

MARKING SCHEME

GEOGRAPHY- GRADE 10

SECTION A: [30 MARKS]

1. Study the map of Kipkabus 1:50,000 (Sheet 104/1) provided and answer the following

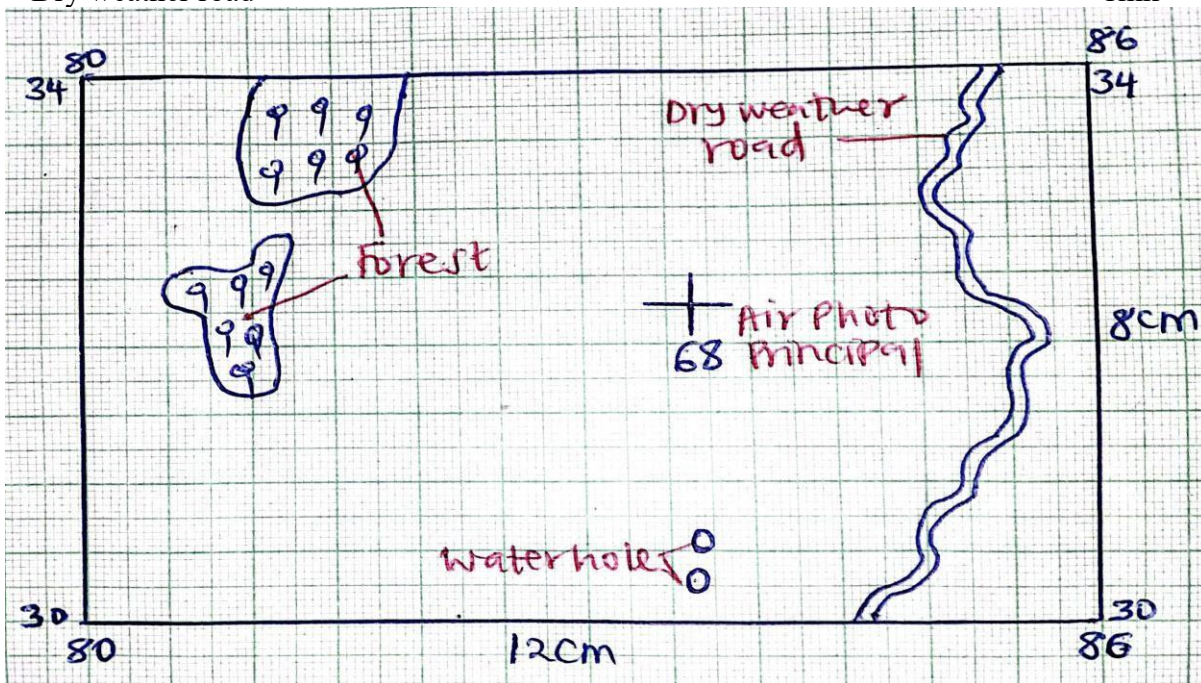
questions..

- a) (i) What type of map is Kipkabus? 1mk
 ➤ **Topographical map**
- (ii) Identify two physical features found in grid square 8336. 2mks
 ➤ **River**
 ➤ **River valley**
 ➤ **Seasonal swamp**
 ➤ **Woodland**
 ➤ **Bamboo**
- (iii) What is the direction of photo air principle point 87 in grid reference 8338 from trigonometrical station primary SKP 102 2mks
 ➤ **North west/ $298^{\circ} + 2^{\circ}$ / $N62^{\circ}W + 2^{\circ}$**
- (iv) Calculate the area of Chof/ Chop forest. Give your answer in square kilometres. 2mks

$$\text{Area} = 1 + 12/2$$

$$= 1 + 6$$

$$= 7 \text{ km}^2$$
- (v) What is the six-figure grid reference of the air photo principal 92/KE/17/013? 2mks
 ➤ **981293**
- b) (i) Draw a rectangle measuring 12cm x 8cm to represent the area between eastings 80 and 86 and northings 30 and 37. 1mk
- (ii) On the rectangle, mark and name 1mk
 - Water hole 1mk
 - Forest 1mk
 - Dry weather road 1mk



- c) (i) Describe the drainage of the area covered by the map. 6mks
 ➤ **There are many permanent rivers.**

- *The main rivers are R. Kimwarer/ R. Kiptunoi.*
- *There are lakes.*
- *There are seasonal swamps.*
- *There is papyrus swamp.*
- *R. Kimwarer and its tributaries form dendritic pattern.*
- *R. Yathine forms trellised pattern.*
- *There are water holes.*
- *There are dams/pond.*
- *Most of the rivers are originating from Keiyo escarpment*

(ii) Citing evidence from the map name two economic activities carried out in the area. 6mks

| ECONOMIC ACTIVITY | EVIDENCE |
|---------------------------------------|------------------------------|
| <i>Transportation</i> | <i>Roads/ railway line</i> |
| <i>Trading</i> | <i>Shops</i> |
| <i>Wattle cultivation</i> | <i>Wattle plantation</i> |
| <i>Lumbering/ Milling/ Processing</i> | <i>Saw mills/ mills</i> |
| <i>Communication</i> | <i>Post office</i> |
| <i>Forestry</i> | <i>Forest/ forest center</i> |

2:

(a) **Simple Bar Graph:** 1 mk for the Title, 1 mk for Y-axis (Rainfall in mm), 1 mk for X-axis (Months), 1 mk for accurately plotted bars. (4 mks)

(b) **Discrete data:** Data that can only take specific, separate values (e.g., number of students) and cannot be measured in fractions. (2 mks)

3:

(a) **A:** Igneous rocks; **B:** Sedimentary rocks; **C:** Metamorphic rocks. (3 mks)

(b) **Volcanic:** Formed on the surface, cool rapidly, have small crystals. / **Plutonic:** Formed deep underground, cool slowly, have large crystals. (2 mks)

(c) Construction (ballast), cement manufacturing (limestone), ornamental/jewelry, tourist attractions. (2 mks)


4:

(a) (3 mks)

4 - Magma

5 - Vent

6 - Ash cloud

(b) Destruction of property/life, air pollution (volcanic ash), acid rain, disruption of air transport. (2 mks) 

Question 5: Folding

(a) (3 mks)

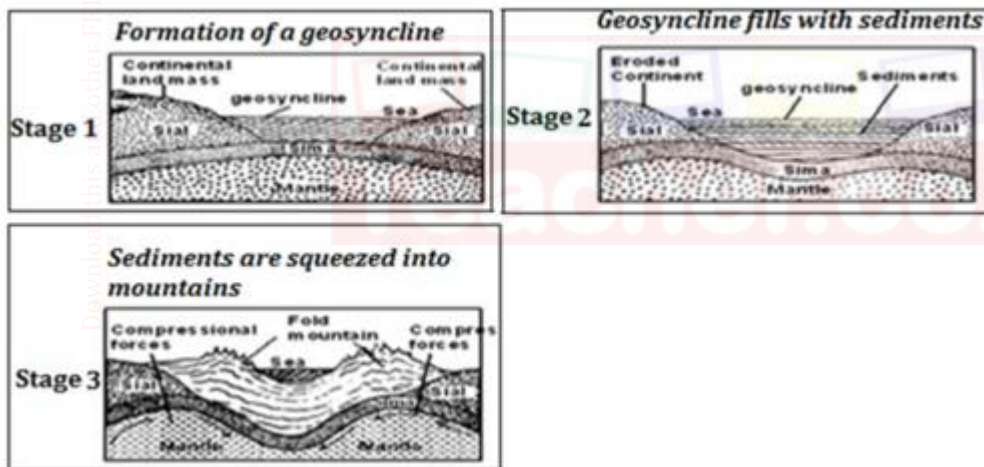
X - Assymetrical fold

Y - Overfold

Z - Overthrust fold

(b) Formation of a fold mountain (4 mks)

- ✓ Initially, earth movements led to the formation of an extensive depression called a geosyncline.
- ✓ The geosyncline was filled with water to form an extensive ocean.
- ✓ The surrounding continental land masses were intensely eroded.
- ✓ Sediments were transported by rivers and glacier and deposited into the geosyncline in layers.
- ✓ Over many years of deposition, thick layers developed whose weight caused the geosyncline to sink inwards.
- ✓ Sinking of the geosyncline triggered compressional forces that drew the surrounding continental land masses towards each other. Compression forces could have also been caused by convection currents in the mantle.
- ✓ The intense compressional forces squeezed the layers of sediments bending upwards to form Fold Mountains.



(c) **Atlas Mountains** (North Africa) or **Cape Ranges** (South Africa). (1 mk)

SECTION B: [50 MARKS]

6:

(a) **Geothermal Energy**. (1 mk)

(b) Proximity to hot magmatic rocks (heat source), presence of fault lines in the Rift Valley, availability of underground water, stable terrain. (3 x 2 = 6 mks)

(c) (i) Small capital investment, labor-intensive/manual skill, uses recycled materials. (2 mks) (ii) Kenya: Simple/manual technology; Japan: High technology/robotics/automation. (2 mks)

(d) Discharge of chemical waste into rivers (e.g., Nairobi River), toxic smoke emissions lowering air quality. (4 mks)

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7:

- (a) **Open-cast mining** (or Quarrying). (1 mk)
- (b) **Limestone**. (1 mk)
- (c) Learner 2: **Alluvial / Placer mining**; Learner 3: **Diamond**. (2 mks)
- (d) Unstable global market prices, lack of capital for modern machinery, poor transport infrastructure, environmental degradation concerns. (3 x 2 = 6 mks)
- (e) Filling up quarries (landfilling), tree planting/reforestation, creating recreational parks or fish ponds. (2 mks)
- (f) **True**. (1 mk)
- (g) **Adit mining**: A method of extraction involving a horizontal tunnel driven into the side of a hill or mountain to reach a mineral seam. (2 mks)

8:

- (a) **Seismograph** (or Seismometer). (1 mk)
- (b) **Pacific Ring of Fire**. (1 mk)
- (c) As tectonic plates slide past or collide with each other, tension builds up. The sudden release of this energy creates seismic waves that shake the earth. (4 mks)
- (d) Building earthquake-resistant structures, conducting emergency drills, installing early warning systems. (3 mks)
- (e) (i) **Hardware, Software, Data, Users** (or Methods). (4 mks)
- (ii) Precision soil mapping, tractor guidance for planting, monitoring crop health via satellite imagery. (3 mks)
- (iii) **1-B, 2-A, 3-C, 4-D**. (4 mks)