **two** reasons for your answer in (a)(i) above. (2 marks)
- *The camera focuses on many objects.*
  - *The horizon is seen on the background clearly.*
  - *Objects become progressively smaller towards the background.*
  - *The camera captures the general appearance of an area/scenery.*
- (b) (i) What time of the day was the photograph likely to have been taken? (1 mark)
- At around noon / mid-day*
- (ii) Name **three** specific places in Kenya where the photograph is likely to have been taken. (3 marks)
- *At Mwea in Kirinyaga county*
  - *At Ahero in Kisumu county*
  - *At Bunyala in Busia county*
  - *At West Kano in Kisumu county*
- (c) (i) Citing evidence from the photograph, explain **three** conditions necessary for the economic activity shown that are observed from the photograph. (6 marks)
- *Availability of gently sloping land which is evidenced by water logging on the flooded plots and the plain on the photograph.*
  - *Availability of a reliable water supply for wet paddy production evidenced by flooded plots*
  - *Availability of labour during field practices such as land preparation, planting weeding and harvesting. This is evidenced by several people within the flooded plot.*
- (ii) Using evidence from the photograph, explain **two** health problems that the people practicing this economic activity would experience. (4 marks)
- *Presence of waterlogged plots creates stagnant water which is a breeding ground for mosquitoes that transmit malaria to the people.*
  - *Water snails also breed in waterlogged plots thus transmitting bilharzia among the farmers / labourers.*
  - *The people seen on the photograph work for long hours while in water logged plots thus likely to suffer from cold related diseases.*
- (d) Explain **four** benefits of the Zuider Zee project in the Netherlands (8 marks)
- *Reclamation created more land for agriculture as the polders were fertile for crop farming hence more food / agricultural raw materials for industries.*
  - *Fresh water Lake Ijssel formed provides water for irrigation, domestic and industrial use.*
  - *Construction of dykes/sea walls around the polders has helped control floods/deadly sea invasion of lowlands.*

- **Fresh water Lake Ijssel**
- **The polders, sea walls and canals created sceneries that have become key tourists attractions thus increased foreign exchange and income to local people**
- **Road connection between Northern Netherlands and some Islands was improved /shortened.**
- **Reclamation and associated activities have created more employment opportunities thus improved the standard of living of Dutch citizens.**

7. (a) (i) Define the term forestry. (1 mark)

***Forestry is the science of developing and managing forest or***

***Forestry refers to the practice of managing and using trees, forests and their associated resources for human benefits***

***or***

***It is the art of planting, tending, managing and extracting forest products.***

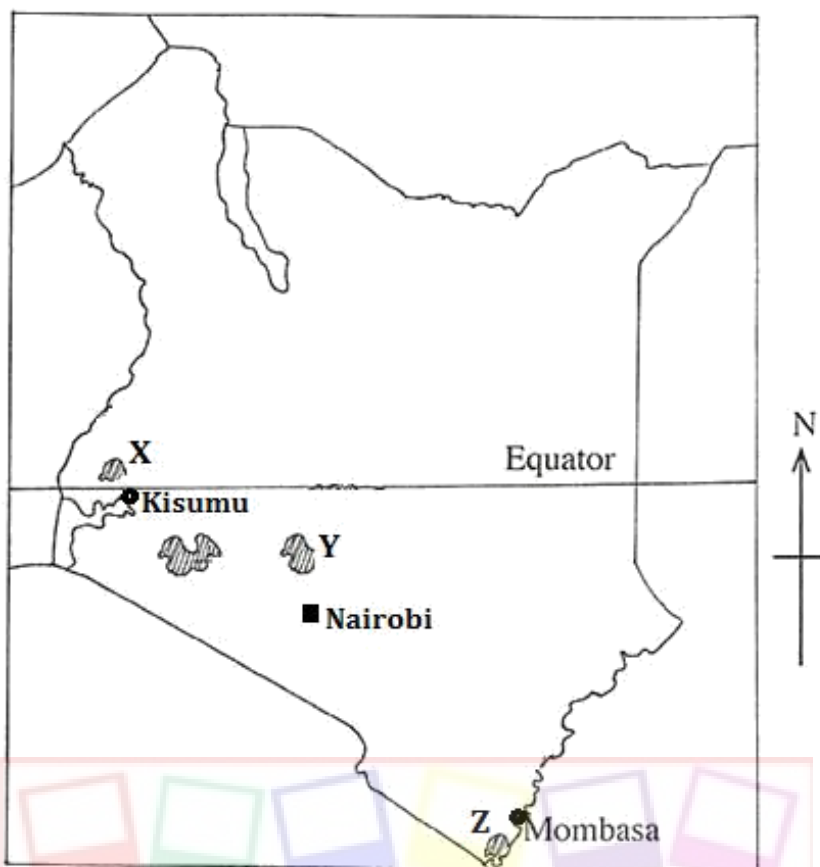
(ii) Give **three** differences between natural forest and planted forests. (3 marks)

- ***Natural forests comprise of indigenous trees while planted forests are mainly composed of exotic trees***
- ***Trees in natural forests are of mixed species while in planted forests trees are of one type of tree species/pure stands.***
- ***Trees in natural forests grow haphazardly while in man-made forest trees are planted in rows***
- ***Forests of the natural type spread from lowland to highland while planted forests are found in the highlands***
- ***Thick undergrowth in natural forests but less undergrowth in planted forests***
- ***Natural forest have canopy while planted have none***
- ***Natural forests have trees that yield hardwood while in planted forests trees yield softwoods***

(b) Explain **four** causes of forest depletion in Kenya today. (8 marks)

- ***Fire outbreaks like the one that happened on Mount Kenya recently destroy large tracts of forests✓✓***
- ***Pests and diseases also kill trees leading to forest depletion✓✓***
- ***Population explosion has raised demand for wood which has resulted into over exploitation of the forests✓✓***
- ***Forest encroachment by man has reduced area under forests✓✓***
- ***Industrialization –setting up of industries that use timber as their raw materials has led to deforestation✓✓***
- ***Adverse climatic conditions e.g prolonged drought make trees to die***
- ***Illegal felling of trees hence their depletion✓✓***

(c) The map of Kenya below shows some forest reserves in Kenya. Use it to answer question (i)



- (i) Identify the forests marked X, Y and Z. (3 marks)

***X – Kakamega forest***

***Y – Aberdare Forest***

***Z – Shimba Hills forest.***

- (ii) State **four** measures that are being undertaken by the Kenya Government to conserve forests. (4 marks)

- ***Enforcing afforestation and re afforestation programs***
- ***Involving the local communities in forest conservation***
- ***Scientific management of trees e.g spraying against diseases and pests, pruning, thinning, carrying out research***
- ***Creating awareness through education about the need to conserve forests***
- ***Creation of buffer zones to eradicate forest encroachment***
- ***Increasing forest guards to reduce illegal felling of trees***
- ***Imposing stiff penalties through legislation on illegal loggers***
- ***Use of alternative sources of energy particularly the renewable like solar, electricity to reduce reliance on forest for energy.***
- ***Perimeter fencing of National parks to stop wild animals invading forests***
- ***Reduction of wastage e.g use of economic jikos***

(d) Explain **three** factors favouring the exploitation of softwoods in Canada. (6 marks)

- *The many rivers such as River Fraser and River Ottawa in Canada provide adequate hydro-electric power for the pulp and paper as well as other related industries*
- *The mild winters with ice-free waters in British Columbia make it possible to transport logs all year round using rivers*
- *The many rivers provide plenty of water needed in pulp and paper industries for soaking and bleaching processes.*
- *Excellent transport system ensures fast ferrying of logs to the factories and the finished products to the market*
- *High demand for forest products within the domestic market as well as international market enhances continuous exploitation*
- *Proximity of adequate capital necessary in forest management as well as establishment of related industries.*

8. (a) (i) Name **two** categories of arable farming. (2 marks)

- *Subsistence arable farming.*
- *Commercial arable farming.*

(ii) Give **three** economic factors that influence agriculture. (3 marks)

- *Operation cost*
- *Price fluctuations*
- *Marketing expenses*

(b) State **five** physical conditions favouring sugarcane farming in western Kenya. (5 marks)

- *High temperatures of about 25°C annually.*
- *High annual rainfall of about 1300 mm.*
- *Well distributed rainfall throughout the growing period.*
- *A dry sunny period during harvesting which increases sugar accumulation.*
- *Well drained black cotton or clay soils that retains a lot of water.*
- *Gently sloping land that favours the use of machines.*

(c) Describe the stages involved in sugarcane processing in western Kenya. (7 marks)

- *At the factory, cane from the farms is weighed while still on lorries and tractors.*
- *The cane is off loaded and put in large tanks where it is washed.*
- *The cane is cut into short pieces using a machine.*
- *The pieces are crushed and squeezed between rollers to extract the juice.*

- *The juice is put in a clarifier where fine matter and soluble non-sugars are separated.*
- *The juice is boiled with lime in tanks called evaporators forming a thick syrup.*
- *The syrup is passed through a vacuum pan under very low pressure forming a mixture of molasses and sucrose crystals (massecuite).*
- *The mixture (massecuite) is put in open tanks (crystallizers) where sugar crystals grow.*
- *A machine called a centrifuge then separates the crystals from molasses.*
- *Raw coarse sugar obtained is further refined to obtain brown and white sugar at various grades.*
- *The sugar is then dried and packed in various quantities ready for marketing.*

(d) Explain **four** economic problems facing sugarcane farmers in Kenya (8 marks)

- *Flooding of the market by cheap imported sugar results in unfair competition thus causing delay in payment to the farmers.*
- *Some sugar processors are unable to adequately pay for the cane delivered. This causes delays in harvesting hence reducing the quality of the cane and the farmer's earnings.*
- *Closure of some factories such as Mumias due to mismanagement and corruption has deprived the farmers of their income forcing some to switch to other crops.*
- *Impassable roads in some areas especially during the wet season leads to delayed delivery of the cane to the factory lowering the quality and subsequently profit to the farmers.*
- *Some sugarcane processing factories are unable to cope with the supply of cane from out growers due to outdated processing technology making some farmers to abandon production.*
- *High cost of farm inputs such as fertilizers and pesticides increases the cost of production thus reducing the farmer's profit margin.*
- *Mismanagement of factories and cooperatives lead to delayed payments thus discouraging farmers.*

9. (a) (i) Define the term fishing. (2 marks)

*Fishing is the practice of catching/harvesting aquatic organisms such as fish and some crustaceans for consumption or for sale.*

(ii) Give **three** examples of pelagic fish. (3 marks)

- *Sardines*
- *Pilchard*
- *Mackerel*



- (b) Describe how trawling method of fishing is carried out. (6 marks)
- *Trawling involves dragging a cone shaped net (trawl) over the sea bed behind a boat or trawler.*
  - *A bag shaped net attached to the ship trawler is dragged along the sea bed to trap the fish*
  - *The net is cast into the sea by a trawler.*
  - *The upper part of the net is kept a float by floats and the bottom held down by weights.*
  - *Then it is dragged on the sea bottom at low speed.*
  - *The mouth of the net is kept open by the floats and weights.*
  - *Fish swim into the net and trapped in.*
  - *Once enough fish is caught the net is hauled into the trawler and the fish is removed.*
- (c) Explain **three** reasons why freshwater fishing is more widespread than marine fishing in East Africa. (6 marks)
- *There are enormous fishing grounds eg L. Victoria, L Albert, L. Naivasha, L Tanganyika which are accessible to many people.*
  - *Fresh water fish are popular with high demand among the people encouraging more inland fishing.*
  - *Fresh water fishing requires simpler methods affordable by majority of fisherman in E. Africa.*
  - *Most inland fishing ground are rich in Plankton hence encouraging fish breeding.*
  - *High population in some places such a L. Vitoria offers the much need market.*
  - *Government support eg setting up processing plants ad cooing plants have encouraged more fishing.*
- (d) Explain **three** measures taken to conserve fisheries in Kenya. (8 marks)
- Fishing is restricted to specific seasons to allow for breeding and maturing of fish*
- The size of the nets used in fishing are standardized to prevent catching of immature fish/fingerlings*
- Licenses are issued to prospective fishermen to control their number and to ensure that there is no over-fishing.*
- Improved patrols by the Kenya Navy within Kenya's exclusive economic zones. This ensures the protection of marine fisheries from external exploitation.*
- Fish farming is being encouraged to that there is sufficient supply of fish from other sources other than the natural fisheries*
- Artificial fertilization is carried out in special hatcheries to sustain the supply of fish/ restocking of over-fished waters.*

10. (a) (i) What is eco-tourism? (2 marks)  
*This is travelling to enjoy nature while at the same time protecting it.*

- (ii) State four factors that limit domestic tourism in Kenya. (4 marks)
- *Negative attitude towards local tourism by the citizens*
  - *High cost of accommodation in the lodges and hotels discourages many local tourists*
  - *Impassable roads leading to the parks and other attractive sites during the wet season.*
  - *Preferential treatment given to the foreign tourists discourages the locals.*
  - *Inadequate knowledge on the tourist attraction sites.*

(b) (i) Give three tourist attractions found at Nairobi. (3 marks)

- *Nairobi National park/safari walk/animal orphanage.*
- *Giraffe centre.*
- *Mamba village.*
- *Kenyatta International Conference centre.*
- *Many five and three star hotels.*
- *National museums of Kenya Nairobi.*
- *Bomas of Kenya.*
- *Uhuru Park/city park*

(ii) Explain **four** measures that Kenya should take in order to attract more tourists. (8 marks)

*Marketing the country more aggressively in order to make it more known/improve the image of the country abroad*

*Establishing a diversity of tourist attractions/emphasis on ecotourism to avoid depending entirely on the traditional attractions/reduce competition with other tourist destination.*

*Establishing/modernizing tourist facilities in areas that have high potential such as Western Kenya where such facilities are inadequate.*

*Improving public utilities such as roads, airports and communications to all tourist sites in order to make them easily accessible.*

*Improving security to ensure the safety of the tourist is guaranteed.*

*Intensify domestic marketing to reduce reliance on foreign tourists.*

*Improve/train more personnel to serve tourists*

*Better/sensitize citizens on the need to be hospitable to local and international tourists to encourage more visitors.*

*An Aggressive promotion by ministry of Tourism through KTB through exhibitions abroad to promote Kenya as a tourist destination and also marketing is being done within, targeting domestic tourists.*

*Lowering of tariffs in hotels, games parks and airports taxes so as to encourage more tourists visits Kenya.*

*Strength of the Kenyan shillings depreciation of will attract more tourists since most will find it cheaper to visit Kenya.*

*Opening up of new areas with untapped attraction potential eg around Lakes like Baringo, Bogoria, and Turkana.*

*Developing of sustainable tourism eg Eco-tourism i.e tourism that involve conservation of the environment.*

- (c) Explain the differences between the tourist attractions in Kenya and Switzerland under the following sub-headings:

- (i) Security (2 marks)

*In Kenya, some areas have rampant insecurity/terror attacks which scares away tourists while in Switzerland there is a peaceful atmosphere/political neutrality which encourage many tourists.*

- (ii) Culture. (2 marks)

*In Kenya there are varied/a diversity of African cultures while in Switzerland tourists are attracted to the traditional Swiss hospitality and many European languages spoken*

- (iii) Waterfalls. (2 marks)

*In Kenya, waterfalls that attract tourists occur along rivers while in Switzerland, waterfalls are associated with hanging glacial valleys within the Swiss Alps*

- (iv) Beaches. (2 marks)

*In Kenya, there are several classic coastal white sandy beaches such as Diani and Watamu that attract tourists while in Switzerland being landlocked has only lake beaches that attract tourists during summer*