EXAMINATIONS COUNCIL OF SWAZILAND
Swaziland General Certificate of Secondary Education

GEOGRAPHY **6890/01**

PAPER 1: Geographical Themes October/November 2018

MARK SCHEME

1hour 45 minutes

Confidential

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{6890/01}

MARKS: 75

1 **(a)** Study Fig. 1 which shows the main plates of the earth`s crust.

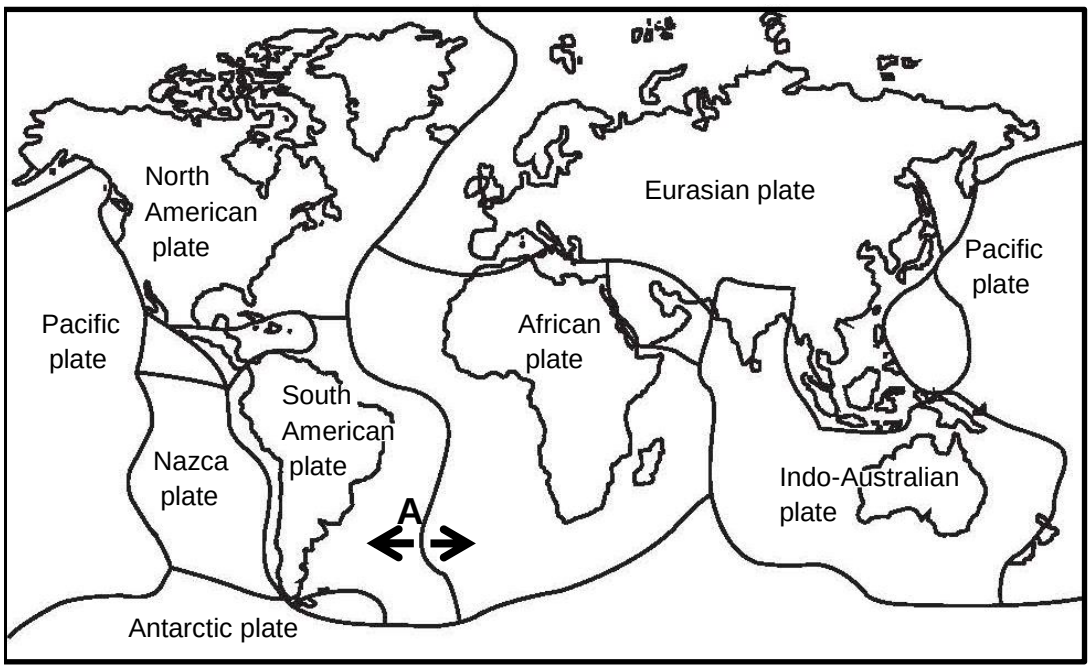

Fig.1

(i) Define plate tectonics.

The theory that the crust is divided into a series of plates [1]

(ii) Name **two** plates which collide along the west coast of South America.

1. **South American plate**
2. **Nazca plate** [2]

(iii) Describe three processes that take place in the point labelled A.

- **Plates diverge/ move apart**
- **magma moves into the space/crack**
- **magma cools down and forms mid-oceanic ridge**
- **a volcano may erupt**
- **Sea floor spreading takes place**
- **gentle earthquake activity** [3]

(iv) Explain what takes place in a destructive plate boundary.

- Continental plate collides with oceanic plate
- continental plate heavier and sinks /subsides beneath the continental plate
- edge of the oceanic plate melts in the mantle forming new magma
- a trench is formed
- the continental plate is folded and forms fold mountains
- faulting results in volcanic eruptions
- violent earthquake activity
- formation of island arcs [4]

(b) Study Fig. 2 which shows a composite volcanic cone.

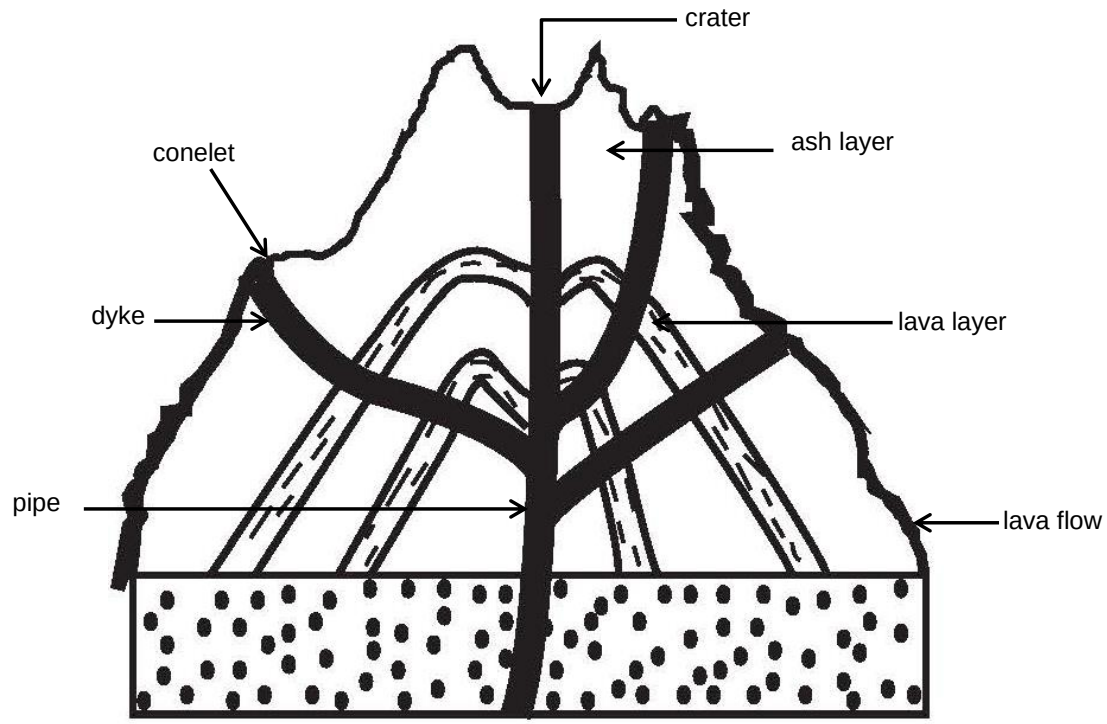

Fig. 2

(i) Describe three features of the volcanic cone shown in Fig.2.

- ash layer
- lava layer
- dykes
- conelets
- crater [3]

(ii) Explain how a composite volcanic cone may be formed.

- **Magma forced out from mantle**
- **Moves out through vent**
- **Lava flows out as a layer**
- **Release of pressure and high temperatures causes explosions**
- **Steam, gas , and ash released**
- **Ash falls on top of lava layer forming own layer**
- **A quite eruption of lava forms a lava layer on top of the ash layer**
- **Lava may be forced to move through secondary pipes forming dykes and conelets**

[5]

(c) For a country you have studied, where volcanic eruption takes place, explain the long term effects of the eruption

Level 1 [1 – 2 marks]

- **Fertile soils**
- **Minerals**
- **Hot springs/geysers**
- **Tourist attraction sites**
- **Destruction of farmlands**
- **Destruction of villages**
- **Destruction of communications**
- **Mudslides**
- **Pollution of water sources**
- **Pollution of air** [7]

Level 2 [3-5 marks]

- Fertile soils are formed from the basaltic lava this results in high yields.
- Minerals such as diamonds are formed which are exploited and exported/ job opportunities.
- Hot springs/geysers which are used for tourists' attraction or geothermal power production.
- Destruction of farmlands as these are covered by lava and ash then low yields.
- Destruction of villages resulting in lack of shelter and death etc.

2 **(a)** Study Fig.3, which shows the broad distribution of four types of climatic region in Africa.

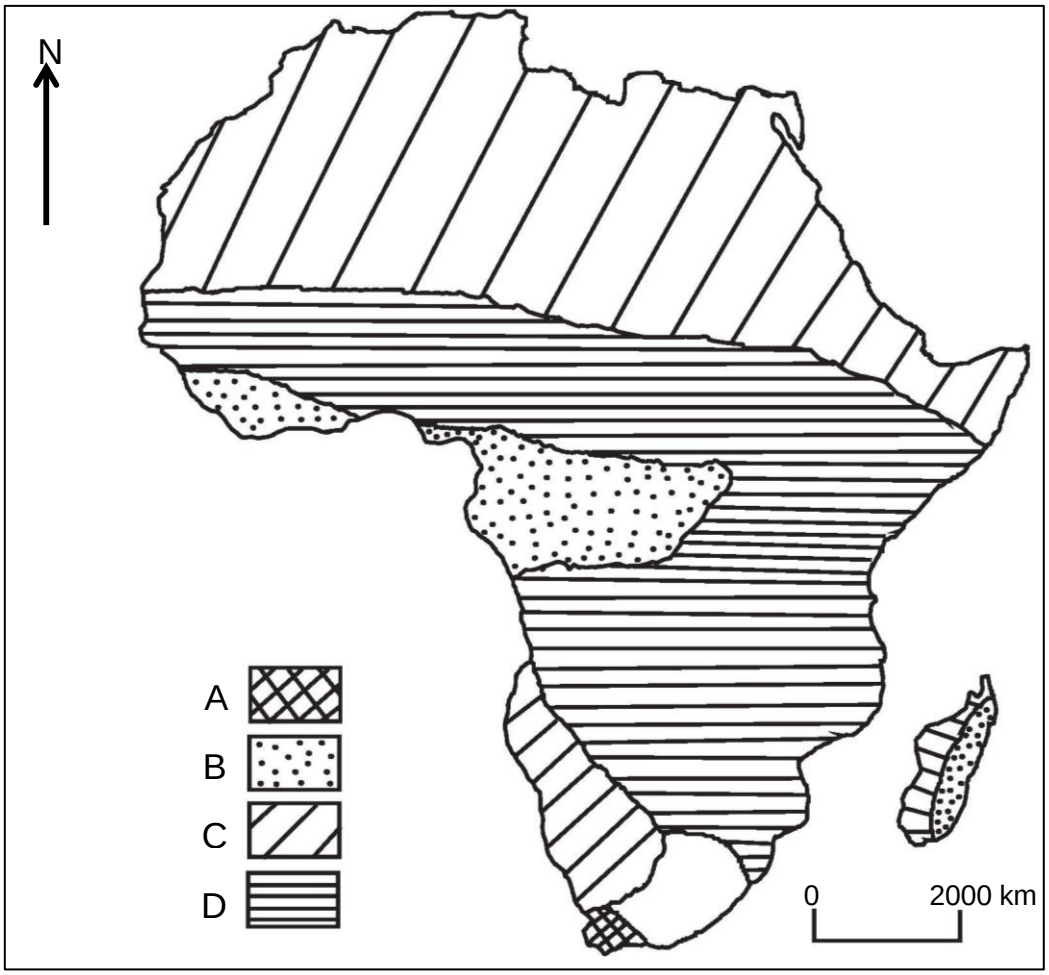

Fig. 3

(i) Name the climatic region labelled **A.**

- Mediterranean [1]

(ii) State **two** characteristics of the climate of climatic region **D.**

- **Wet summers**
- **Dry winters/drought**
- **Hot summers**
- **Cool to cold winters** [2]

(iii) State **three** features of the leaves of the natural vegetation of biome climatic region A.

- **Small**
- **Waxy/glossy**
- **Short thorns**
- **Thick/hard** [3]

(iv) Describe the soil conditions which make it difficult for plants to survive in climatic region C.

- **Sandy/loose**
- **Rocky**
- **Dry**
- **Infertile**
- **Laterite** [4]

(b) Study Photograph A (Insert), which shows the vegetation of the Equitorial rainforest region.

(i) Describe three features of the vegetation shown in Photograph A.

- **Dense**
- **Different layers**
- **Emergent layer**
- **Broad leaves**
- **Canopy**
- **Evergreen**
- **Straight tree trunks**
- **Buttress roots**
- **Climbers/ lianas**
- **Little undergrowth** [3]

(ii) Explain how the vegetation has adapted to the climate of the Equitorial rainforest region.

- **Evergreen forests –continuous growth season**
- **Different layers as plants compete for light**
- **Straight tree trunks and branchless lower part in their effort to grow tall**
- **Large buttress roots for support**
- **Climbers /lianas in search of sunlight/trying to reach for sunlight**
- **Little undergrowth as less sunlight reaching the ground**
- **Drip tips on leaves to shed heavy rainfall**
- **High density of trees/vegetation due to high rainfall and temperature**
- **Broad leaves to get rid of excess moisture** [5]

(c) For a country you have studied, explain how human activities have affected the vegetation of the Equitorial rainforest region.

Level 1

- **Vegetation cleared for subsistence farming**
- **Vegetation cleared for commercial cattle ranching**
- **Vegetation cleared for plantations**
- **Vegetation cleared for timber exploitation**
- **Vegetation cleared to exploit minerals**
- **Development of reservoirs for hydro power**
- **Development of communication routes** [7]

3(a) Study Fig. 4 which shows a type of power station.

Fig. 4

(i) Name the type of power generated by this power station.

- **Thermal electricity** [1]

(ii) Identify the parts of the power station labelled A and B.

A - cooling tower

B - pylon [2]

(iii) State **three** factors that affect the location of the power station shown in Fig. 4.

- **Access to coal supplies / near coal mine**
- **Access to transportation facilities e.g. ports / rail**
- **Access to plenty water supply**
- **Vast land / gentle sloping land**
- **Link to transmission grid** [3]

(iv) Describe how power is generated from this power station.

- **Burning of coal**
- **Boil water and generate steam**
- **Steam used to turn turbines**
- **Generator produces electricity**
- **Hot water goes to cooling tower**
- **Returned to reservoir**
- **Step up transformer** [4]

(b) Fig. 5 shows the world's oil production.

Fig. 5

(i) Describe the distribution of oil producing areas.

- **West Africa** **south east Australia**
- **North Africa**
- **Middle East**
- **Eastern Europe**
- **Northern China**
- **Central and Southern USA**
- **NW South America / west of South America** [4]

(ii) Explain the problems encountered in transporting oil using pipelines.

- **Oil spillage due to breakage/old pipes pollute water sources**
- **Danger of fire during oil spillage**
- **Oil theft along pipeline in isolated areas**
- **Loss of land and migration of local people along route**
- **Destruction of animal habitats along the oil pipe route**[[4]

(c) For an LEDC you have studied explain the problems associated with the use of fuel wood as a main source of energy.

Level 1 [1-2 marks]

- **Deforestation/destruction of forests**
- **Carbon monoxide/dioxide produced from burning of wood**
- **Time loss due to collection of firewood**
- **Soil infertility**
- **Soil erosion**
- **Loss of indigenous vegetation** [7]

Level 2 [3-5 marks]

- **Deforestation which results in soil erosion or loss of habitants.**
- **Carbon monoxide / dioxide produced which contributes to global warming.**
- **Time loss due to collection of firewood as people have to travel long distances in search of firewood.**
- **Soil infertility – trees drop their loams which also adds humus to the soil.**
- **Loss of indigenous vegetation which might end up extinct.**

Level 3 Examples [6-7 marks]

4. (a) Study Photographs B and C (Insert), which shows some products of the craft industry in Swaziland.

(i) Define a craft industry.

Small scale industry using cheap, natural /local materials to produce goods using hands or simple tools [1]

(ii) Identify **two** raw materials used in Photographs B and C.

- **Grass**
- **Cotton**
- **Leather/animal skin**
- **Sisal**
- **Shrubs** [2]

(iii) State **three** features of a craft industry.

- **Small scale/sites**
- **Local raw materials used**
- **Skills passed from generation to generation**
- **Goods usually targeting tourists** [3]

(iv) Explain **four** advantages of craft industries in Swaziland and Lesotho.

- **Employment of local people**
- **Employment of women**
- **Craft products attract tourists / foreign exchange**
- **Raw materials often obtained from nature and so cheaper or free**
- **Local people learn skills for producing goods**
- **Provides goods for use locally / by locals** [4]

(b) The craft industry involves the exploitation of natural resources.

(i) Describe how craft industries affect the environment.

- **Removal or destruction of natural vegetation**
- **Unsightly pits in environment due to mining of soapstone and clay**
- **Pollution/littering where goods are produced**
- **Loss of habitats**
- **Loss of indigenous vegetation** [3]

(ii) Suggest **five** factors which affect the location of craft industries.

- **Availability of raw materials**
- **Proximity to markets**
- **Availability of capital**
- **Availability of skilled personnel**
- **Government policy** [5]
-

(c) For a country you have studied, explain how the government help to improve the craft industry.

Level 1 [1 - 2 marks]

- **Loans for local entrepreneurs**
- **Education or training for locals**
- **Provision of sites**
- **Advertisement of products**
- **Provision of markets**
- **Cooperatives** [7]

Level 2 [3-5 marks]

- **Loans for local entrepreneurs which they can use to acquire raw materials and machinery.**
- **Education or training in skills – hence they produce goods of international standards and learn how to market products..**
- **Provision of sites – saves on work of construction and rent which increases profit and these are accessible to tourists.**
- **Cooperatives – becomes easy to organise a market and loans for local.**

5. (a) Study Fig.7 which shows an area of a rural settlement.

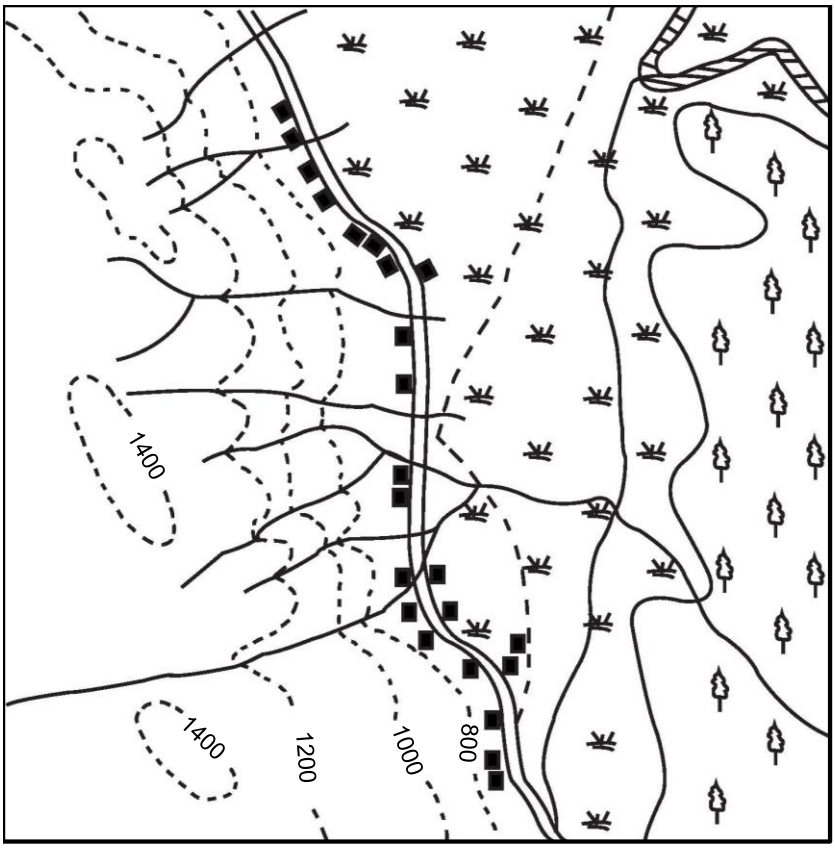

Fig. 7

(i) Name the settlement pattern shown by Fig.7

- **Linear** [1]

(ii) State two possible uses of the forest shown in Fig.7 to the local people.

- **Firewood**
- **House construction**
- **Fencing**
- **Craft industry** [2]

(iii) Describe three factors which influence the settlement pattern shown in Fig.7.

- **Along road**
- **Edge of steep slope**
- **Edge of marshy area** [3]

(iv) Explain **four** physical factors which influence the location of rural settlements.

- **Relief**
- **Water supply**
- **Resources**
- **Building materials**
- **Altitude**
- **Aspect** [4]

(b) Fig. 8 shows a hierarchy of settlements.

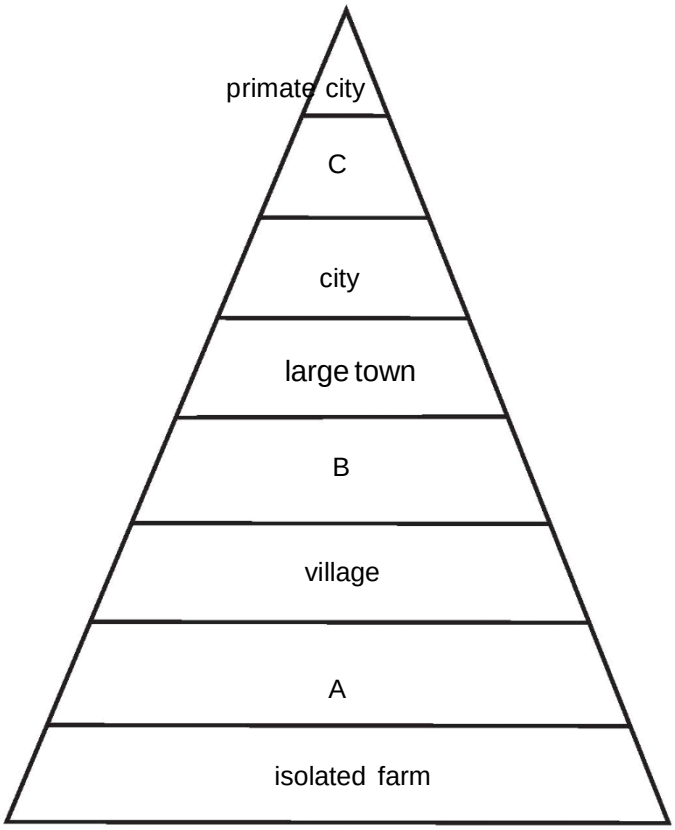

Fig.8

(i) Name the urban settlements labelled **A, B, C** in Fig.8.

A hamlet

B Small town

C capital city [3]

(ii) Explain the difference between the population, services and sphere of influence of a village and a city.

- **Village small shop for daily goods - City shopping complex for comparison goods**
- **Village small sphere of influence - City large**
- **Small/junior sec school - City many colleges/universities**
- **Low population - City high population**
- **No rail station single bus stop - railway station or bus rank**
- **No banks - city many banks**
- **Few services provided - many services provided** [5]

(c) For an LEDC you have studied explain the problems resulting from rapid urbanisation,

Level 1 [1-2 marks]

- **Encroachment into farmland**
- **Increase in crime rate**
- **Increase in traffic congestion**
- **Urban sprawl**
- **Increase in rural urban migration**
- **Increased pollution** [7]

Level 2 [3-5 marks]

- **Encroachment into farmland which results in less agricultural produce / due to need for more housing and shopping malls.**
- **Increase in crime rate – as there may be few employment opportunities.**
- **Increase in traffic congestion resulting in increased pollution.**
- **Urban sprawl – more land is needed for expansion of the urban area, etc.**

Level 3 [6-7 marks]

examples

5 (a) Fig. 9 shows the percentage of adults (15 – 49) living with HIV and AIDS in Botswana and Swaziland between the years 2005 and 2008.

Table 1

Percentage of Adults (15 – 49) living with HIV and AIDS

	2005	2008
Swaziland	26	32.4
Botswana	24.1	24.0
Lesotho	23.2	23.7

(i) What does the letters HIV stand for?

- **Human immune-deficiency virus** [1]

(ii) Compare the percentage of adults living with HIV in Botswana and Swaziland, between the years 2005 and 2008 using Fig. 9.

- **Swaziland higher percentage Botswana lower**
- **Swaziland increase between 2005 and 2008 Botswana decrease**
- **Swaziland bigger change Botswana smaller change** [2]

(iii) State three economic impacts of HIV and AIDS in a LEDC like Swaziland.

- **More resources spent on orphans**
- **More resources spent on orphans feeding**
- **Less economic growth due to fewer workers**
- **Increase in poverty due to higher dependency ratio** [3]

(iv) Suggest how some governments are trying to reduce the spread of HIV and AIDS.

- **free distribution of condoms**
- **education of population**
- **VCTs**
- **ARVs/prevention of mother to child transmission**
- **circumcision** [4]

(b) Study Fig. 6, which shows an extract about life in an area with rapid population growth.

Tables and maps which compare countries of the world are very useful for giving us overall patterns. These abstract statistics translate into hunger, drudgery and early death for almost half of the human beings on this planet. When you walk into a typical rural village or urban slums one of the LEDCs, you are greeted with the stench of refuse, open sewers and smoke. Groups of malnourished children may be sitting around wood fires eating breakfast of bread and coffee, Children and women have to carry jars of water from a muddy, contaminated river, canal or single water tap. At night some people may sleep on the street, the open or in make shift canopies. Other families of 10 and 12 may crowd into single room shacks, often made from straw, reeds, cardboard or rusting corrugated sheet metal. Three or four people may be in one or two beds, but most sleep on the dirt floor. The father and perhaps most of the children may work in the fields or beg for food in the city. The parents who themselves may die by age 35, know that three or four of their children may die an infants due to hunger or childhood diseases. The children that survive add to the flood of people in the slums or to those who leave their farms and head for urban slums hoping to find jobs that do not exist. The list of problems of rapid population growth in developing countries throughout the world could go on and on.

Fig. 6

(i) Using Fig. 6 identify three problems of an area which experiences rapid population growth.

- **Malnutrition**
- **Exposure to cold weather conditions**
- **Drinking dirty water**
- **Overcrowding**
- **Sleeping on the streets**
- **Low life expectancy**
- **Increased litter**
- **Poor sewerage disposal** [3]

(ii) Explain how some governments try to solve the problems of rapid population growth.

- **Provision of free contraceptives**
- **Food donations**
- **Provision of farming inputs**
- **Clean water sources**
- **Low cost housing**
- **Employment opportunities** [5]

(c) For an LEDC that you have studied, explain the characteristics which show that it is overpopulated.

Level 1

- **Development of squatter settlements – due to lack of housing**
- **Poverty**
- **Social unrest – shortage of services to the people**
- **Starvation – lack of investment in farming**
- **Diseases outbreaks – due to shortage of facilities such as water sanitation**
- **Degradation of the environment**
- **Shortage of vital services e.g. hospitals / schools - the government cannot afford to provide these due to the increase in population / limited resources** [7]