

# GEOGRAPHY

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8233  
Paper 1

## Key message to teachers

- Learners should be encouraged to follow the examination rubric correctly, answering 6 of the 9 questions only.
- Teachers should teach the learners how to use and interpret a variety of resources such as photographs, graphs or diagrams in order to extract information and analyse the data to show patterns or trends.
- Learners should also be taught how to compare change, by use of comparative words e.g. increased slightly, steep increase, etc.
- Learners should also be encouraged to avoid using vague terms e.g. pressure on infrastructure, without giving specific examples e.g. schools or hospitals.

1 (a) (i) Moderately answered. Few candidates incorrectly identified the plate boundary as a convergent plate.

**Expected answers:**

A – Transform/conservative

[1]

(ii) Well answered. The majority of the candidates identified the constructive/divergent plate correctly.

**Expected answers:**

C – Divergent/constructive

[1]

(b) Poorly answered. The majority of the candidates did not produce a diagram and a few who did, incorrectly drew a simple diagram of subduction.

**Expected answers:**

Learners must give reference to:

Arrows of divergence

Subduction of oceanic crust

Earthquake zone – earthquakes occur

Formation of fold mountains

Formation of Deep Sea trench

Oceanic crust/plates diverge/moves apart

New oceanic crust forms.

*If no diagram is offered – no marks awarded.*

[4]

(c) Well answered. The majority of the candidates correctly explained the tectonic activities at a divergent plate.

**Expected answers:**

Convection currents causes tension forces

Tension forces cause the divergences of oceanic plate/divergence of plates

An area of extrusion/fault develop

Magma rises through up the extrusion

Mid-oceanic ridges are found where the two oceanic plates are moving away from each other

A Mid-Atlantic ridge is formed

As more magma force its way above the oceanic crust, the volcanoes emerge above the sea level

Creating volcanic islands

[4]

[10]

2 (a) (i) Moderately answered. Candidates incorrectly identified A, as evapotranspiration.

**Expected answers:**

A Through flow

[1]

(ii) Well answered. B, was correctly identified by the majority of candidates as evaporation.

**Expected answers:**

B Overland flow

[1]

- (b) Well answered. Candidates were able to describe the movement of water in the drainage basin system as illustrated in Fig. 2.

**Expected answers:**

Precipitation  
Direct input into river channel  
Interception  
Infiltration  
Saturation of soil/bedrock to increase overland flows.  
Through flow/a change in the soil water storage.  
Percolation  
Groundwater flow/the height of the water table/base flow

[4]

- (c) Moderately answered. The majority of the candidates scored 2 out of 4. The most common answers were urbanisation/artificial concrete surfaces and deforestation.

**Expected answers:**

Urbanisation – artificial surfaces: removal of natural vegetation decrease transpiration and increase overland flow

Deforestation – reduce transpiration of moisture back into the system reducing chances for rainfall

When rainfall occurs a lower infiltration will lead to more surface flow

Increasing agriculture – less interception and evaporation adding to surface run-off, erosion and depositing of sediment in river channels – (flooding)

Water extraction reduces the amount of water reaching the ground water storage

Afforestation – reduction in overland flow and increase in infiltration and evapotranspiration

Climate change – changing precipitation patterns

Mining – reduce interception and evaporation with loose soil increasing sedimentation

[4]

[10]

- 3 (a) Poorly answered. Many candidates misinterpreted the question and concentrated upon differences in the effects of day and night time radiation energy.

**Expected answers:**

Surplus between latitudes 35°N - 35°S  
Maximum surplus as the Equator - 0°  
Maximum deficit at 90°  
Deficit areas above 35°/35-90°/+35° N/S  
±35° N/S – energy balance  
Transfer of heat from areas of surplus to areas of deficit

[4]

- (b) Poorly answered. Candidates only defined the vertical heat transfers e.g. latent heat transfer, convection, conduction, etc. Candidates who mentioned either wind or ocean currents were unable to give much explanation as to how they transfer heat.

**Expected answers:**

Heat is transferred from surplus to deficit by warm ocean currents. (D)

Because they cover 67% of the Earth's surface, the oceans receive 67% of the sun's energy that reaches Earth/oceans hold onto this heat for longer than the land does (E)

In total, ocean currents transfer about 25% of the global heat budget / an appropriate example of a named warm ocean current. (E)

Heat transferred via winds/air movement/jet streams (D) Because polar cell causes HP cells and Ferrel Cell where descending air warms up and gives clear cloudless skies, and the Hadley cell, giving cooling and sinking of upper air. (E)

Heat is transferred via cyclones/depressions/LP – (D) system

Depression results when warm tropical air meets colder polar air (E)

The upward movement results in less air at the earth's surface, creating an area of below – average pressure/low pressure. (E)

Heat can also be transferred vertically; (D) This is achieved through radiation, conduction, convection and the transfer of latent heat. (E)

*A candidate would need to identify (describe and explain) three ways to gain the max. 6 marks.*

*There may be several ways of scoring those 2 marks.*

[6]

[10]

- 4 (a) (i) Poorly answered; the majority of the candidates described A as extensive farming.  
**Expected answers:**  
 A Intensive/subsistence/small scale/arable/maize/cereal/sorghum/crops/organic crops [1]
- (ii) Poorly answered; the majority swapped letter A with B and describe B, as intensive.  
**Expected answers:**  
 B Extensive/commercial/large scale/high yield crops/crops [1]
- (b) Well answered. The majority were able to describe the nature of the agricultural system shown. Common responses were: small scale, mostly women, labour intensive, additional methods, etc.  
**Expected answers:**  
 Primitive tools/traditional methods  
 Manual labour/labour-intensive  
 Mostly women  
 Limited capital to mechanise (tractors + irrigation)  
 Simple farming techniques  
 Not a great variety of produce/crops [3]
- (c) Well answered. The majority of the candidates explained in greater depth how technology leads to increased agricultural production in low income countries.  
**Expected answers:**  
 Irrigation improves the yields of crops which means more income for farmers  
 Irrigation makes it possible to grow more cash crops  
 Larger farm land – higher yields  
 Two growing cycles in a year – higher yields  
 More/varieties of crops/mixed cropping  
 Encourage the use of marginal land  
 Reduce effects of drought/reduce famine  
 Shorter growing season  
 Larger areas of land can be farmed with the use of machinery  
 Use of genetic modified seeds  
 Use of HYVs  
 Use of dip tanks/vets/ protection against diseases  
 Pesticides/insecticides  
 More mechanisation [5]  
**[10]**
- 5 (a) Poorly answered. The majority of the candidates failed to compare trends in energy consumption between the USA and China. Candidates merely lifted from Fig. 4.  
**Expected answers:**  
 USA continuous fluctuation while China shows a steady increase  
 Development mark with data (1) (E.g. the biggest fluctuation for USA and increase total for China).  
 China from 2001 – 2014 increase more steeply compared to USA (1)  
 China's rate grew from 35 – 75 gigajoules while the USA overall declined from 340 – 310, but with varying rates and fluctuations (1)  
 Both increased (1) (with the difference in data for both countries given, or stating and ending figures for both) (1) [3]
- (b) Moderately answered. The majority scored 2 out of 3. Common responses were; increasing populations and increase in industrialisation.  
**Expected answers:**  
 Industrialisation increased/China –NIC  
 Expansion of technology  
 Large population occupied in manufacturing  
 Urbanisation/increasing of proportion of population living in urban areas  
  
*For up to 2 reasons each (2)*  
*Development of a reason (1)* [3]

- (c) Moderately answered. Candidates only gave vague responses such as it can lead to air pollution, without stating the method of energy production.

**Expected answers:**

The possible environmental impact will depend on the nature of energy production  
 Max 2 for each energy source. i.e the first mark for initial statement and second for development  
 Air pollution – increased greenhouse gases lead to global warming increasing climate change (1)  
 This may reduce rainfall causing severe drought / increased rainfall, causing flood the effect may destroy natural and human environments (development) (1)  
 Burning of fossil fuels causes formation of acid rain (1)  
 Destroying natural vegetation can contaminate water sources (development) (1)  
 Clearing large areas of natural vegetation destroys natural habitats  
 Causing extinction of species and reduce biodiversity (development) (1)  
 Nuclear energy can be linked to routine emissions of radio-activity/radio-active contamination accidents.  
 This can further be intensified by waste disposed where waste stays radio-active for very long periods (development) (1)  
 Bio-fuel could lead to deforestation/destruction of natural vegetation  
 Leading to increased soil erosion/decreased rainfall/humidity/destruction of natural habitats/ecosystems (development) (1)  
 Wind energy produced in areas of scenic attraction  
 They are therefore too close important wildlife habitats/or areas where they are visually intrusive (development) (1)  
 HEP energy leads to large areas of vegetation being cleared/flooded  
 This could lead to the destruction of wildlife habitats/lakes could become acidic and anaerobic (development) (1)

[4]  
 [10]

- 6 (a) Well answered. The comparison between various dam levels was correctly analysed by the majority of the candidates.

**Expected answers:**

Overall dam had higher levels of water during February 2020 season than previous season  
 Exception Southern dams had less water during February 2020 than in February 2019  
 February 2020 and the previous rain season Windhoek region has most water available.  
 Windhoek has almost the same (65%) for both seasons  
 Biggest difference between 2020 and previous season is in the east (29.8% and 3.6%)  
 Credit data up to 1 mark

[4]

- (b) Moderately answered. Candidates scored 1 out of 2, for differences between precipitation and evaporation for the two terms.

**Expected answers:**

Surplus – excess of water available in a drainage basin system  
 Precipitation exceeds (evapo) transpiration  
 Deficiency – Demand is greater than supply  
 Evapotranspiration is higher than precipitation

[1]

[1]

- (c) Moderately answered. Most scored 2 out of 4, mainly for "displacement of people and water wars".

**Expected answers:**

**Social**

Loose ancestral land  
 Displacement of people to available land for the project/people loose farm land  
 Water borne diseases e.g. Malaria, Bilharzia, etc.  
 Scarcity of water downstream

**Political**

Water conflict/war between countries  
 Competition for water

*Max (3) for reasons, 1 mark in reserve for development (explanation/use of examples).  
 Max (2) for development  
 At least one social and one political issue.*

[4]  
 [10]

- 7 (a) Well answered. The pattern was correctly described, although some candidates inferred that more refugees had moved to the Syrian Arab Republic, even listing the figure which showed refugees' origin not destination.

**Expected answers:**

Highest number of refugees are from the Middle East e.g. Syrian Arab republic, Afghanistan

Intermediate origin refugee countries are found in Central and eastern

Africa e.g. Democratic Republic of the Congo

Lowest number of refugees are from the northern parts of South America e.g. Columbia

Res 1 mark for data reference – e.g.

Syrian Arab Republic – 55 00 00

Afghanistan – 2 750 00 – 2 400 000

South Sudan – 2 400 000 – 1500 000

Somalia – 1500000 – 1000000

Sudan – 1000000 – 650000

DRC – 650 000 – 550 000

Central African Republic – 550 000 – 450 000

Eritrea – 450 000 – 200 000

Myanmar 200 000 – 100 000

Columbia – 100 00 – 80 000

[4]

- (b) Well answered. Common responses were war and natural disasters, e.g. drought.

**Expected answers:**

Environmental reasons:

Drought/floods

Natural hazards e.g. earthquakes

Political:

Civil unrest

War

Religious persecution

Cultural persecution/Xenophobia

[2]

- (c) Well answered. The majority of the candidates scored 3 out of 4. Common responses were: language barrier; xenophobia and discrimination.

**Expected answers:**

Discrimination/Intolerance (religious) or cultural

Language barriers

Difficulty securing higher paying jobs

Difficulty to access services e.g. permits / health / education

Difficulty to afford decent housing

Xenophobia

*2 marks for 2 challenges*

*2 marks for development of the mentioned challenges*

[4]  
[10]

- 8 (a) Moderately answered. The majority recognised that these countries are in SADC. Answers that gained full marks gave a more precise location with reference to southern, central or eastern Africa.

**Expected answers:**

Mostly southern part of Africa

Eastern coast of Africa/Eastern countries of Africa

Central Africa e.g. DRC

SADC countries (development)

*Using of data = res 1*

[3]

- (b) Well answered. The majority of the candidates correctly extracted the answer from the Figure shown.

**Expected answers:**

Climate change/drought/floods

Pests

Diseases/HIV/AIDS/TB

[2]

- (c) Well answered. The majority of the candidates correctly discussed the problems associated with rapid increase in world population. However, candidates used vague statements such as pressure on services or infrastructure without giving specific examples.

**Expected answers:**

Pressure on wood for fuel/food prices  
Increased unemployment  
Pressure on water sources/electricity  
Increase in air/water/land pollution/wastage  
Shortage/pressure on housing/increase in informal settlements  
Pressure on schools/education services  
Pressure on hospitals/medical services  
Increase social problems e.g. prostitution/crime  
Poverty  
Likelihood of being exposed to diseases/epidemics  
Lower life expectancy in fastest growing countries  
Loss of ecosystems e.g. Rain forests  
Increase government debt

[5]  
[10]

- 9 (a) Poorly answered. The majority of the candidates failed to compare trends and merely gave a word by word description of all the data provided. This produced lengthy and often irrelevant answers.

**Expected answers:**

All increasing  
More developed countries are higher and increase slowly until the year 1985/flattens off to 2030 / slight increase to 2050  
World steady increase continuous.  
Asia and Africa same pattern of increase  
Are the lowest of all but slightly steeper increase from 1990  
World follows same pattern as Asia and Africa.  
Latin America and Caribbean steepest increase from 1950 to 1995  
Slower increase from 1995 to 2050  
Biggest increase Latin America + Caribbean

[3]

- (b) Moderately answered. Candidates scored 2 out of 4, mainly for explaining reasons for urbanisation in LIC's only.

**Expected answers:**

HICs: already have a higher level (%) of urbanisation since 1950's  
Early industrialisation  
Urbanisation ends – majority of people employed in manufacturing industries and services  
Counter urbanisation  
LICs: economic opportunities (jobs)  
Better services provided (education and health care)  
Higher population growth rates  
Fewer urbanised areas compared to HICs

LICs: mostly primary education with a few secondary schools  
Young people migrate to urban areas to continue studies, especially at Tertiary institutions.

[4]

- (c) Well answered. The majority of the candidates correctly discussed the problems related to transport. There was a general trend in good responses e.g. "increase in pollution or more accidents" instead of just pollution and accidents.

**Expected answers:**

Increased traffic congestion (people and cars)  
Longer time in journey to work/lateness in arriving at work/delays for companies in shipping goods.  
Increasing pollution (noise and air)  
Increase in respiratory diseases  
More accidents – socio-economic effects  
Transport costs are higher as demand rises  
Road rage and conflict amongst people  
Stressful – possible heart diseases

[4]  
[10]