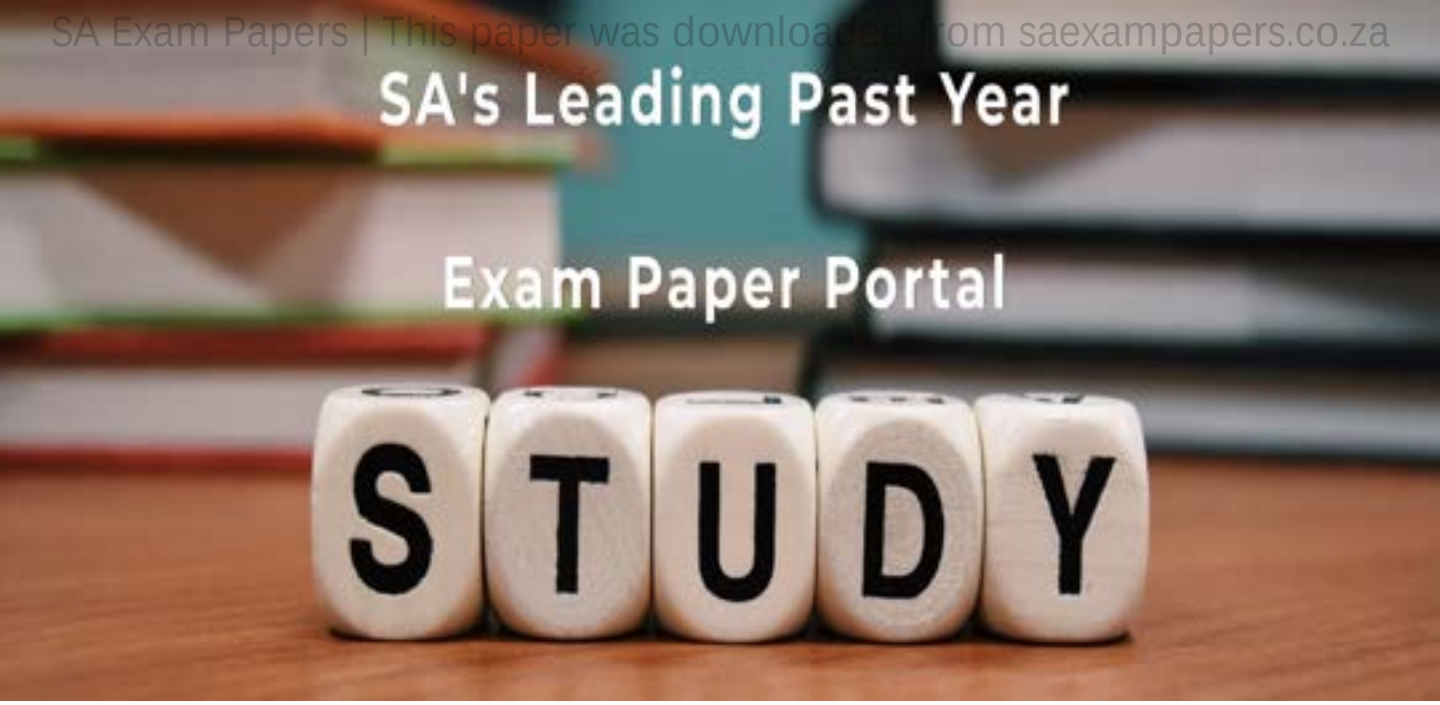


KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P1

MARKING GUIDELINES

PREPARATORY EXAMINATION

SEPTEMBER 2023

MARKS: 150

This marking guideline consists of 9 pages.

SECTION A

QUESTION 1

1.1

1.1.1 winter ✓

1.1.2 coastal low ✓

1.1.3 from the interior of South Africa ✓

1.1.4 dry ✓

1.1.5 increase ✓

1.1.6 greater ✓

1.1.7 cold front is approaching ✓ (7 x 1) (7)

1.2

1.2.1 Z ✓

1.2.2 Y ✓

1.2.3 Y ✓

1.2.4 Z ✓

1.2.5 Y ✓

1.2.6 Z ✓

1.2.7 Z ✓

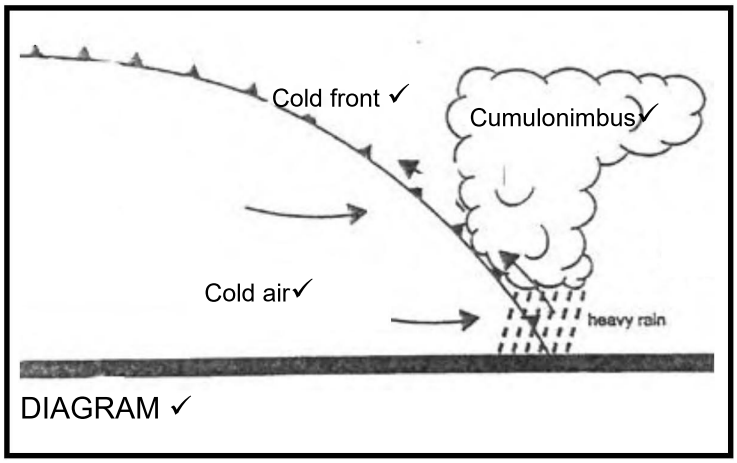
1.2.8 Y ✓ (8 x 1) (8)

1.3

1.3.1 West to east/Eastwards/ Easterly ✓(1 x 1) (1)

1.3.2 Driven by the Westerlies ✓✓ (1 x 2) (2)

1.3.3



(a) Cloud cover ✓

(b) Air masses/cold/warm✓

(c) Fronts ✓ (4 x 1) (4)

1.3.4 Soil erosion results from heavy rains and damages the environment ✓✓
Flooding resulting from heavy rains disrupts ecosystems✓✓
High waves damage the coastline✓✓
(ANY TWO) (2 x 2) (4)

1.3.5

(a) As visibility is poor, minimize driving and remain indoors until weather clears ✓✓
Stay away from mountainous areas because of the danger from rock falls and slippery roads. ✓✓
Strong winds could make driving difficult for people with light vehicles ✓✓
(ANY ONE) (1 x 2) (2)

(b) Do not venture out into open sea during frontal weather conditions. ✓✓
Secure fishing vessels to harbors and keep track of the weather on the media before attempting to go out. ✓✓
High waves/storm surges will pose a danger to small fishing vessels ✓✓
(ANY ONE) (1 x 2) (2)

1.4

1.4.1 Wind gusts as high as 170 km/h✓✓ (1 x 2) (2)

1.4.2 (a) clockwise✓ (1 x 1) (1)

(b) **Calm conditions** - Coriolis force deflects the converging winds away from the eye, causing a weak pressure gradient ✓✓ (1 x 2) (2)

Cloud free - Descending air evaporates the moisture in the eye, causing the cloudless conditions ✓✓ (1 x 2) (2)

1.4.3 As Cheneso's track changed to southeast it began to move to colder waters ✓✓
The cyclone moved below the 30^{o} latitude, away from the tropics✓✓
Moisture supplies were reduced due to less evaporation✓✓
Evident in the tracking map where atmospheric pressure began to increase significantly, noted by the widely spaced isobars✓✓
Decreased pressure gradient resulted in a drop in wind speed✓✓
The eye began to become deformed and finally disappeared✓✓ (4 x 2) (8)
[Any FOUR]

1.5

1.5.1 Moisture front is a zone that separtates two air masses with different moisture contents. ✓✓
[CONCEPT] (1 x 2) (2)

1.5.2 X - South westerlies✓
Y - North easterlies✓ (2 x 1) (2)

1.5.3 X✓ (1 x 1) (1)

1.5.4 Originates from over a cold ocean ✓✓ (1 x 2) (2)

1.5.5 The air is warm and moist toward the east ✓✓
Line Thunderstorms develop to the east of the moisture front due to uplift over the colder air from the west ✓✓ (2 x 2) (4)

1.5.6 Rainfall will fill dams for irrigation purposes✓✓
After flooding the soil will be naturally fertilized due to silt deposits ✓✓
Ground water will be revived ✓✓
Natural vegetation will grow well and contribute to be the feed for animals ✓✓
Growth of natural vegetation will prevent soil erosion✓✓
Increase in the habitat for fauna and flora✓✓
Biodiversity will increase ✓✓
Rainfall will fill natural water bodies providing a water source✓✓ (2 x 2) (4)
(Any TWO)

[60]

QUESTION 2

2.1

2.1.1 Y ✓

2.1.2 Z ✓

2.1.3 Z ✓

2.1.4 Z ✓

2.1.5 Y ✓

2.1.6 Y ✓

2.1.7 Y ✓

2.1.8 Z ✓ (8 x 1) (8)

2.2

2.2.1 B ✓

2.2.2 C ✓

2.2.3 B ✓

2.2.4 D ✓

2.2.5 C ✓

2.2.6 B ✓

2.2.7 A ✓ (7 x 1) (7)

2.3

2.3.1 upper course ✓ (1 x 1) (1)

2.3.2 Softer rock is found below the hard resistant rock ✓✓
Water plunges over the hard resistant rock onto the softer rock ✓✓
Softer rock is being eroded quicker ✓✓
Undercutting of the softer rock causes an overhanging hard resistant layer ✓✓
(ANY TWO) (2 x 2) (4)

2.3.3 Forms tourist attractions ✓✓
Used to generate hydro- electricity ✓✓ (2 x 2) (4)

2.3.4 Boats cannot travel up and down rapids. ✓
Hard to build bridges across them. ✓
(ANY ONE) (1 x 2) (2)

2.3.5 Rapids form when the hard, resistant layer of rocks dips downstream.
As erosion of soft rock takes place more hard rock is exposed creating rapids. ✓✓
The layers of soft rock erode quicker than the layers of hard rock. ✓✓
This makes the bed of the river uneven creating rough turbulent water. ✓✓
(ANY TWO) (2 x 2) (4)

2.4

2.4.1 steeper gradient/river flowing at a lower level ✓
Greater rainfall ✓
Softer rock ✓
(ANY TWO) (2 x 1) (2)

2.4.2 Headward erosion ✓ (1 x 1) (1)

2.4.3 Erosive ability increase due to increased flow ✓
Flow faster/high velocity due to an increase in volume of water ✓
Entrenched meander✓
Valley within a valley/river terraces✓
Knickpoint/waterfall ✓ (2 x 1) (2)

2.4.4 River C eroded headwards into the watershed and lengthened its course ✓✓
Capture the headwaters of river B and diverted it into river A✓✓ resulting in river B having too little water for the valley within which it flows. ✓✓ **(ANY TWO)** (2 x 2) (4)

2.4.5 Less water for irrigation of crops/livestock ✓✓
Reduced yields due to the lack of water ✓✓
Increase in costs to obtain sufficient water ✓✓
Reduced flooding decreases natural fertilization of soil ✓✓
Input costs to farm increases ✓✓
Farming no longer economically viable ✓✓
Loss of jobs as farming areas decline ✓✓
Poverty increases due to lack of crops to sell and access to food (food insecurity) ✓✓
Rural urban migration sets in✓✓
Lack of domestic water for farmers✓✓
(Any THREE) (3 x 2) (6)

2.5

2.5.1 Escherichia coli ✓ (1 x 1) (1)

2.5.2 Chemicals ✓
Nutrients ✓
Litter ✓
Heavy metals ✓
Toxic substances ✓
Sewage✓
(ANY TWO) (2 x 1) (2)

2.5.3 To replace the ageing water infrastructure instead of patching leaks ✓✓
Include adequate funds when budgeting for replacement of ageing infrastructure (pipes etc.) ✓✓
Material used for infrastructure development should accommodate unusual weather conditions and accommodate for population growth/durable material✓✓
Proper utilization of funds✓✓
Employ qualified managerial staff to oversee and implement maintenance timeously ✓✓
Maintenance must be conducted on a regular basis ✓✓
(ANY TWO) (2 x 2) (4)

2.5.4 Frequent monitoring of water quality needs to continue. ✓✓
Lack of accountability, delayed or no action and poor water governance should be investigated, addressed and improved upon. ✓✓
Public – private partnerships should be considered to address the continued sewage crisis. ✓✓
Create a buffer zone to prevent development too close to the river ✓✓
Implement legislation to discourage pollution of the river ✓✓
Educating farmers on sustainable farming methods ✓✓
Promote recycling of waste water before releasing back into the river. ✓✓
Fine those that break the rules ✓✓
Awareness campaigns, bill boards and poster ✓✓
(ANY FOUR) (4 x 2) (8)

SECTION B

QUESTION 3

3.1

3.1.1 KwaZulu-Natal ✓ (1 x 1) (1)

3.1.2 A ✓ (1 x 1) (1)

3.1.3 D ✓ (1 x 1) (1)

3.1.4 Length 4,2 x 0,1 = 0,42 ✓ Range 0,41 – 0,43
Breadth 3,9 x 0,1 = 0,39 ✓ 0,38 – 0,40
Area = 0,42 km✓ x 0,39 km✓
= 0,1638 km^2 ✓ (0,1558 – 0,172) (5 x 1) (5)

3.1.5 TB = 180^o + 128^o = 308^o (307^o – 309^o) ✓ (1 x 1) (1)

3.1.6 MB = 308^o + 25^o 45'
= 333^o 45' west of true North
Range 332^o 45' to 334^o 45'✓ (1 x 1) (1)

3.2 **MAP INTERPRETATION**

3.2.1 D ✓ (1 x 1) (1)

3.2.2 C ✓ (1 x 1) (1)

3.2.3 a) anabatic ✓ (1 x 1) (1)

b) During the day the slopes are heated and the air that is in contact with the slopes is also heated and rises. ✓✓ (1 x 2) (2)

c) The smoke released during the day into the lower atmosphere by industries located within the valley is carried away by the wind. ✓✓ (1 x 2) (2)

3.2.4 a) Northerly / northeast ✓ (1 x 1) (1)

b) The river flows towards the dam wall indicated by an accumulation of water before the wall. ✓✓ (1 x 2) (2)

3.2.5 a) The contour lines are far apart. ✓✓ (1 x 2) (2)

3.3.1

(a) raster ✓ (1 x 1) (1)

(b) A ✓ (1 x 1) (1)

(c) The quality and detail of image **A** is clearer than image B ✓✓
Image **A** has a larger/greater number of pixels ✓✓
(ANY ONE) (1 x 2) (2)

3.3.2

(a) Data layering: maps showing different types of information are projected (placed) on top of one another. ✓✓ (1 x 2) (2)
[CONCEPT]

(b) The contour lines are far apart ~~i~~ndicating gentle land which would promote the use of machinery on the farms increasing yields. ✓✓ (1 x 2) (2)

GRAND TOTAL: 150