

Geography, 2012 EC, social science, entrance exam

Grade 12 · Geography · 2012 E.C.

MARKING KEY — CONFIDENTIAL**Time allowed:** 120 minutes**Questions:** 30**Total marks:** 30

1. What is the most sparsely populated country in northern Africa? (1)
- A. Tunisia
B. ✓ **Libya**
C. Egypt
D. Algeria

Answer: B

North Africa is mostly Sahara, so people crowd into the few places with water. Libya covers about 1.76 million square kilometres but holds only around 7 million people, which works out at roughly 4 people per square kilometre, the thinnest spread in the region.

Egypt is the tempting answer because its desert looks empty, but almost all Egyptians are packed along the Nile valley and delta, so the country as a whole is far more crowded than Libya.

Textbook: Geography Grade 10, Unit 4 Population of Africa, section 4.4 Distribution and density of Africa's population (page 105).

2. In which region of Africa is the highest infant mortality rate found? (1)
- A. Western Africa
B. Eastern Africa
C. Northern Africa
D. ✓ **Central Africa**

Answer: D

Infant mortality is the number of babies who die before their first birthday per 1,000 live births. In the 2020 figures, Central Africa had the highest rate in the continent at 62 per 1,000, followed by Western Africa at 55.

Northern Africa is the lowest at 22 per 1,000, so option C is the opposite of the answer. Central Africa's rate stays high because of conflict, weak health services and poor sanitation.

Textbook: Geography Grade 10, Unit 4 Population of Africa, section 4.2 Africa's major demographic trends, Table 4.6 (page 97).

3. Which one best characterizes the African population? (1)
- A. Low crude death rate in the world
B. High immigrants from other continents
C. ✓ **Categorized as young age group**
D. Dominated by old age population

Answer: C

Africa's median age was about 19.7 years in 2020, while Europe's was 42.5 years. A low median age means half the people are still children or teenagers, so the continent is dominated by the young age group.

Option A fails because Africa's crude death rate is not the lowest in the world; it is about 8 per 1,000, the same as the world figure and higher than in several richer regions. High fertility, not migration, is what keeps the African population young.

Textbook: Geography Grade 10, Unit 4 Population of Africa, section 4.3 Population structure.

4. What is the main reason for the low sex ratio in sub-Saharan African countries? (1)
- A. The region is characterized by a large number of female immigrants
 - B. The drought condition of the region highly affects male population
 - C. ✓ **There is huge loss of male population due to war and migration**
 - D. Female births exceed male births in the region

Answer: C

Sex ratio counts males for every 100 females. A ratio below 100 means men are missing from the population. In sub-Saharan Africa civil wars kill mostly men, and it is mostly young men who leave to work in other countries, so the male side of the pyramid is thinned out.

Option D is the trap. Everywhere in the world slightly more boys are born than girls, about 105 boys per 100 girls, so births cannot explain a shortage of males.

Textbook: Geography Grade 10, Unit 4 Population of Africa, section 4.3 Population structure.

5. People often move from their original residence to another place in the same country in search of work. This happens for a short period as the people return to their original place when the working season is over. What is type of movement called? (1)
- A. International migration
 - B. Intra-continental migration
 - C. Permanent migration
 - D. ✓ **Temporary migration**

Answer: D

The people in the question leave for one working season and then go home again. Movement that lasts only a short time and ends with a return to the place of origin is temporary migration, and the seasonal farm labour described here is its classic example.

Permanent migration is ruled out because the workers come back. International and intra-continental migration are ruled out too, because the move stays inside one country.

Textbook: Geography Grade 10, Unit 7 Geographic Issues and Public Concerns in Africa, section 7.2 Migration, factors and impacts on Africa (page 157).

6. What is the disadvantage of migration to the losing countries? (1)
- A. It put more pressure on public services
 - B. ✓ **It losses people in productive age group**
 - C. It increases cost of services
 - D. It leads to overcrowding

Answer: B

The losing country is the one people leave. It pays for raising, feeding and schooling young adults and then loses them at the very age when they would start working, which is why the loss of the productive age group, often called brain drain, is the main cost.

The other three options describe crowding, service costs and pressure on public facilities. Those are burdens on the country that receives migrants, not on the one that loses them.

Textbook: Geography Grade 10, Unit 7 Geographic Issues and Public Concerns in Africa, section 7.2 Migration, factors and impacts on Africa (page 157).

7. Which one of the following is the disadvantage of migration to the receiving countries? (1)
- A. An increase in the number of skilled workers
 - B. A reduction in pressure on jobs
 - C. A reduction in social and racial tension
 - D. ✓ **Communication barrier**

Answer: D

In the receiving country, newcomers often speak a different language and follow different customs, so a communication barrier grows between migrants and their hosts. That barrier makes work, schooling and health services harder to deliver.

Option A is a benefit of migration, not a disadvantage, and options B and C state the reverse of what happens: migration usually increases competition for jobs and can raise social and racial tension rather than reduce it.

Textbook: Geography Grade 10, Unit 7 Geographic Issues and Public Concerns in Africa, section 7.2 Migration, factors and impacts on Africa (page 157).

8. What is the main reason for the highest rate of urbanization in Africa? (1)
- A. High rate of urban to urban migration
 - B. Advancement of social services in urban areas
 - C. ✓ **High fertility rate in the urban areas**
 - D. The expansion of industries in urban areas

Answer: C

African towns grow from two sources: people arriving from the countryside, and the babies born to the town dwellers themselves. City populations in Africa are young and fertility stays high, so natural increase inside the urban area adds a large share of the growth every year. Of the four choices, only high fertility names such a growth engine.

Option D is the tempting one, because in Europe and Asia industry pulled people into cities. In Africa urban growth has run ahead of industry, which is why the syllabus calls it unplanned urbanization.

Textbook: Geography Grade 10, Unit 7 Geographic Issues and Public Concerns in Africa, section 7.1 Unplanned urbanization (page 152).

9. In which region of Africa is the highest level of urbanization in found? (1)
- A. Eastern Africa
 - B. ✓ **Southern Africa**
 - C. Western Africa
 - D. Northern Africa

Answer: B

Level of urbanization means the share of people who live in towns. In the 2016 regional figures, Southern Africa leads with 62 percent urban, then Northern Africa 51, Central Africa 47 and Western Africa 45.

Eastern Africa is the trap. It has the fastest rate of urban growth in the continent, but its level is the lowest of all, only 26 percent, because it started from a very rural base.

Textbook: Geography Grade 10, Unit 4 Population of Africa, section 4.5 Urban and rural settlement patterns, Table 4.10 (page 107).

10. Among the following, which one is the main impact of rapid urbanization in urban areas of Africa? (1)
- A. Language difficulties
B. ✓ **Theft related crime**
C. Noise pollution
D. Improper waste disposal

Answer: B

When towns swell faster than housing and jobs can follow, inequality widens, rents rise and many young people end up with no work. The textbook traces that chain to social instability and a rising prevalence of crime, and theft is the everyday form it takes.

Improper waste disposal is a genuine problem in fast growing African cities, but the syllabus treats it as a feature of poor infrastructure and sanitation rather than the main social impact. Noise and language difficulties are much smaller issues.

Textbook: Geography Grade 10, Unit 7 Geographic Issues and Public Concerns in Africa, section 7.1.2 Consequences of unplanned urbanization (pages 155 and 156).

11. Which part of Ethiopia contributes rainfall water to the Wabishebele River? (1)
- A. ✓ **Hararghe**
B. Keffa
C. Shewa
D. Illubabor

Answer: A

The Wabe Shebelle belongs to the southeastern, or Indian Ocean, drainage system. That system collects its water from the highlands of Hararghe, Bale, Arsi and Sidamo, then flows southeast across the dry Somali lowlands.

Keffa and Illubabor drain west into the Baro Akobo and the Abbay, and Shewa feeds the Awash and the Abbay, so none of them can supply the Wabe Shebelle. Hararghe is the only choice on the southeastern side of the divide.

Textbook: Geography Grade 9, Unit 3 Natural Resource Base of Ethiopia, section 3.2 Drainage systems of Ethiopia (page 62).

12. What are the two major rivers of inland drainage system in Ethiopia? (1)
- A. The Baro-Akobo and the Tekezze Rivers
B. The Wabishebele and the Genale Rivers
C. ✓ **The Awash and the Omo-Ghibe Rivers**
D. The Abay and the Didessa Rivers

Answer: C

Inland drainage means the water never reaches a sea. The Awash ends in the salty Lake Abbe on the Djibouti border and the Omo Gibe ends in Lake Turkana, so both die inside the Rift Valley. They are the two major rivers of the inland system.

The Baro Akobo, Tekezze and Abbay in options A and D run west to the Nile and the Mediterranean, and the Wabe Shebelle and Genale in option B run southeast toward the Indian Ocean.

Textbook: Geography Grade 9, Unit 3 Natural Resource Base of Ethiopia, section 3.2 Drainage systems of Ethiopia (page 63).

13. In which part of Ethiopia are most of the highland lakes found? (1)
- A. ✓ **Shewa**
B. Wello
C. Tigray
D. Wellega

Answer: A

Highland lakes sit on the plateaus, either as crater lakes or as watershed lakes. The largest cluster named in the syllabus is on the Shewan plateau: many small but deep crater lakes in and around Bishoftu, such as Bishoftu, Kuriftu, Babo Gaya and Arsedi, plus Wonchi and Dendi near Ambo and Ginchi, and Ziquala.

Tigray is the tempting answer because Lake Hashenge near Korem is famous, but it is almost the only highland lake there. Wello contributes Lake Haik, and Wellega has none of note.

Textbook: Geography Grade 9, Unit 3 Natural Resource Base of Ethiopia, section 3.3 Water resources of Ethiopia (page 66).

14. Which one of the following is relatively the most utilized river for irrigation and hydroelectric power generation in Ethiopia? (1)
- A. The Ghibe River
B. The Fincha Rive
C. ✓ **The Awash River**
D. The Abbay River

Answer: C

The Awash basin is the most developed river basin in the country. Because the river runs for hundreds of kilometres across flat Rift Valley plains, it was easy to dam and divert, so it carries the Koka dam together with the Wonji, Metahara and Tendaho irrigation schemes.

The Abbay is the tempting choice since it carries much more water, but it runs through a deep gorge, which made large scale use of it slow and costly to start.

Textbook: Geography Grade 9, Unit 3 Natural Resource Base of Ethiopia, section 3.2 Drainage systems of Ethiopia (page 63).

15. Which one of the following represents the sphere of water bodies? (1)
- A. Anthroposphere
B. Lithosphere
C. ✓ **Hydrosphere**
D. Biosphere

Answer: C

Hydro means water, so the hydrosphere is all the water of the Earth: oceans, seas, lakes, rivers, groundwater and ice.

The lithosphere is the rocky crust, the biosphere is the zone where living things exist, and the anthroposphere is the part of the Earth made or changed by people. Only one of the four is defined by water.

16. A geography teacher aims to teach course, introduction to Climatology. He wants to cove the spatial distribution, (1) variation and interaction of climatic system of the world course. Among the following geographical approaches, which one is the best approach for the teacher to use?
- A. ✓ **Systematic approach**
B. Regional approach
C. Quantitative approach
D. Analytical approach

Answer: A

Geography can be organised in two ways. The systematic approach takes one topic, such as climate, landforms or population, and follows it right across the world. The regional approach takes one area, such as the Horn of Africa, and studies all of its features together.

Introduction to Climatology is a single topic covering the climatic systems of the whole world, so it is systematic.

Choosing the regional approach would mean teaching everything about one place instead, which is not what the teacher wants.

17. Agricultural activities carried out in Ethiopia have contributed to climate change. Climate change has in turn an (1) adverse impact on agricultural yields. To reduce the impact of climate change, Ethiopian farmers have developed different adaption strategies. Which school of geographical thoughts is concerned with such interactions between the environment and human activities?
- A. Quantitative revolution
B. Environmental Perception
C. ✓ **Environmental possibilism**
D. Environmental determinism

Answer: C

Possibilism says that people can adapt to many different environments and can choose between several possible responses, even though nature sets limits. The farmers in the question are doing exactly that: they change the environment through their farming and then design their own adaptation strategies against the climate.

Determinism is the tempting answer, but it claims the physical environment dictates what people do, in one direction only. It leaves no room for farmers who alter the climate and then choose how to answer it.

Textbook: Geography Grade 10, Unit 6 Human and Natural Environment Interactions, section 6.2 Human environment relationship (page 141).

18. What is the use of geographic knowledge that is used to solve spatial problems called? (1)

- A. Political geography. **B. ✓ Applied geography.**
C. Human geography D. Physical geography

Answer: B

Applied geography is geographic knowledge and technique put to work on real problems in real places: where to site a clinic, how to plan land use, how to route a road, how to warn people about a flood.

Political, human and physical geography are branches that describe what is studied. They are fields of knowledge, while applied geography is the use of that knowledge to solve a problem.

Textbook: Geography Grade 9, Unit 1 Geological History and Topography of Ethiopia, section 1.1 Geography, meaning, scope and branches (page 7).

19. Which sub-field of geography studies the behavior of human population (1)

- A. Historical geography
B. ✓ **Population geography**
C. Political geography
D. Cultural geography

Answer: B

Population geography deals with where people live and why, together with birth and death rates, population structure, household size and the movement of people. That is the behaviour of human population described in the question.

Cultural geography looks at beliefs and customs, political geography at boundaries and power, and historical geography at how places changed over time. None of them takes population itself as its subject.

Textbook: Geography Grade 9, Unit 1 Geological History and Topography of Ethiopia, section 1.1 Geography, meaning, scope and branches (page 7).

20. The Awash and the Abbay river basins are separated from one another by the Shoan Plateau. In this case the Shoan plateau is (1)

- A. drainage basin B. drainage system
C. drainage pattern D. ✓ watershed

Answer: D

A watershed is the high ground that divides one drainage area from the next, sending rain down one side or the other. The Grade 9 text describes the Shewan plateau in exactly those words, as a dome shaped plateau serving as a watershed between the Awash, Omo Gibe and Abbay basins.

A drainage system is the whole network of a river with its tributaries and its final destination, and a drainage basin is the land the river collects from. Both name the water, while the question asks about the ridge that separates two of them.

Textbook: Geography Grade 9, Unit 1 Geological History and Topography of Ethiopia (page 25); see also Geography Grade 10, Unit 3, section 3.2 (page 55).

21. What type of drainage pattern do you expect in areas that consist of rocks of different hardness? (1)

- A. Rectangular B. Centripetal
C. ✓ Trellis D. Dendritic

Answer: C

A trellis pattern forms where bands of hard and soft rock lie side by side. The main river cuts straight across the bands, while its tributaries run along the soft belts and join the main stream at almost right angles, like a garden trellis.

A dendritic pattern is the tempting answer, but it needs rock of the same hardness everywhere, which lets streams branch freely like a tree. Different rock hardness is the clue that points to trellis.

22. Sources of rivers are a higher ground that are covered by hard rocks which cannot easily be eroded. If an area has ample rainfall, what type of drainage pattern, do you think, can develop in the area? (1)
- A. Rectangular
B. Centripetal
C. Trellis
D. ✓ **Radial**

Answer: D

The question describes one piece of high ground, capped with hard rock, standing above the land around it. With plenty of rain, streams begin near the summit and run outward down every side, so the pattern spreads like the spokes of a wheel. That is a radial pattern, typical of a dome or a volcanic mountain.

Trellis is the tempting answer, but it needs alternating belts of hard and soft rock, and the question mentions hard rock only. Centripetal is the opposite case, where streams run inward into a basin.

23. Under what condition is a river capture formed? (1)
- A. It is formed in a watershed that comprises higher ground.
B. It is formed in area where the pirate's river has a moderate slope and erosion resistant course.
C. ✓ **It is formed when heavy precipitation occurs on the pirate's river side of the watershed.**
D. It is formed in areas where the rock on the side of the victim river is harder.

Answer: C

River capture happens when one stream cuts backwards into the divide until it taps a neighbour and steals its headwaters. Heavy rain on the pirate's side gives that stream more water and more cutting power, so it erodes headward fastest and reaches the victim first.

The other three options reverse the real conditions. Capture is easier where the divide is low and indefinite, not high, and the pirate needs a steeper course through softer rock, while the harder rock lies on the victim's side of the divide.

24. Among the following, which one explains the feature of a river at its middle course? (1)
- A. The slope of the river gets steeper than it does at the upper course.
B. ✓ **The sediment carrying capacity is higher than it is at the lower course.**
C. The volume of the river discharged is lower than it is at upper course.
D. The speed of water flow is faster it is at the upper course.

Answer: B

By the middle course the river has been joined by tributaries, so it carries much more water than at its source, and its channel still runs on a fairly steep slope. Plenty of water plus a good gradient means it can move more sediment than the lower course.

In the lower course the land flattens, the flow slows and the river drops its load to build flood plains and deltas. Option C fails for the same reason: discharge grows downstream, so the middle course carries more water than the upper course, not less.

25. What is the average amount of money that an individual is expected to have as result of the country's gross national product? (1)
- A. ✓ **Per capital income**
B. Standard of living
C. Gross national product
D. Gross domestic product

Answer: A

Per capita income is the country's national product divided by the number of people, so it is the average amount of money each person would receive. That is exactly what the question describes.

Gross national product and gross domestic product are the totals themselves, before dividing. Standard of living is wider still, since it also covers housing, health and schooling, not money alone.

26. Which African is sub-region is known for its low Gross Domestic Product (GDP)?

(1)

- A. ✓ Horn of Africa
B. Magherb Africa
C. Western African
D. Southern Africa

Answer: A

The Horn of Africa, made up of Ethiopia, Eritrea, Djibouti and Somalia, records the smallest output of the four sub regions, both in total and per person. Long droughts, recurring conflict and very little manufacturing keep the figures low.

Western Africa is the tempting answer because many of its countries are poor, but the sub region also contains Nigeria, the largest economy in Africa, which lifts its total well above the Horn. Southern Africa and the Maghreb are higher again.

27. What characterizes countries of low standard of living?

(1)

- A. High life expectancy
B. ✓ **Low per capita income**
C. Standard housing
D. Low fertility rate

Answer: B

Standard of living is measured first by how much money a person has to spend, so a low standard of living shows up as low per capita income. Poor housing, short life expectancy and high fertility usually come with it.

High life expectancy, standard housing and low fertility are all signs of a high standard of living, so the other three options describe the opposite of what the question asks.

28. Which one of the following characterizes the African economy?

(1)

- A. Tertiary economic sector has a major share in its GDP.
- B. Secondary economic sector is the backbone of the African economy.
- C. There is very inter high African communication network.
- D. ✓ **Its inter and intra-regional trade is at low.**

Answer: D

African countries trade far more with the rest of the world than with each other. Intra African trade is only about 15 percent of the continent's total trade, the lowest share of any region, because neighbouring countries export the same primary goods and the roads, railways and ports between them are weak.

Option B is the tempting one, but the secondary sector is small in most African economies. Farming and mining, not manufacturing, are the backbone.

Textbook: Geography Grade 11, Unit 5 Geography and Economic Development, section 5.4 Intraregional trade in Africa.

29. Why are most countries of Africa considered to be not so developed?

(1)

- A. ✓ There is high dependency on primary economic sectors.**
 B. They have high level of import substituting industries.
 C. Their exports are mainly high value products.
 D. Their economy largely depends on manufacturing sector.

Answer: A

Most African economies still rest on primary activities, that is farming, herding, fishing, forestry and mining. Agriculture alone employs about two thirds of the working people and gives 30 to 60 percent of national output, mostly with traditional tools and rain fed fields.

Option C reverses the truth: African exports are mainly raw materials of low value whose prices are set outside the continent, while the manufactured goods they buy back are expensive.

Textbook: Geography Grade 10, Unit 5 Major Economic and Cultural Activities of Africa, section 5.2 Major economic activities in Africa (page 116).

30. Which one of the following adversely affect the prospect of African development?

(1)

- A. Existence of free trades and common currency
- B. ✓ **Prevalence of political instability and civil war**
- C. Availability of untapped mineral resources
- D. Large territorial and population size

Answer: B

Political instability and civil war destroy roads, schools and farms, drive investors away, displace millions of people and force governments to spend on weapons instead of development. No other single factor sets back African development so widely.

The other three options are assets, not obstacles. Free trade and a common currency would make business easier, untapped minerals are wealth waiting to be used, and a large territory and population form a big market.

Textbook: Geography Grade 12, Unit 5 Challenges of Economic Development, section 5.3 The growing imbalance between regions and countries (page 134).

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