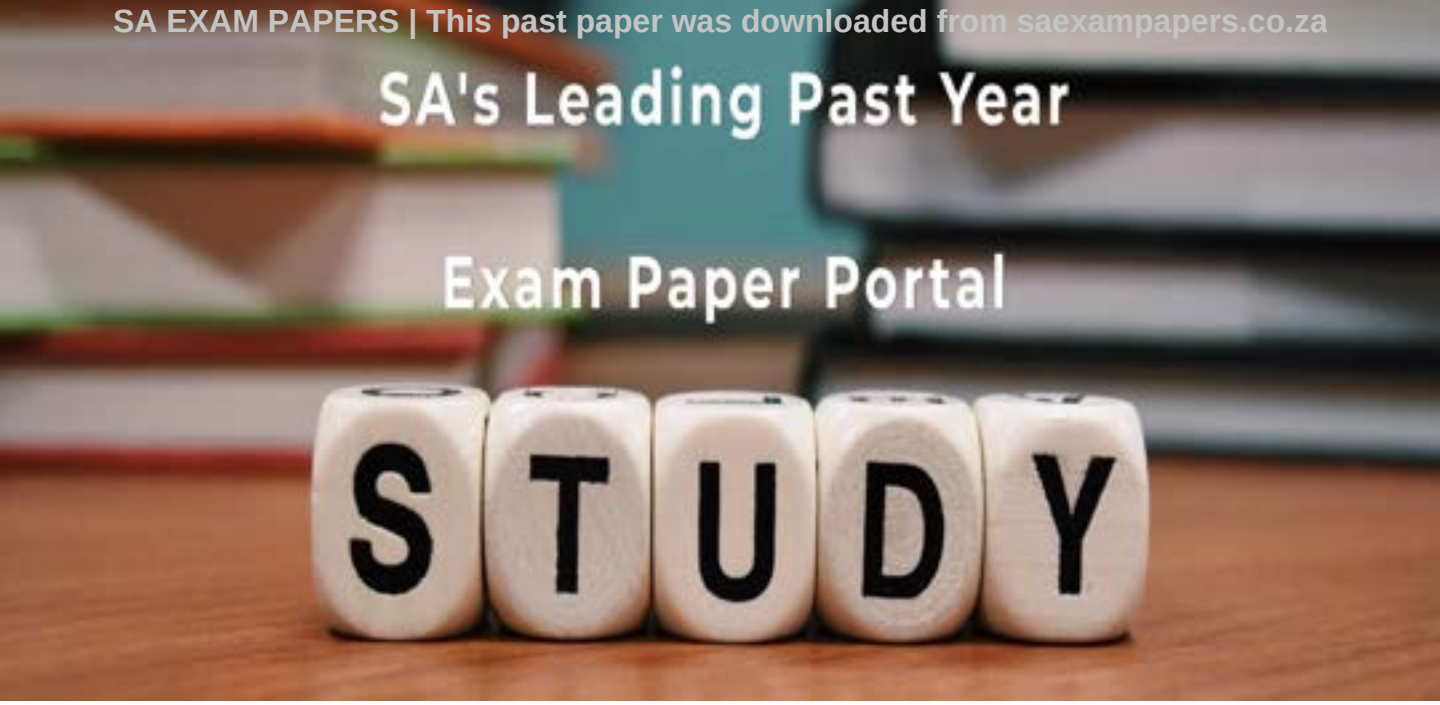


LIMPOPO PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF EDUCATION

VHEMBE WEST DISTRICT

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P1

2024 PRE-TRIAL EXAMINATION

MARKING GUIDELINES

MARKS: 150

DURATION: 3 HOURS

This marking guidelines consists of 11 pages

QUESTION 1: CLIMATE AND WEATHER

1.1 1.1.1 X (1)

1.1.2 X (1)

1.1.3 X (1)

1.1.4 Y (1)

1.1.5 X (1)

1.1.6 X (1)

1.1.7 X (1)

(7 x 1) (7)

1.2 1.2.1 B (1)

1.2.2 B (1)

1.2.3 C (1)

1.2.4 A (1)

1.2.5 B (1)

1.2.6 D (1)

1.2.7 D (1)

1.2.8 C (1)

(8 x 1) (8)

1.3

1.3.1 Winter (1) (1 x 1) (1)

1.3.2 Occluded (stage) (1) (1 x 1) (1)

1.3.3 The cold front has "caught up" with the warm front. (2)
The occlusion occurs (at the apex)/Cold front overtakes the warmfront. (2)
[Any ONE] (1 x 2) (2)

1.3.4

(a) C (1) (1 x 1) (1)

(b) Mid-latitude cyclones move from west to east/C lies furthest to the east/they are steered by the westerlies to move eastwards. (2)
The occluded front has developed at C. (2)
The warm sector has narrowed at C/warm sector at B not asnarrow as C. (2)
[Any TWO] (2 x 2) (4)

1.3.5

Temperature decreases due to upliftment of warm air by the cold front. (2)
Wind direction will change due to backing of winds (caused by thecold front. (2)
Cloud cover increases/cumulonimbus clouds due to rapid upliftment of air caused by steep pressure gradient of the coldfront. (2)
[Learner must indicate the difference and account for why it occurred.]
(3 x 2) (6)
(15)

1.4.

1.4.1 Summer (1) (1 x 1) (1)

1.4.1

(a) The warmer, moister and less dense air (2) (1 x 2) (2)

(b) Colder, drier and denser air (2 (1 x 2) (2)

1.4.3 East (1) (1 x 1) (1)

1.4.4

The cold air from the west uplifts the warm, moist air on the east ofthe moisture front. (Rising air cools and condenses and forms clouds.) (2)
(1 x 2) (2)

1.4.5 <u>POSITIVE:</u>
Line thunderstorms bring rain to irrigate crops. (2)
Line thunderstorms bring rain to irrigate pasture land for livestock.(2)
It can fill dams creating availability of water during dry periods (2)
It replenishes the ground water as well as rivers to be used for crops /cattle. (2)
Gives relief to droughts or semi-arid areas practicing agriculture. (2)

<u>NEGATIVE:</u>
Thunderstorms can damage/flood crops. (2)
Thunderstorms can injure/kill/drown cattle. (2)
The gusty wind, hail or rain can wash away/erode the fertile soil. (2)
Affect trading/production of food that impacts on the agricultural sector (2)
Damage to agricultural infrastructure due to flooding (2)
Silt is washed into dams, reducing their water holding capacity which is much needed for crops/livestock. (2)
[Any FOUR facts. Must include both positive and negative impacts]
(4 x 2)
(8)
(16)

1.5
1.5.1

It is an urban area of higher temperature surrounded by ruralareas of lower temperature. (2)
[CONCEPT] (1 x 2) (2)

1.5.2

It lets heat in and acts as a greenhouse that traps the heat insidethe building. (2)
It reflects heat between buildings. (2)
[Any ONE] (1 x 2) (2)

1.5.3

It increases human discomfort because of high temperatures. (2)Heat stress/stroke/cardiovascular illnesses during heat waves (2) Urban smog reduces visibility and may cause accidents. (2)
Loss of energy to be productive in working environment(2)
Increases the number of insects such as mosquitoes and fleas which infect/irritate humans (2)
[Any TWO – must be a negative effect on humans] (2 x 2) (4)

1.5.4

A – By planting more trees, it reduces the amount of heat through absorbtion. (2)
Transpiration by trees lowers temperatures. (2)
Shadows of the trees will cool the temperatures. (2)
[Any ONE]

B – Dense buildings prevent air from moving freely between buildings, causing heat to build up. (2)
Space between buildings lowers temperatures because air movesfreely and winds increase. (2)
Cooler winds increase between buildings with significant space.(2)
[Any ONE]

C – Water sources absorb heat and use it in evaporation. (2) Evaporation of water uses heat and lowers temperatures. (2) Water is cooler than surfaces such as sand, tar, concrete etc. (2)[Any ONE]
[Must refer to A, B and C. All THREE must be explained.] (3 x 2) (6)

(14)
[60]

QUESTION 2: GEOMORPHOLOGY

2.1 2.1.1 Confluence (1)

2.1.2 Drainage basin (1)

2.1.3 River system (1)

2.1.4 Catchment area (1)

2.1.5 Surface run off (1)

2.1.6 Interfluve (1)

2.1.7 Water table (1)

(7 x 1) (7)

2.2 2.2.1 D (1)

2.2.2 E (1)

2.2.3 F (1)

2.2.4 B (1)

2.2.5 C (1)

2.2.6 I (1)

2.2.7 H (1)

2.2.8 G (1)

(8 x 1) (8)

2.3
2.3.1

A – Dendritic (1)
B – Radial (centrifugal) (1) (2 x 1) (2)

2.3.2 Underlying rock structure (1) (1 x 1) (1)

2.3.3 Streams meet at acute angles. (1)
Looks like branches of trees (1) (2 x 1) (2)

2.3.4

Drainage pattern A:
Water evenly distributed and more accessible for irrigation (2)
Easier to build storage dams at various locations (2)
Fairly flat land which facilitates the cultivation of soil (2)
[Any TWO] (2 x 2) (4)

2.3.5

Steep slopes result in more runoff and less infiltration. (2)
Steep slopes result in higher velocity of water flow and thus more erosion, resulting in silting of dams. (2)
Higher velocity and erosion cause water to flow into deep (2) V-shaped valleys which reduces the accessibility of water. (2)
Uneven landscape results in uneven distribution of water. (2)
More resistant rock structure reduces infiltration and increases runoff. (2)
[Any THREE] (3 x 2) (6)
(15)

2.4.1 .

River capture – When a more energetic river captures the headwaters of a less energetic river (2)
(CONCEPT) (1 x 2) (2)

2.4.2 Gradient (1) (1 x 1) (1)

2.4.3 C – Elbow of capture (1)
D – Misfit stream (1) (2 x 1) (2)

2.4.4 The volume will decrease (1) (1 x 1) (1)

2.4.5

Increased flow of water from captured stream E increased the volume. (2)
The increased volume increases the velocity and erosive power of river F. (2) (2 x 2) (4)

2.4.6

Higher volume of water will result in flooding of the riverbanks. (2)
Flooding will damage crops grown on the floodplain and riverbanks. (2)
Damage of crops will result in lower production. (2)
Flooding will cause soil erosion of fertile soils and less economic activity. (2)
Higher volume and velocity cause damage to crops. (2)
[Any TWO] (2 x 2)
(4)
(14)

2.5.

2.5.1 The planned and coordinated use of the river without compromising people's well-being and the environment (2)
(CONCEPT) (1 x 2) (2)

2.5.2 Healthy riverbanks maintain the form of the river channel. (1)
It provides habitat for species (aquatic and terrestrial) and filtersediment, minerals and light. (1)
Water quality includes the chemical; physical and bacteriologicalproperties of water that determines its suitability for use. (1)
[Any TWO] (2 x 1) (2)

2.5.3 The urban nature of Gauteng (especially the central part) (1)
Road networks across the province seal natural surfaces in a manner that does not allow natural infiltration of rainwater into theground. (1)
This high run-off scenario during rainfall events coupled withpollution emanating from the urban environment (1)
[Any TWO] (2 x 1) (2)

2.5.4 Rivers are home to aquatic life. (2)
Aquatic life feeds directly from the polluted rivers. (2)
Aquatic species have softer skins thereby exposing them more tochemical waste. (2)
[ANY TWO] (1 x 2) (2)

2.5.5 Strict local by-laws on disposal of waste from both domestic useand industry (2)
Buffering the area to prevent pollution (can give examples) (2)
Maintaining the natural vegetation and reducing deforestation (2)
Education and public awareness on environmental management (2)
Regular cleaning of riverbanks and surrounding areas(2)
Implementing of fines for violation of environmental regulations (2)
[Any FOUR] (4 x 2) (8)
(16)

[60]

SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

3.1 3.1.1 B (1) (1 x 1) (1)

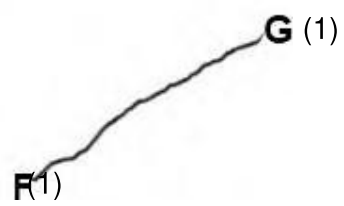
3.1.2 A (1) (1 x 1) (1)

3.1.3 Distance = **Map distance x Map scale**

= 9 (1) cm x 100 (Range 8.9 to 9.1)

= 900 m (1) (Range 890 m to 910 m) (2 x 1) (2)

3.1.4



[AWARD 1 MARK FOR CORRECT SHAPE WITHOUT LABELS] (2 x 1) (2)

3.1.5 Yes (1) (1 x 1) (1)

3.1.6 Total change: 11' x 6 years = 66' (1)
Magnetic declination for 2022: 24º 42'
+(1) 66' (1° 06')
24º 108'
25º 48' west of true north (1) (3 x 1) (3)

3.2 3.2.1 C (1) (1 x 1) (1)

3.2.2 (a) morning (1) (1 x 1) (1)

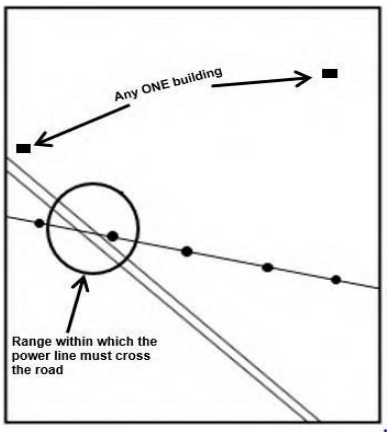
(b) The shadows fall in a south-westerly direction (2) (1 x 2) (2)

3.2.3 Rainfall is seasonal (2) (1 x 2) (2)

3.2.4 (a) The river flows towards the dam (1)
The V-shape contour lines point in a south-westerly direction (1)
Height decreases in a northerly direction (1)
[ANY ONE] (1 x 1) (1)

(b) Flat/Gently sloping (2)
Widely spaced contour lines (2)
[ANY ONE] (1 x 2) (2)

3.2.5	B (1)	(1 x 1)	(1)
3.2.6	Uniform/homogenous resistance (2) Horizontally layered (2) **[ANY ONE]**	(1 x 2)	(2)
3.3.1	D (1)	(1 x 1)	(1)
3.3.2	primary (1)	(1 x 1)	(1)
3.3.3	Higher number of pixels was used (1) The pixels are smaller (1) Close up view (1) Better quality camera or lens used (1) **[ANY ONE]**	(1 x 1)	(1)
3.3.4	Features are clearly visible (accept examples) (2)	(1 x 2)	(2)
3.3.5	Power line (1) Buildings (1) **[ANY ONE]**	(1 x 1)	(1)
3.3.6	Infrastructure data layer		



1 mark for correct reference symbol (relating to QUESTION 3.3.5).
1 mark for redrawing the power line crossing the road /1 mark for the correct position of the building (2 x 1) (2)

TOTAL SECTION B: 30
GRAND TOTAL: 150