**TERM 2 2025**

**MAY 2025**

**GEOGRAPHY MARKING SCHEME PAPER 1**

1. (a) Define the solar system (2 marks)
   - **Is a group of heavenly bodies comprising of the sun, planets and t heir satellites, asteroids and comets and meteors which orbit the sun in the universe or space**

   (b) main layers of the earth (3 marks)
   -crust
   -mantle
   -core

2. (a) Differentiate between a plug dome or spine and a volcanic plug/neck (2 marks)
   - **A plug dome/spine is a rigid cylindrical column of very viscous lava forced out of the ground and sticks above the ground like a pillar while a volcanic plug/neck is a column of solidified magma inside the vent of volcanic cone that is exposed after erosion of a volcano as a resistant column.**

   (b) State 3 effects of earthquakes (3 marks)
   - **When earthquakes occur they cause damage of property as well as result in loss of lives.**
   - **Earthquakes cause huge sea waves called Tsunamus which flood the neighbouring coastal areas**
   - **Earthquakes may make parts of the sea floor to be raised or lowered.**
   - **Earthquakes will cause vertical and lateral displacement of t he land that damage transport and communication lines.**
   - **Earthquakes can trigger off faulting, folding and vulcanicity**
   - **Earthquakes give off a lot of energy more powerful than atomic bombs that cause destruction and psychological trauma**
   - **Earthquakes can lead to landslides.**

3. (a) Describe the characteristics of savanna vegetation (5 marks)
   - **Are grasslands with widely spaced trees**
   - **The trees are of medium height (3M) and their crowns are umbrella-shaped**
   - **Trees have small leaves and thorns**
   - **The savanna grasses are tall up to 3M with stiff blades**
   - **Grass changes colour with the seasons, green during rainy season and turns brown during dry spell.**
   - **Trees have deep roots and thick barks to reduce transpiration**
   - **Savanna vegetation differs with the range of rainfall. i.e. in wet areas trees are dense with tall grass and in drier areas, poorer type like in semi arid grasslands**

4. (a) Name any three glacial erosion features on a highland region (3 marks)
   **Cirque**
   **Arêtes**
   **Pyramidal peak/Horn**
   **Hanging valley**
   **V –shaped valley**

b) list two factors influencing glacial erosion (2mks)
-nature of the underlying rock

-speed of the glacier
-thickness and weight of the ice
-availability of ice

5. (a) Name three process of wind erosion in deserts (3 marks)
- **Abrasion**
- **Attrition**
- **Deflation**

(b) Differentiate between a Zeugen and a Yardang (2 marks)
- A Zeugen – is a ridge and fullow feature produced through ***weathering and abrasion***✓ by wind when rocks are ***alternating hard and soft horizontally***✓in the direction of prevailing winds

***While a***

- A yardang – a ridge and fullow feature produced through ***wind abrasion*** when ***hard and soft***✓ rocks ***are tyingvertically parallel*** to each other in direction of the prevailing winds



## ***SECTION B***
## ***ANSWER QUESTION 6 AND ANY OTHER TWO QUESTIONS FROM THIS SECTION***

**6. (a) Study the map of Tambach 1:50 000 (sheet 90/3) provided and answer the Following questions.**

**(i) Name *three* human features found in grid square 8260.(3 marks)**
- *All weather Road Loose surface.*
- *Shop*
- *Houses*
- *School*

**(ii) Measure the length of all-weather road loose surface C 51from the junction near the mining camp to the southern edge of the map. Give your answer in Km. (2 marks)**

- *5.5 Km 0.1 Km (5.4-5.6)*

**(iii) Convert the map scale into a statement scale? (2 marks)**

1:50000
50000cm = $\frac{50000}{100000}$ km
= 0.5km
1cm represents 0.5km

**(iv) Give two ways through which relief has been represented in the area covered by the map. (2 marks)**

- *By use of contours*
- *By use of trigonometric station.*
- *By use of Spot Heights*

**(c) Draw a square 15cm by 10cm to represent the area enclosed by easting 78 and 95 and northing 60 and 70. (1 mark)**

**On it mark and label the following features.**

(i) River Kerio. **(1 mark)**

(ii) Lake Kamnorok. **(1 mark)**

(iii) Seasonal swamp. **(1 mark)**

(iv Tambach Municipality **(1 mark)**

**(d) (i) Describe the drainage of the area covered by the map. (6 marks)**

- *The area is has many permanent rivers.*
- *Most rivers are vanishing*
- *Most of the rivers originate from the escarpments in the western and eastern part of the map.*
- *There is seasonal river in the south western part of the map.*
- *The area has seasonal swamps in Kerio valley.*
- *The area has papyrus swamp around lake Kamnorok.*
- *River Kerio and its tributaries form dendritic pattern.*
- *River Kerio has meanders.*
- *River Kerio flow from the south towards the north..*

**(ii) Citing evidence from the map, state *five* functions of Tambach town. (5 marks)**

- *Education centre evidence by school.*
- *Administrative centre evidence by District office / police line/county council*
- *Recreational centre evidence by rest house*
- *Religious centre evidence by church / mission*
- *Medical centre evidence by Hospital*
- *Transport centre evidence by roads.*

*commercial centre evidence by shops/petrol pump*

7. (a)(i) Define a mineral (2 marks)

- **A mineral is a naturally occurring crystalline inorganic substance which define chemical composition and physical characteristics.**

**(ii) Rocks are classified** according to their mode of formation into three: namely (3 marks)

- **Igneous rocks**
- **Sedimentary rocks**
- **Metamorphic rocks**

**(b)i) Name three types of plutonic igneous rock. (3 marks)**

- ✓ Peridotite
- ✓ Gabbro
- ✓ Granite
- ✓ Diorite
- ✓ syenite

(b)(ii) Briefly describe the formation of mechanically/physically sedimentary rocks. (5 marks)

- **Rocks formed from sediments/particles of other rocks derived from many sources.**
- **Weathered materials are transported and deposited by agents (Ice, water wind) either on land or in sea waters**
- **Over a period of time the materials consolidate, get compacted cemented into a hard rock.**

- **The rocks are formed in layers according to different periods the materials were laid down.**
- **They are classified according to the size of materials laid down into mendacious (large), Arenaceous (medium) and Argillaceous (fine**).

(b)(iii) State any five significance of rocks (5 marks)

- **Formation of soils for agri; after weathering**
- **Stores underground water**
- **Fossil fuels are obtained from rocks;**
- **Various salts are obtained from rocks e.g rock salt.**
- **Building materials; for building and construction.**
- **Some rocks form fascinating features that are tourist attractions.**
- **Some rocks are used in heavy industries i.e. limestone used in copper and iron smelting**
- **Some are used in making ornaments and sculptures and decorations.**
- **Contain mineral deposits**

(c) Students from Bonyunyu Sec. School in Nyamira County, set out for a field study on rocks within Nakuru County

(i) List down any four preparations they will make for their study (4 marks)

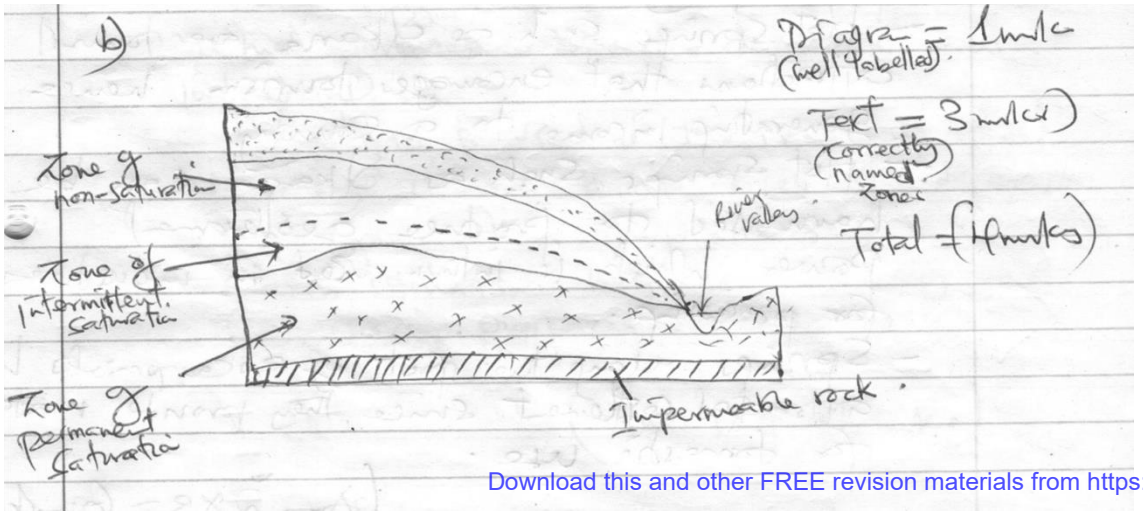
- **Ask permission from school and county of Nakuru**
- **Organize for means of transport**
- **Set their objectives and hypotheses for the study.**
- **Divide themselves into groups**
- **Draw their schedule**
- **Prepare their questionnaires**
- **Have the map of Nakuru County**.

c) ii) Give three reasons why it's necessary to make a reconnaissance survey (3 marks)

- To know the direction/routes of area to visit
- To prepare for the means of transport and draw time schedule
- Help them prepare on the method to use to collect their data.
- To ask for permission from the county of Nakuru.
- To help them to identify the problems to encounter.

8a) A spring is a natural outflows of water from the rocks while a well is hole sunk into a permeable rock to reach the water. (2mks)

b)



- c) – Aquifer must me of permeable materials rocks
  - The aquifer must be exposed in an area of sufficient precipitation
  - The aquifer must be in between two impermeable rocks for it to detain water.
  - The mouth of the well must lower than the intake area to allow water to be forced to the surface by pressure with no neet of pumping it.
  - The aquifer must dip from a region of water intake and rocks layers must form a broad syncline or basin
- d)
  - **Many springs are source of rivers or their tributaries which provide water for industrial uses.**
  - **Ground water is used in irrigating land hence promoting agricultural activities.**
  - **Hot springs such as olkaria are tourist attraction that encourage tourism hence generating income to a county.**
  - **Hot springs such as Olkaria can be harnessed to produce geothermal power which is inturn used in industrial for processing.**
  - **Springs along the foot of escarpments have attracted settlement since they provide water for domestic use.**

e) i**) Karts scenery is a limestone region where water action has created unique features on the surface as well as underground. (2x1=2mks)**

ii)**The surface rock and the rock beneath should be thick limestone,……. Or chalk.**

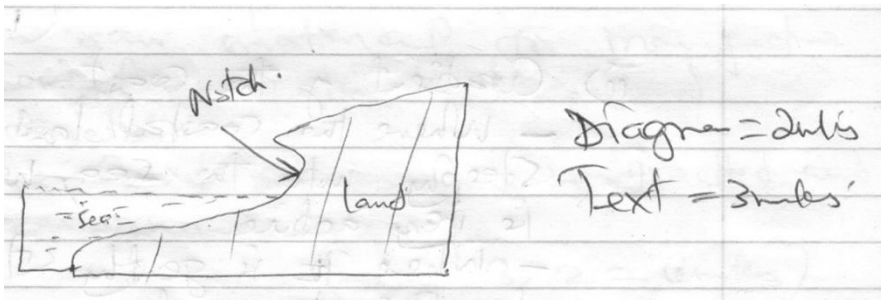
- **The rock should be harf and well jointed.**
- **The climate should be hot and …..**
- **The water table should be deep below the surface. (1x3=3mks)**

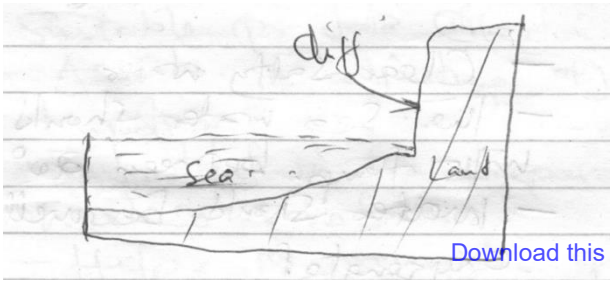
iii)

- **The features form good tourist attraction i.e Gorges who intun bring foreign exchange to a country.**
- **Collapse of dolines into the water table may lead to formation of lakes which provide water for domestic and industrial use.**
- **Limestone is used in the iron and steel industry where it is used to separate iron from other impurities.**
- **Limestone's regions are very good for grazing purposes.**

10 a**) i) Ocean is a vast body of salty water on the earths surface that surround the land or continent while sea is a large salty water body found at the margins of continents**

ii)



- **Wave erosion attacks a steeply sloping coast at the high tide level work.**
- **A notch is formed and an overhanging block is suspended above the notch**
- **The overhanging block eventually collapse and vertical or near vertical rock face is exposed to form a cliff**

b) i) Climate

- **Climate influences weathering of coastal rocks hence causing wave erosion along the coastal land to be more effective since rocks are already weakened.**
- **Coral coasts develop in the tropical regions of the world in the warm seas. (1x2=2mks)**

ii) Gradient of the coast

- **Where the coastal land slopes steeply into the sea, wave erosion is very active.**
- **Where is gently steeping, wave deposition dominates.**

c) i) – Clear salty water

- **The sea water should be warm with temperature between $20^0$ and $29^0$**
- **Water should be well oxygenated**
- **Water should be clear, free from silt or mud.**

ii) Coral features such as fringing reefs attract tourist who bring foreign exchange into the country.

- **Coral reefs provide breeding ground for fish which inturn promote fish industry and provision of food**
- **Coral rocks provide limestones which is a raw materials for manufacture of ….. used in building and constructions.**
- **Some coral stones** are extracted and sold as ornaments.

d) i) Enables them to determine the methods suitable for data collection
**- Assists in adjusting objectives and hypothesis**
**- Important in the preparation of a working schedule**
**- Helps in preparation of a route map. (1x3=3mks)**

ii) Affected by elements of subjectivity as it depends on one persons observation.
- **Encourages biasness as the choice of where to conduct the study depends on an individual.**
- **Visual fisability may reduce its effectiveness**
- **It is tiresome and expensive since it involves a lot of travelling (1x2=2mks)**

**10. a)Outline two factors that influence the development of drainage patterns.**
**- Direction of the slope of the land.**
**- Difference in rock resistance /hardness.**
**- The arrangement of rock layers/rock structure 2 mks**
**(ii) Outline five characteristics of a river in its youthful stage.**
**- the river has a steep river gradient.**
**- the river channel is narrow.**
**- the river has deep/steep-sided/V-shapedvalley**
**- the river flows at a high speed/high stream velocity.**
**- the vertical erosion/down cutting is dorminant.**
**- the river channel is generally winding**
**- Erosional featuresare common rapids/waterfalls/cataracts/cascades/ interlocking**

**spurs/potholes/ plunge pools/**
**- the type of flow is torrential.**
**- the river has a small load**
**- the river has a small volume of water**
**b) Describe the following processes of river erosion.**
**i)Attrition: As rock materials are transported downstream, they constantly collide against each other.**
**The materials gradually wear down/reduce in sizes**
**Corrasion : As solid rock materials are transported downstream, they are hurledagainst the banks**
**and drapedalong the river bed**
**The rock materials chip off pieces of rock from thechannel and the river bed,**
**Eddy currents rotate pieces of rock around the hollows breaking/ grinding the river bed.**
**c)Explajn three negative effects of rivers to the human environment.**
**-When rivers flood, they destroy a lot of property/crops lead to loss of human life.**
**- Wide/deep rivers are a barrier to transport especially where bridges have not been constructed.**
**- River water can be a medium of spreading water-born diseases, since flood waters may spread**
**chemicals from farms/human waste which contaminatessources of water**
**- Some rivers are habitat to dangerous animals which may attack human beings/destroy crops.**
**(d) Your class is planning to carry out a field study of a river in its old stage,**
**(i)State three reasons why it would be necessary to pre-visit the area of study.**
**- It helps to draw up objectives/hypothesis for the study,**
**- It helps to prepare a route map.**
**- it helps to design a working schedule.**
**- it helps to identify the probable problems/how to solve problems.**
**-it helps to asses the suitability of the study area**
**(ii) State three activities you would carry out to determine why deposition occurs at this stage.**
**- Measuring of gradient.**
**- Finding out the nature of the load.**
**- Finding out the amount of the load.**
**- Establishing the velocity of the river.**
**- Observing obstacles in the stream channel/distributaries.**
**- Measuring of the width of the river. any 3x1=3 mks**