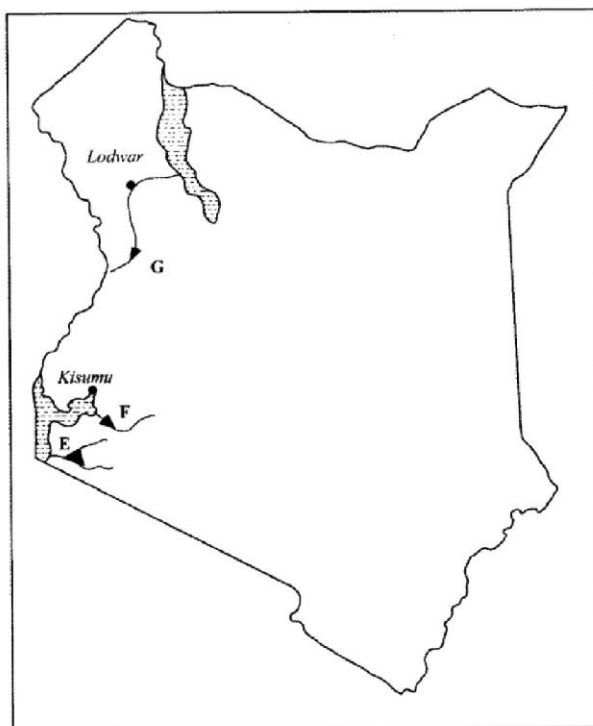4.10.2 Geography Paper 2 (312/2)

SECTION A

1. (a) **Define the term environment**

   It is the sum of all the external conditions/influences affecting the life/development of organisms. (2 marks)

   (b) **Give three effects of air pollution in major urban centres**
   - (i) causes poor visibility/haze/smog
   - (ii) causes respiratory diseases/skin cancer in humans
   - (iii) leads to acidic rain
   - (iv) causes increase in air temperature
   - (v) causes stunted growth in plants   Any 3 x 1 = (3 marks)

2. (a) **Identify three factors that influence the occurrence of minerals**
   - (i) vulcanicity
   - (ii) metamorphism
   - (iii) denudation/weathering/erosion
   - (iv) earth movements/folding
   - (v) evaporation
   - (vi) sedimentation/deposition   Any 3 x 1 = (3 marks)

   (b) **Name the areas where the following minerals are mined in Kenya**
   - (i) diatomite   -   Kariandusi   (1 mark)
   - (ii) salt   -   Magadi/Malindi/Ngoleni/Magarice/Ngongori   (1 mark)

3. (a) **Distinguish between forest and forestry**

   A forest is a continuous cover of trees over a large area while forestry is a science of developing/managing forests. (2 marks)

   (b) **Identify three activities that may be undertaken in your school to conserve trees.**
   - (i) Planting trees/establishing a tree planting day within the school calendar.
   - (ii) Establishing tree nurseries
   - (iii) Establishing tree planting/environmental clubs to create awareness on conservation
   - (iv) Using alternative sources of energy
   - (v) Taking care/protection of young trees/watering/that mulching
   - (vi) Using energy save jikos/stoves
   - (vii) Using alternative sources of construction material
   - (viii) Pest/disease control   Any 3 x 1 = (3 marks)

4. **Give four challenges facing nomadic pastoralism in Kenya**
   - (i) Shortage of water
   - (ii) Scarcity of pasture
   - (iii) Outbreak of animal diseases/rinderpest/foot and mouth/tripanosomiasis
   - (iv) Attacks by animal pests/ticks/tsetseflies
   - (v) Inadequate veterinary services
   - (vi) Poor marketing strategies
   - (vii) Cattle rustling/raids/attacks by wild animals
   - (viii) Decrease in grazing land/competition from other land uses.   Any 4 x 1 (4 marks)

5. **Use the map of Kenya below to answer question (a)**

(a) **Name the hydroelectric power projects marked E, F and G**

E	-	Gogo	(1 mark)
F	-	Sondu Miriu/Sangoro	(1 mark)
G	-	Turkwel	(1 mark)

(b) **State three advantages of geothermal power as a source of energy**
   (i)   It is a clean source of energy/non pollutant
   (ii) The cost of production is low
   (iii) It has minimal environmental degradation
   (iv) It is a renewable source of energy
   (v)   It is a reliable source of energy

Any 3 x 1 = (3 marks)

SECTION B

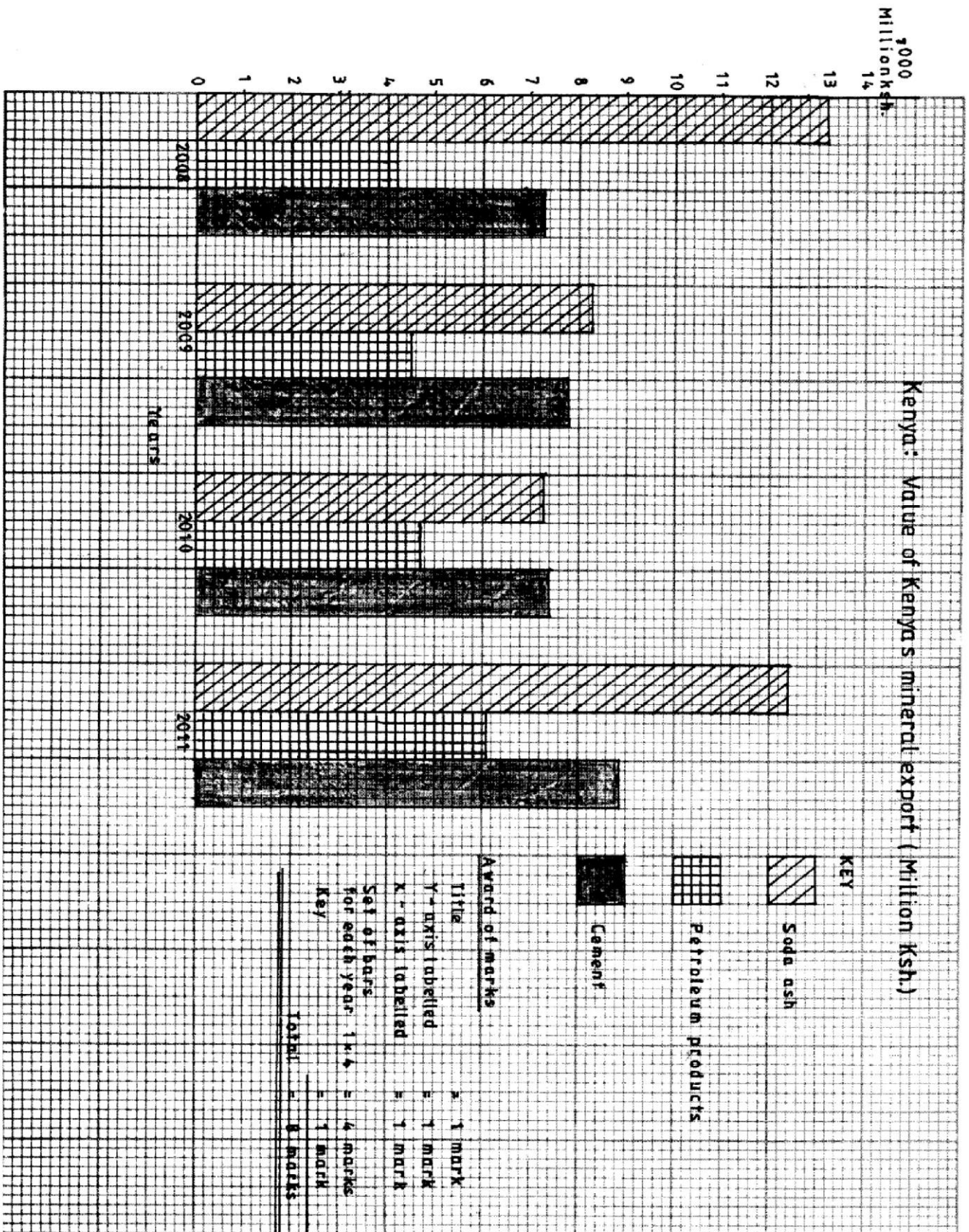*Answer question 6 and any other **TWO** questions in this section*

6. **The table below shows the value of some of Kenya's mineral exports from 2008 to 2011. Use it to answer questions (a) and (b)**

Value of Kenya's mineral exports (Million Ksh.)

Mineral \ Year	2008	2009	2010	2011
Soda Ash	13 200	8 300	7 300	12 400
Petroleum Products	4 200	4 500	4 700	6 100
Cement	7 300	7 800	7 400	8 900

Source: Central Bureau of Statistics

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(a) (i) **Using a scale of 1 cm to represent 1000 million Kenya shillings, draw a comparative bar graph to represent the data shown.**

Kenya: Value of Kenya's mineral export (Million Ksh.)

KEY

Soda ash

Petroleum products

Cement

Award of marks

Title   = 1 mark
Y – axis labelled   = 1 mark
X – axis labelled   = 1 mark
Set of bars
for each year 1x4   = 4 marks
Key   = 1 mark

Total = 8 marks

(ii) **State three advantages of using comparative bar graphs to represent statistical data.**
- They give a clear visual impression on total values
- They are easy to read/interpret the values for each bar
- They are easy to compare the values of commodities
- They can be used to represent a wide range of data
- They are easy to draw/constuct

Any 3 x 1 = (3 marks)

(b) **Calculate the percentage increase in value of exports between the year 2010 and 2011**

Soda Ash

Increase in value   =   12,400 - 7,300 = 5,100

Percentage increase = $\frac{5,100}{7,300} \times 100 = 69.86\%$ (2 marks)

Petroleum Products

Increase in value   =   6,100 - 4,700 = 1,400

Percentage increase = $\frac{1,400}{4,700} \times 100 = 29.79\%$ (2 marks

Cement

Increase in value   =   8,900 - 7,400 = 1,500

Percentage increase = $\frac{1,500}{7,400} \times 100 = 20.27\%$ (2 marks)

(c) **Explain the significance of trade to the economy of Kenya**
(i) Transport and communication network has been improved to facilitate the movement of goods/services
(ii) Employment opportunities have been created leading to improved standard of living
(iii) Demand for goods/services has led to the expansion/establishment of industries
(iv) Taxation on goods/services has earned the country revenue
(v) Trade has encouraged specialization which leads to production of quality good/services
(vi) Trading activities have led to the development of settlements providing market for good/services
(vii) Export of goods and services earns the country foreign exchange used in developing other sectors of the economy
(viii) Trade between Kenya and other trading partners enhances economic cooperation/international understanding
(ix) Importation of good/services that are not locally available for development of other sectors of economy.

(x)   Leads to diversification of the economy hence increasing foreign/local earnings.

(xi)   Trade stimulates exploitation of existing natural resources in order to have a wide range of exports.

Any 4 x 2 = (8 marks)

7.   (a)   **State three physical conditions which favour large scale sugarcane growing in Kenya**

(i)   The presence of deep, well drained soil/black cotton /clay soils

(ii)   High temperatures/between 21°C to 27°C

(iii)   Gently sloping/undulating land which enables mechanization

(iv)   High rainfall/1200mm to 1500mm, well distributed throughout the year

(v)   Sunny conditions for sugar accumulation.

Any 3 x 1 = (3 marks)

(b)   (i)   **Describe the stages involved in the processing of sugarcane at the factory**

- The cane is received and weighed
- The cane is washed and chopped into small pieces
- The pieces are crushed to extract the juice
- The juice is put into clarifiers to filter off the impurities
- The juice is boiled to evaporate the water
- The juice is further stirred in large tanks to allow crystallization
- The crystals are separated from molasses
- The sugar is breached to whiten
- The sugar is then dried, cooled, graded, weighed and packed.

Any 6 x 1 = (6 marks)

(ii)   **Give three by-products obtained from sugarcane**

- Bagasse
- Molasses
- Cane juice
- Filter cake/filter mud
- Jaggery

Any 3 x 1 = (3 marks)

(c)   **Explain three ways in which the Kenya Government is promoting the sugar industry**

(i)   Establishment of Kenya sugar Board to advise on production/marketing of sugar

(ii)   Restricting sugar imports to protect farmers from the flooding of cheap sugar

(iii)   Establishing a scheme for small scale outgrowers in production/marketing of sugar

(iv)   Enforcing law to protect the exploitation of farmers by brokers

(v)   Financing research for high yielding cane

(vi)   Subsidizing farm inputs to lower the cost of sugarcane production.

(vii)   Providing financial assistance to ailing sugar factories.

Any 3 x 2 = (6 marks)

(d)   Your class visited a sugarcane plantation for a field study on land preparation and

planting of sugarcane

(i) **Outline four activities that you are likely to identify**
- Clearing of land
- Ploughing of the land
- Preparing seedlings/cuttings/dipping setts in pesticide
- Making furrows
- Planting seedling/cuttings in the furrows
- Weeding the crop/spraying with herbicides
- Application of fertilizers
- Harrowing
- Irrigation   Any 4 x 1 = (4 marks)

(ii) **Give three methods you would use to record data during the field study**
- Taking photographs
- Tape recording/video recording
- Drawing sketches
- Notes taking
- Filling in the questionnaire
- Tallying
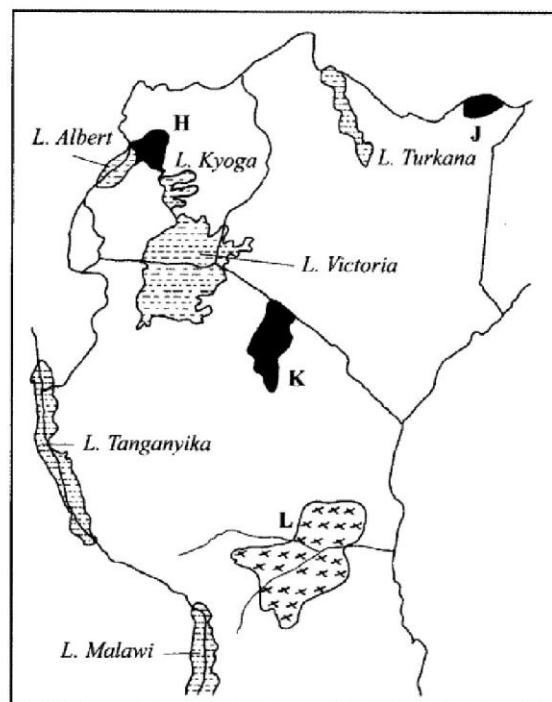- Tabulating   Any 3 x 1 - (3 marks)

8.   (a)   **Differentiate between domestic and international tourism**

Domestic tourism is the visit by people within their country for pleasure while
international tourism is the visit by people away from their mother country to a given
country for pleasure

(2 marks)

Use the map of East Africa below to answer question (b)

(b) **Name:**
  (i) the national park marked H, J and K
  (ii) The game reserve marked L

H	-	Murchison falls/kabarega	(1 mark)
J	-	Malka Mari	(1 mark)
K	-	Serengeti	(1 mark)
L	-	Selous	(1 mark)

(c) (i) **Explain how the following factors influence tourism in Kenya**
  - Climate
  - Scenery
  - Tour companies

Climate
Kenya has a pleasant warm tropical climate/sunny conditions throughout the
year that attracts tourists from temperate regions.   (2 marks)

Scenery
Kenya has beautiful features such as lakes/mountains/the great rift valley/sandy
beaches and vegetation that attract tourists.

Kenya has a variety of scenery that allow sports such as mountain climbing/
fishing/skating/water skiing.
                                          Any 2 x 1 = (2 marks)

Tour companies
The tour companies charter flights/organize package tours which lower the cost
of travel for tourists /facilitates movement of tourists.   (2 marks)

(ii) **State five effects of floods on tourism**

  - Inaccessibility to tourist sites
  - Migration of wild animals
  - Destruction of tourist sites/hotels/lodges
  - Disruption of communication systems
  - Loss of income by proprietors
  - Water related diseases in tourist areas
  - Drowning of people

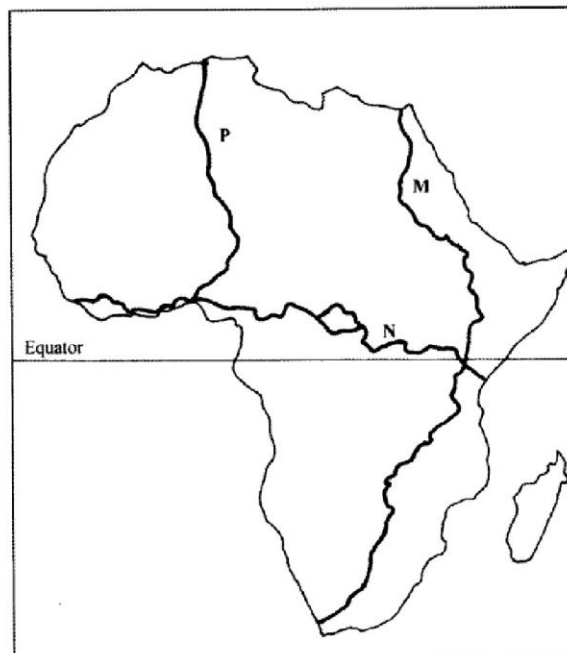   Any 5 x 1 = (5 marks)

(d) **Explain four ways in which the County Governments in Kenya would promote
sustainable tourism**
  (i) Involving local communities in decision making to enhance positive perception
      on wildlife conservation
  (ii) Fencing the parks (compensating persons aggrieved by wild animals) to
      minimise human-wildlife conflicts
  (iii) Encouraging the use of alternative sources of energy/management of energy to

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reduce the destruction of natural ecosystem/animal habitat
- (iv) Improving waste management to reduce contamination of the environment
- (v) Encouraging local tourism/lowering rates during the low season in order to have continuous use of tourist facilities
- (vi) Conserving water to meet the needs of local communities/wildlife/tourists
- (vii) Improve transport systems within their counties to facilitate movement of tourist
- (viii) Advertise tourism activities within their county to increase awareness
- (ix) Strengthening marketing/publicity of their tourist destinations to capture new sources of tourists
- (x) Enforcing by-laws to strengthen security in game reserves/tourist sites
- (xi) Planting trees to help in the conservation of the environment
- (xii) Encouraging community tourism/home stays in order to benefit from the tourism industry/enhance hospitality
- (xiii) Encouraging collaboration with the private sector to finance tourist activities.
- (xiv) Establishing new tourist attractions to create diversity
- (xv) Modeling existing tourist facilities to attract more people/visitors.

Any 4 x 2 = (8 marks)

9. **Use the map of Africa below to answer question (9)**

(a) Name the trans-continental highways in Africa marked M, N and)

M	-	The Great North Road	(1 mark)
N	-	The Trans-Africa Highways	(1 mark)
P	-	Algeria-Lagos Highway/Trans-saharan Highway	(1 mark)

(b) (i) **State four advantages of air transport**
- It is a fast means of transport
- It operates on fixed schedules that allows for prior planning
- It has a minimum risk/damage of cargo
- It is the most comfortable means of transport over long distances
- It has limitless scope of operations
- It allows access to remote areas

Any 4 x 1 = (4 marks)

(ii) **Explain four efforts that the Kenya Government has taken to improve air transport**

- Expansion of existing airport/improvement of airport facilities to cope with increased air traffic
- Training personnel in modern aviation technology to improve service delivery
- Promoting budget flights/package tours to lower the cost of travel/lower operational costs
- Enhancing security around the airports to reduce crime/lower accident risks
- Installing modern navigational equipment to increase efficiency in service delivery
- Encourage partnership with established airlines in order to get capital for expansion of air transport.
- Promotion of domestic air transport to maximise use of facilities.

Any 4 x 1 = (8 marks)

(c) (i) **Identify two types of communication**

- Oral/verbal communication
- Written communication
- Visual/audio-visual communication
- Sign language

Any 2 x 1 = (2 marks)

(ii) **Explain four problems facing communication in Africa**

- Africa has rugged terrain/physical barriers which makes the installation of communication equipment difficult
- Africa lacks sufficient capital to buy/maintain the communication equipment
- There is shortage of skilled human resource which has led to installation/ poor management of the communication systems
- The countries have different communication policies making the interconnection difficult
- Some countries have suffered periods of civil war/political unrest making it impossible to develop effective communication systems
- Vandalism/destruction of communication equipment leads to great losses and discourages further development.
- Low level of technology limits connectivity with other parts of the world

Any 4 x 2 = (8 marks)

10. (a) (i) **Give two main sources of population data**

- National census/head count
- Sample surveys
- Vital statistics / Registration of birth/death/marriage/migration
- Content analysis

Any 2 x 1 = (2 marks)

(ii)   **Outline the information that can be derived from a population pyramid**
-        The size of population
-        The proportion of males and females
-        The proportion of youthful/working/ageing population
-        The composition of population by sex
-        The dependency ration
-        Birth/death rate

Any 3 x 1 = (3 marks)

(b)   **Explain how the following factors have led to population increase in Kenya**

(i)   **Cultural beliefs**
- Some cultures encourage large families due to preference of one gender to the other/prestige/wealth/source of labour some cultures discourage the use of contraceptives leading to couples getting many children.
- Some cultures encourages early marriages hence a longer child bearing period.   (2 marks)

(ii)   **Migration**
Political instability in some neighbouring countries has led to an influx of refugees leading to population increase.   (2 marks)

(c)   **Explain four problems which result from a high population growth rate in Kenya.**
(i)   Kenya experiences a high unemployment rate (due to inability to create job opportunities to match the rapid increasing population) leading to low standards of living.
(ii)   There is a high dependency ratio which leads to low saving by workers.
(iii)   Increased demand for social ammenities has led to strain/congestion.
(iv)   The high demand for land has caused land fragmentation/landlessness/ destruction of forest land
(v)   The increased demand for food has led to food shortages.
(vi)   Increased expenditure on social ammenities slows down economic growth.

Any 4 x 2 = (8 marks)

(d)   **Describe four ways in which the population of Kenya differs from that of Sweden**
(i)   The population of Kenya consists of mainly a large number of young people below 20 years of age while Sweden has an ageing population
(ii)   Kenya's population has a relatively low life expectancy while Sweden has a high life expectancy
(iii)   Kenya has a high population birth rate while that of Sweden is low
(iv)   Kenya's fertility rate is high while in Sweden it is low
(v)   Kenya's death rate is high while that of Sweden is low
(vi)   Kenya's population growth rate is high while that of Sweden is low.
(vii)   Kenya has a high dependency ratio while in Sweden it is low.
(viii)   Most of Kenya's population live in rural areas while in Sweden mostly they live in urban centres.

Any 4 x 2 = (8 marks)

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