GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

PREPARATORY EXAMINATION

2017

MARKING GUIDELINES

GEOGRAPHY P1 (10781)

14 pages

GAUTENG DEPARTMENT OF EDUCATION

PREPARATORY EXAMINATION – 2017

GEOGRAPHY
(First Paper)

MEMORANDUM

QUESTION 1

1.1.1 Kalahari High Pressure Cell (1)
1.1.2 inversion layer (1)
1.1.3 increase (1)
1.1.4 summer (1)
1.1.5 east (1)
1.1.6 wet (1)
1.1.7 warm and moist (1) (7 x 1) (7)

1.2.1 upper course (1)
1.2.2 turbulent (1)
1.2.3 middle (1)
1.2.4 laminar (1)
1.2.5 upper / 3 (1)
1.2.6 turbulent / A (1)
1.2.7 lower / 1 (1)
1.2.8 middle / 2 (1) (8 x 1) (8)

1.3.1 (a) 12 (1) (1 x 1) (1)
(b) Hurricanes are named alphabetically from A at the start of the hurricane season (2)
M is the 13th letter in the alphabeth therefore the hurricane before Matthew was the 12th one. (2)
[Any ONE] (1 x 2) (2)

1.3.2 Storm surge (1)
Winds of up to 195 km/h (1)
Huge downpours (1)
[Any TWO] (2 x 1) (2)

1.3.3 Huge waves due to intense low pressure and strong winds (2)
[Concept] (1 x 2) (2)

1.3.4 Putting early warning systems in place so that people can prepare themselves for the disaster. (2)
Educate people on the steps that can be taken to limit the effect of the hurricane. (2)
Proper monitoring of possible hurricanes that could affect the area (2)
Creating proper transport routes for emergency exits (2)
Having sufficient emergency services available (2)
Telecommunication links (2)
Availability of specific assembly points (2)
[Any FOUR] (4 x 2) (8)

1.4.1 A = North-easterly / Northeast (1)
B = South-westerly / Southwest (1) (2 x 1) (2)

1.4.2 A = Warm (1)
B = Cold (1) (2 x 1) (2)

1.4.3 Moisture front (1) (1 x 1) (1)

1.4.4 Warm and moist north-easterly winds meet. (2) cold and dry south-easterly winds at moisture front (2)
Cold air forces warm air to rise. (2)
Strong condensation occurs, clouds form and thunderstorms develop. (2)
[ANY THREE] (3 x 2) (6)

1.4.5 Brings rainfall for farmers, crops and livestock. (2)
More water available for farmers for domestic use. (2)
It will cause floods which could destroy crops and livestock. (2)
Destruction of crops and livestock results in less income for farmers. (2)
Floods destroy farmers' machinery, homes, infrastructure etc. (2)
[ANY TWO – one positive and one negative] (2 x 2) (4)

1.5.1 3rd order (1) (1 x 1) (1)

1.5.2 (a) dendritic (1) (1 x 1) (1)

(b) Uniform horizontal resistance rocks (1)
Sedimentary or Igneous rocks (1) (2 x 1) (2)

1.5.3 (a) Low (1) (1 x 1) (1)

(b) Permeable rocks absorb water, therefore less water on the surface for run-off density therefore less. (2)
Steep gradient encourages run-off rather than infiltration – therefore drainage density is high. (2)
Less vegetation encourages more run-off and less infiltration – therefore high drainage density. (2)
Non-permeable rocks do not allow the absorption of water, therefore more water on the surface therefore density is high. (2)
Gentle gradient discourages run-off therefore more infiltration – therefore low drainage density. (2)
More vegetation discourages run-off but encourages infiltration – therefore low drainage density (2) (3 x 2) (6)

1.5.4 Stage A experiences vertical / downward erosion making the stream narrow. (2)
Stage B experiences vertical and lateral erosion making the river valley wider. (2) (2 x 2) (4)

1.6.1 Urban heat island (1) (1 x 1) (1)

1.6.2 The development of areas in a city where vegetation occurs and no construction is allowed.
[Concept] (1 x 2) (2)

1.6.3 Development of urban structures limits space for greenbelt development (2)
Pollution destroys greenbelt development (2)
Limited space for greenbelt development (2)
Costly to develop (2)
Maintenance is expensive (2)
[Any TWO] (2 x 2) (4)

1.6.4 Cooling effect through evaporation (2)
Production of clean air (2)
More oxygen is available (2)
Reduces pollution (air / noise and water) (2)
Creates biodiversity of ecosystems (2)
Creates buffer zones between different activities (2)
Results in more infiltration and less run-off (2)
Used as recreation sites / walking / picnic (2)
To increase aesthetic appeal and reduce stress (2)
[Any FOUR] (4 x 2) (8)
[75]

QUESTION 2

2.1.1 A (1)
2.1.2 C (1)
2.1.3 C (1)
2.1.4 A (1)
2.1.5 B (1)
2.1.6 D (1)
2.1.7 B (1)
2.1.8 B (1) (8 x 1) (8)

2.2.1 F (1)
2.2.2 B (1)
2.2.3 H (1)
2.2.4 A (1)
2.2.5 D (1)
2.2.6 C (1)
2.2.7 G (1) (7 x 1) (7)

2.3.1 Mid-latitude cyclone / Frontal depression / Temperate cyclone (1) (1 x 1) (1)

2.3.2 Air circulation around the low pressure is clockwise. (1)
Position of cold sector is south of the warm sector (1) (2 x 1) (2)

2.3.3 Mature stage (1)
Cold and warm fronts are well developed (2) (1 + 2) (3)

2.3.4 **Positive effects:**
Rainfall will bring green pastures – aesthetic value. (2)
Improve farming conditions therefore more food production / variety of food available for tourists (2)
Improved farming conditions result in food prices being lowered for tourists (2)
Negative effects:
Can cause floods due to high rainfall and discourage tourists. (2)
Floods will limit tourists sightseeing. (2)
Rockfalls caused by strong winds affect tourists (2)
Precipitation could make sightseeing tours dangerous for tourists. (2)
Slippery rocks can be dangerous. (2)
[Any FOUR – must include positive and negative effects.] (4 x 2) (8)

2.4.1 Katabatic wind (1) (1 x 1) (1)

2.4.2 Night (1) (1 x 1) (1)

2.4.3 During the night, air in contact with the slopes cools down due to loss of heat through longwave radiation. (2)
Air moves down the slope under the influence of gravity. (2)
[Any ONE] (1 x 2) (2)

2.4.4 Thermal belt / inversion layer (2) (1 x 2) (2)

2.4.5 During the night the cold air sinks down the valley slopes. (2)
Cold air displaces warmer air and the warm air rises. (2)
The warm air gets trapped between the cold upper air and the cold air below creating the thermal belt. (2)
[Any TWO] (2 x 2) (4)

2.4.6 Farmers plant their crops on the slopes as they are above frost zone. (2)
Frost will damage crops that's not frost resistant (2)
Avoid planting certain crops too close to the valley floor. (2)
Use valley for livestock farming. (2)
Use colder valley slopes lower down for frost resistant crops. (Candidates can give examples of crops) (2)
[ANY THREE] (3 x 2) (6)

2.5.1 The renewal of a river's erosive power / energy (1)
[Concept] (1 x 1) (1)

2.5.2 Knickpoint / waterfall (1) (1 x 1) (1)

2.5.3 The knickpoint changes the gradient of the river. (2)
The steeper gradient results in a faster flowing river that erodes downward (2)
Changes river profile from graded to ungraded. (2)
[Any TWO] (2 x 2) (4)

2.5.4 Incised meanders (1)
Terraces (1)
Valley in a valley (1)
[Any TWO] (2 x 1) (2)

2.5.5 Faster flowing rivers will cause more erosion and result in destruction of fauna and flora downstream. (2)
Faster flowing rivers will create more soil erosion upstream and deposition downstream. (2)
Faster flowing rivers will alter the biodiversity of ecosystems. (2)
Faster flowing rivers will create more vertical erosion, creating deeper valleys even in the lower course. (2)
Changes the shape of the river channel. (2)
Erosion will cause formation of ox-bow lakes. (2)
[Any THREE] (3 x 2) (6)

2.6.1 When plants are exposed to intensive grazing for extended periods of time, without sufficient recovery periods (2)
[Concept] (1 x 1) (1)

2.6.2 (a) Poor farming methods (1)
To many sheep (1)
Poor farming knowledge / Lack of farming management skills (1)
Subsistence farming (1)
[Any ONE] (1 x 1) (1)

(b) Destruction of natural habitats (2)
Vegetation cannot support sheep farming (2)
Unproductive land (2)
Less export of meat (2)
Meat prices increases (2)
Commercial farming changes to subsistence farming (2)
Change in rural land-use (2)
Influence the sustainability of sheep farming (2)
Negative influence on food security (2)
Leads to desertification (2)
Erosion of the topsoil layer (2)
Degrading grazing pastures (2)
[Any THREE] (3 x 2) (6)

2.6.3 Management strategies to use the silt in the river to fertilize the soil. (2)
Piping of water from the river to irrigate the land away from the river. (2)
Revegetate the area with indigenous vegetation. (2)
Encourage the planting of vegetation to increase infiltration of water so that the level of the water table increases. (2)
Create bufferzones for controlling effective grazing. (2)
Increase the fertility of the soil with silt from the river. (2)
Fill up erosion dongas with rocks and silt from the river. (2)
Use GIS for impact study on the extent of sheep the area can accommodate. (2)
Control the number of sheep in the area. (2)
Educate the farmers on the environmentally sustainable use of the river catchment area. (2)
Use underground water to create other water access points away from the River. (2)
Legislation to control the sustainable use of the catchment area. (2)
Legislation to control the underground sources of water. (2)
Rehabilitate overgrazed land. (2)
Research on the impact of modification of the channel in the catchment area. (2)
Assess the influence of the quantity of sheep farming on the status of vegetation in the catchment area. (2)
Assess the short and long term consequences of drought on the sustainability of the catchment area. (2)
[Any FOUR] (4 x 2) (8)
[75]

QUESTION 3

3.1.1 D / Trade and transport (1)
3.1.2 A / Bulk of break town (1)
3.1.3 G / Gateway town (1)
3.1.4 H / Specialized town (1)
3.1.5 I / Junction town (1)
3.1.6 C / Central place town (1)
3.1.7 B / Recreation town (1)
3.1.8 E / Dry point settlement (1) (8 x 1) (8)

3.2.1 Communal farming (1)
3.2.2 Rotational grazing (1)
3.2.3 Food security (1)
3.2.4 Small scale farming (1)
3.2.5 Large scale farming (1)
3.2.6 Intensive farming (1)
3.2.7 Extensive farming (1) (7 x 1) (7)

3.3.1 The movement of people from rural to urban areas (1)
[Concept] (1 x 1) (1)

3.3.2 Low wages (1)
Limited job opportunities (1) (2 x 1) (2)

3.3.3 Decrease of production because of shortage of labour force (1)
Farming land left inactive (1)
Less production taking place (1)
Farmland is desolated and isolated (1)
Yields are decreasing (1)
Removal of topsoil (1)
Farms taken over by subsistence farmers (1)
[Any THREE] (3 x 1) (3)

3.3.4 Efficient health services (1)
Tertiary education options (1) (2 x 1) (2)

3.3.5 Service delivery will decline as fewer people in rural areas. (2)
Service delivery will be slow and unreliable. (2)
Price of service delivery will increase as demand decreases. (2)
Lack of Health services due to insufficient support. (2)
Educational facilities will close down due to few children. (2)
Businesses will close down as a result of decline in customers. (2)
Quality of piped water will decrease due to decreased demand. (2)
Decline in efficient electricity supply due to decreased demand. (2)
[Any FOUR] (4 x 2) (8)

3.4.1 The formless expansion of the urban area (1)
[Concept] (1 x 1) (1)

3.4.2 Lack of urban planning (1) (1 x 1) (1)

3.4.3 Large open space for expansion (1)
Close to transport routes e.g. airport, train, motorway (1)
Easily accessible (1)
Less pollution (1)
Less traffic congestion (1)
[Any TWO] (2 x 1) (2)

3.4.4 Rural activities in the area will decrease/ the area will become more urbanised (2)
Will cause air, ground and water pollution (2)
Will have an impact on the shape and extent of the urban heat island (2)
Warmer temperatures in rural-urban fringe (2)
Natural resources and natural environment will decrease. (2)
Golf course will experience air pollution because of its location next to the power station. (2)
Stimulate economic development in the rural-urban fringe (2)
[Any TWO. Can be positive or negative.] (2 x 2) (4)

3.4.5 Proper planning of urban areas (2)
Create greenbelt development around the city. (2)
Creation of new towns (2)
Encourage urban-rural migration (2)
Improving facilities and conditions in the rural area (Candidates can give examples) (2)
Create more vertical development e.g. flats. (2)
[Any THREE] (3 x 2) (6)

3.5.1 A form of employment where people are self-employed and don't pay tax to SARS. [Concept] (1 x 1) (1)

3.5.2 Poverty (1)
Lack of education (1)
Lack of educational institutions (1)
Higher population growth (1)
Corruption (1)
[Any THREE] (3 x 1) (3)

3.5.3 No taxes are paid to SARS by the informal sector. (2)
It puts pressure on the formal sector that pays tax to SARS. (2)
Can result in illegal practices e.g. DVD piracy (2)
Crime increases when people sell stolen goods. (2) (2 x 2) (4)
[Any TWO]

3.5.4 **UNEMPLOYMENT:**
Informal sector creates self-employment. (2)
As the business grows more people could be employed. (2)
Indigenous products produced and sold could attract more tourists / customers. (2)
Tourism creates a bigger market resulting in more employment opportunities (2)
Informal sector can develop into a formal sector business, employ more people. (2)

QUALITY OF LIFE:
People will earn an income which will allow them to afford basic needs. (Learner is allowed to explain each basic need and marks will be allocated for each basic need. E.g. health, education, electricity, piped water.) (2)
It can alleviate poverty. (2)
[Any THREE- Learners must explain the unemployment and quality of life.]
(3 x 2) (6)

3.6.1 An area along a major transport route linking major markets with harbours for the purpose of export/trade. (1)
[Concept] (1 x 1) (1)

3.6.2 (a) It would increase job opportunities. (1) (1 x 1) (1)

(b) Development of infrastructure will result in employment opportunities for the people in the region. (2)
Permanent job opportunities will result from the maintenance of the highway. (2)
More job opportunities will result from new activities in the area due to increased accessibility. (2)
[Any ONE] (1 x 2) (2)

3.6.3 To create more stable jobs (2)
To ensure positive economic growth in the future (2)
To stimulate other development programs e.g. IDZs (2)
To boost tourism (2)
Stimulate conservation initiatives (2)
To create a good quality of life for the people in the area which is more sustainable (2)
[Any TWO] (2 x 2) (4)

3.6.4 Involve the community in the development and conservation initiatives. (2)
Create awareness of sustainable methods of development. (2)
Conduct sufficient impact studies before the development strategies are finalised. (2)
Create awareness of how everybody can benefit from the spatial development. (2)
Invest in local businesses for their expertise. (2)
Encourage recycling. (2)
Create incentives for the people to adhere to the rules that limit the impact on the natural environment and resources. (2)
Encourage activities that are environmentally friendly and which limit the impact on the natural environment e.g. eco-tourism. (2)
Use environmentally friendly energy sources such as solar or wind energy. (2)
When planning, take into consideration the natural environment. (2)
Educate people on the importance of conserving the natural resources and environment. (2)
[Any FOUR – Must include sustainability of SDI and environment.] (4 x 2) (8)

[75]

QUESTION 4

4.1.1 Rural-urban fringe (1)
4.1.2 Low income homes (1)
4.1.3 CBD (1)
4.1.4 Greenbelt(1)
4.1.5 Transition zone (1)
4.1.6 Informal (1)
4.1.7 Light industry (1)
4.1.8 OBD (1) (8 x 1) (8)

4.2.1 B (1)
4.2.2 B (1)
4.2.3 A (1)
4.2.4 C (1)
4.2.5 A (1)
4.2.6 C (1)
4.2.7 B (1)
(7 x 1) (7)

4.3.1 The physical space that a settlement occupies (1)
[Concept] (1 x 1) (1)

4.3.2 Flat land (1)
River / proximity to water (1) (2 x 1) (2)

4.3.3 A – Intensive (1)
B – Subsistence (1)
C – Extensive (1) (3 x 1) (3)

4.3.4 Large area for grazing (2)
Underground water supply to supply water for cattle (2)
Grassy plains for natural grazing (2)
Enough space for rotation grazing (2)
(Any TWO) (2 x 2) (4)

4.3.5 Near the trees which could be used as building material (2)
Trees can be used as fuel (2) (2 x 2) (4)

4.4.1 Public transportation (1) (1 x 1) (1)

4.4.2 Lack of efficient public transportation (1)
Traffic congestion (1)
[Any ONE] (1 x 1) (1)

4.4.3 Overpopulation results in pressure on existing public transportation. (2)
Outdated street patterns can't handle the increase in traffic. (2)
Too many cars for the existing road networks (2)
More people can afford to have their own transport. (2)
Too many people need to make use of public transport. (2)
Public transport is unreliable. (2)
[Any THREE] (3 x 2) (6)

4.4.4 **Advantages:**
Easier mode of public transport (2)
Can get through traffic easily (2)
Relieves being caught up in traffic congestion (2)
Travel short distances at low costs (2)
Creates employment (2)

Disadvantage:
Can only accommodate small number of people (2)
Travels at low speed (2)
Conflict with other taxi-drivers (2)
Operates and transports within a small radius (2)
[Any FOUR – Must be positive and negative.] (4 x 2) (8)

4.5.1 Interruption of an electricity supply to avoid an overload on the generating plant. (1)
[Concept] (1 x 1) (1)

4.5.2 There is a greater demand than supply in the provision of electricity.(2) (1 x 2) (2)

4.5.3 (a) Domestic (1) (1 x 1) (1)

(b) They have the largest number of customers. (2) (1 x 2) (2)

4.5.4 1.43 % (2) (1 x 2) (2)

4.5.5 **Influence on RSA's Economy**
Negative impact on the economy (2)
If there is no electricity there won't be any production. (2)
Export will decline and will cause lower foreign exchange. (2)
Workers will earn less income and spend less in the commercial sector. (2)
Increase in prices because of shortage in production (2)
Importing of products because of short supply, will increase expenditure and result in a price increase of products. (2)
Service delivery will decline. (2)

Initiatives
The private sector can reduce electricity demand through using it responsibly e.g. regulation of geyser, switch lights off. (2)
Public sector can use sustainable energy e.g. solar power to reduce electricity demand on Eskom. (2)
Educate people on sustainable electricity practices. (2)
[Any FOUR – Must include influence on RSA's economy and initiatives.]
(4 x 2) (8)

4.6.1 An area where industries are concentrated (1)
[Concept] (1 x 1) (1)

4.6.2 Harbour location for export of products (1)
Skilled and unskilled labour (1)
Sub-tropical climate which allows for various crops to be produced (1)
Abundance of raw materials (1)
Well-developed road, rail and air transport networks (1)
Access to water (1)
Open land (1)
[Any THREE] (3 x 1) (3)

4.6.3 It is an industry where the motor vehicles are assembled. (2)
Situated close to the harbour for export of assembled vehicles/ import of car parts (2)
Results in agglomeration of other industries to manufacture car parts for Toyota (2)
[Any TWO] (2 x 2) (4)

4.6.4 It creates more employment opportunities. (2)
It developed and upgraded existing infrastructure. (2)
It brought in more foreign investment. (2)
Increase in employment resulted in an increase in the market. (2)
Exporting of these vehicles brought in more foreign exchange. (2)
More industries that were related to the motorcar industries developed. (2)
[Any THREE] (3 x 2) (6)
[75]

TOTAL: 225