



SWED MOCK

2025 MSCE MOCK EXAMINATION

MARKING KEY

GEOGRAPHY PAPER I

MAP READING AND PHYSICAL GEOGRAPHY

1. a.(i) Borehole (1 mark)
(ii) 316266 (2 marks), 1 mark for the correct eastings and 1 mark for correct northings.
- b. (i) North West (NW) (1 mark)
(ii) 115° (2 marks)
- c. (i) 15km (2 marks)
(ii) area for the Tobacco Estate Ltd

Handwritten calculation for area of Tobacco Estate Ltd:

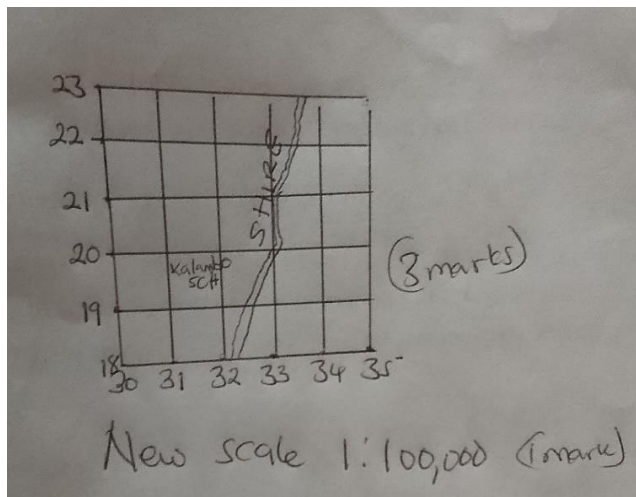
Complete Squares + Incomplete Squares

$$\begin{array}{r} \textcircled{1} \quad \textcircled{1} \quad 2 \\ 17 + 12 = 6 \\ \hline 21 \\ 17 + 6 \textcircled{1} \\ 23 \times 1\text{km} \times 1\text{km} \textcircled{1} \\ \hline \underline{23\text{km}^2} \textcircled{1} \end{array}$$

- d. (i) dendritic drainage pattern 1 mark
(ii) 50ft 1 mark
- e. (i) -Agriculture
-Farming
-Forestry
-Settlement (any two of these) 2 marks
(ii) Presence of Liwonde forest which has covered a lot of land. (2 marks)
- f. i. farmers
ii. drivers
iii. fishermen

iv. teachers (1 mark) any two of these)

g.



(1 mark for the plotting on the graph) total: 5marks

2. a. (i). divergent / constructive plate boundary

(1 mark)

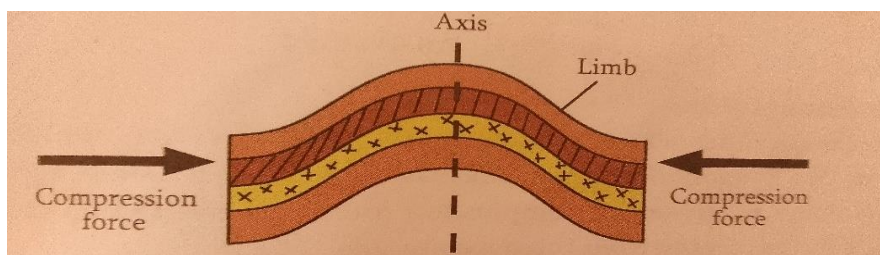
(ii)

- Plates are subjected to tension forces and eventually break
- Plates continue to move far away from each other
- Magma comes out from the mantle, cool and solidify to form various volcanic features such as volcanic mountains, marine ridges, volcanic islands, lava plateaus, lava plains

b. 1. Pangea- was a gigantic super continent which broke into two large blocks (2 marks)

2. Laurasia – the piece of land that broke from Pangea in the northern hemisphere (2 marks)

c. Simple fold



-The limbs are of equal steepness (2marks)

d. (i) are associated with volcanoes

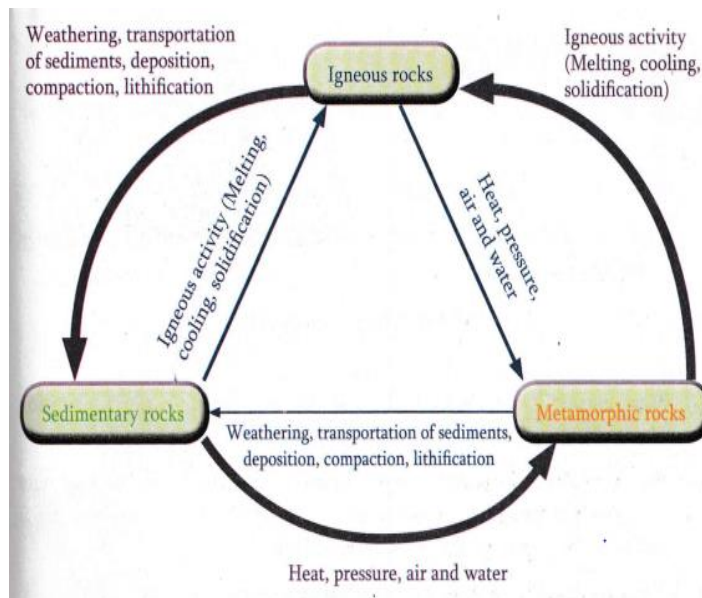
(ii) most of them are found on western margin

(iii) they have pointed peaks

(iv) they are long and high (1 mark each)

- c. (i) Volcanic rocks (extrusive rocks) are igneous rocks that form when magma cools and solidify on the earth's surface, while plutonic rocks are formed when magma flows, cool and solidify inside the crust (2 marks)

(ii)



(3 marks for the diagram)

- The rock cycle refers to the process of rock change from one type to another. Cyclic changes take places among igneous, sedimentary and metamorphic rocks.

(1 mark for definition of rock cycle)

- Sedimentary and metamorphic rocks buried deep in the ground may be exposed to intense heating, melt and form magma which flows, cool and solidify into an igneous rock in the process called igneous activity. (2 marks)

- The igneous rock and sedimentary rocks change to metamorphic rock when be subjected to heat, water, air and pressure. (2 marks)

- The metamorphic and igneous rocks subjected to the processes of weathering beak down into sediments which are transported away, deposited in depressions and cemented or lithified into sedimentary rocks. (2 marks)

3. a. (i) B = Oceanic ridge (1 mark)
C = Trench/Ocean deep (1 mark)

(ii)

- Feature labelled C is a trench. It is formed at convergent plate boundary where continental and ocean plates move towards each other and meet or collide (plate collusion) (1 marks)
- The heavier plate (oceanic plate) sinks deep into the earth (or mantle), in the process of subsidence or subduction, creating a very deep place in the ocean called a trench or ocean deep (1 mark)

(iii)

- It provides a rich fishing ground due to its shallowness which facilitate the growth of planktons
- It's a bed of important minerals and oil deposits
- Useful in water transport i.e docking of ships
- Act as a deposition zone for sediments carried by rivers, contributing to the formation of beaches and coastal features
- Supports diverse marine ecosystems

(2 marks for any two points, 1 mark for each point)

- b (i) bird's foot or digitate delta (1 mark)

(ii)

- the delta extends into the ocean
- the delta has fewer distributaries
- composed of fine-grained sediments
- shaped like the foot of a bird
- formed when river load is less dense than the ocean waters

(3 marks, one for any 1 point)

(iii)

- contain rich mineral deposits (promotes mining industry)
- provide vast lands for human settlements, industrialization and urbanization
- ideal topography (gentle) for transport development (railways etc)
- promote the fishing industry (presence of more rivers)
- provide very fertile soils ideal for farming

(2 marks, 1 for any point)

c.

- planting more drought tolerant food crops like cassava, millet, sorghum sweet potatoes can be re-introduced into the farming systems.
- Promoting irrigated agriculture by developing irrigation schemes along river basins
- Addressing land degradation by building soil and stone bunds, creating grass strips and contour levelling as well as incorporating trees or hedgerows.
- Creating functional linkages with development partners for technology enterprise initiatives.
- Diversifying rural economies, e.g. through value addition to agricultural products and financial support for apiculture (bee keeping) with the aim of reducing reliance on climate-sensitive agricultural practices.
- Reducing reliance on centralized food system where commodity production is concentrated in a few locations that may be vulnerable to climate disruptions such as storm damage, pest outbreaks, etc.
- Switching to new crops, seeds or agricultural practices can moderate the impacts on agriculture of changes in temperature and water availability.
- Improving weather and flood forecasting and communications can assist evacuation, relief and rehabilitation

(4 marks, 2 for any one point)

d. (i)

- Creating awareness on the dangers of air pollution.
- Using alternative sources of energy that do not pollute the air.
- Enacting and enforcing laws to protect the environment.
- Establishing measures and policies in factories in order to control the level of air pollution.
- Dispersing and diluting pollutants in the upper layers of the atmosphere with the aim of reducing concentration at the lower levels.

- Preventing occurrence of bushfires.
- Carrying out afforestation and re-afforestation practices.
- Monitoring levels of air pollution regularly.
- Using clean energy at home and in industries

(2 marks, 1 for any one point)

(ii)

- i. The burning of these fossil fuels leads to production of large amounts of carbon dioxide and other gases, which accumulate in the atmosphere. These gases trap heat that is otherwise supposed to be lost into space from the earth and consequently lead to a sustained increase in the average temperature of the earth's atmosphere (global warming). This causes the climate to change

(2 marks)

- ii. When forests are cleared or burned, the carbon stored in the trees is released into the atmosphere as carbon dioxide, adding to the greenhouse effect. On top of that, when a forest is destroyed, it can no longer absorb carbon dioxide from the atmosphere, thereby leading to climate change.

(2 marks)

(iii)

- Any decrease in temperature makes air molecules to be cooled and eventually contract. When this happens, the outward pressure of its molecules is spread over a smaller area. Since air molecules are now concentrated at one point, they begin to push outwards with great force. Consequently, this increases the pressure of air.
- When temperature increases, molecules of air get heated and expand. They eventually begin to rise because they lose weight. They occupy a larger surface area and exert a less outward force. This eventually decreases the pressure of air.

(3 marks)

4. (i) Chipirone wind **(1 mark)**

(ii) X = Mozambique **(1 mark)**

Y = Malawi **(1 mark)**

(iii)

- It originates from Mozambique in Chipero highlands
- It is warm
- It is moist
- Occur in cool dry season, between May and August

(3 marks, 1 for any point)

- (iv) Chipero winds bring persistent stratus clouds which lead to the formation of precipitation called drizzle mainly in the southern region of Malawi (Mulanje, Chiradzulu, Thyolo and Blantyre) **(1 mark)**

b. (i)

- it becomes very cloudy and rainy.
- persistent rainfall

(2 marks)

(ii)

- An abundant source of warm, moist air with temperatures of about 27°C or more, near the surface.
- High level of heat causing updrafts of air.
- High levels of humidity.
- Major winds blowing in the same direction.
- Air must be blowing inwards towards the centre and rising rapidly.
- Nimbostratus clouds must form to give heavy rainfall.
- There must be an inward flow of air in the upper level of the atmosphere.

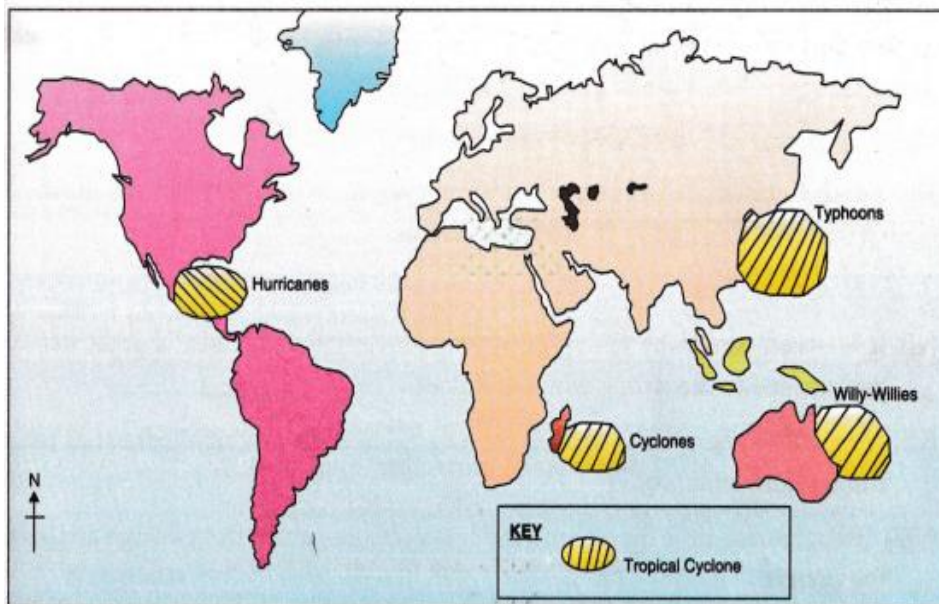
(4 marks, 2 for any one point)

(iii)

- It is an area of calm
- light winds
- no rain.

(3 marks, 1 for one point)

(iv)



c. (i) Savana vegetation/Tropical grasslands

(1 mark)

(ii) Tropical continental/Sudan/Savanna climate

(1 mark)

(iii)

- tall grass with scattered trees
- grass dries out in the hot dry season
- Trees are umbrella shaped
- Trees have long roots to reach ground water
- Trees are deciduous (shed off leaves to prevent water loss)

(2 marks, 1 for any one point)

(ii)

- They have thick stems to store water
- They have deep roots to reach water at deep level
- They shed their leaves in order to prevent water loss
- They are umbrella-shaped to shield their roots from the scorching heat
- Drought-resistant grass

(2 marks, 1 for any one point)

5. a (i)

- B = Sub tropical high / Horse latitude pressure belt **(1 mark)**
- C = Temperate low-pressure belt **(1 mark)**

(ii)

- Intense heating due to the overhead sun leads to expansion and rising of air, creating intense low-pressure cells called the doldrums
- Air thrown from the 30°N and 30°S high pressure belts towards the equator comes to occupy a larger space. It spreads out, and its weight per unit area decreases hence low atmospheric pressure.
- The region is characterized by the meeting of warm moist winds (trades winds) which mix up and rise into the atmosphere, creating the intense low pressure cells

(4 marks, 2 for any one point)

(iii)

- They are warm winds
- They blow from an easterly direction
- They blow from Horse Latitudes to the doldrums

b (i)

- X = Atacama / Peruvian desert **(1 mark)**
- Y = Australian desert **(1 mark)**

(ii) Namib desert was formed in two ways:

- The cold Benguelan current to the west coast prevents moisture from rising into the atmosphere and creating rain.
- Dry air descending from interiors of the land off the south western coast of Africa resulted in extremely arid conditions which led to erosion of rocks into sand, creating dunes

(2 marks, 1 for each point)

(iii)

- Desertification causes climate change
- Decreased agricultural productivity
- Soil and land degradation
- Loss of biodiversity
- Negatively affects tourism
- Increases demand for relief items due to food shortages
- Leads to migration of people out of region
- Water scarcity

(2 points, 1 for any one point)

(i) Ways of controlling desertification:

- Afforestation
 - Re-afforestation
 - Good land husbandry
 - Controlling rapid population growth
 - Use of alternative sources of energy
 - Civic education
- (2 marks, 1 for any one point)**

c. (i) Mediterranean climate

(ii) Annual Tem. Range = Highest monthly temp – Lowest monthly temp

= 24°C - 9°C **(1 mark)**

= 15°C **(1 mark)**

(iii) South Africa, Tunisia, Morocco, Lybia **(1 mark, for any one country)**

(iv)

- growth of crops such as fruits and cereals.
- Olive trees are grown. They are useful for making cooking oil.
- Growing of grapes (viticulture)- used for making wine.
- Growing of wheat and barley-for making flour used for baking.
- Tourism: the long hot, dry summers attract many tourists from the cold regions.

- Mining: the Mediterranean climate region has abundant mineral resources such as coal, gold, diamond, platinum