

K.C.S.E GEOGRAPHY 2008 PAPER 312/1
MARKING SCHEME

SECTION A

1. a) - To understand and the origin of continents.
- To understand the formation of physical features.
- To understand and form a basis of fauna and flora with the movement of plates. (3 marks)
- b) - Extension/constructive boundaries.
- Compression/destructive boundaries.
- Transform faults/conservative boundaries. (2 marks)
2. a) P - Mercury
Q - Alcohol
R - Metal index (3 marks)
- b) (i) The diurnal temperature range $27 - 18 = 09^{\circ}\text{C}$
(ii) mean temperature for Saturday $\frac{29 + 21}{2} = \frac{50}{2} = 25^{\circ}\text{C}$
3. a) diatomite; coal; soda ash/salt; soapstone; gemstones; fluorspar; limestone; phosphates;
natural carbon dioxide. (2 marks)
- b. - diamond used in shaping hard stones and metals.
- it is the hardest metal that cannot easily break or bend compared to metallic minerals. (1 mark)
4. a) Gases e.g. CO_2 , O_2 ; Air (wind); Cloud; Mist (2 marks)
- b) i) altitude
appearance
formation (2 marks)
- ii) cumulus
cumulo-nimbus
nimbus (2 marks)
5. a) V - Sun
W - Moon (2 marks)
- b) - photographs taken from the outer space/satellites show the curvature of the earth.
- during the eclipse of the moon the earth casts a spherical shaped – shadow on the moon.
- it's possible fly/sail round the world and come to the same point (circum navigation).
- the earths horizon is always circular.
- all planets are round when viewed in a telescope. (4 marks)

SECTION B

6. a) i) Longitudinal extend of the area covered by the map $35^{\circ}15'$, $35^{\circ}25'$. (1 mark)
- ii) Centimetre on the map represent $\frac{1}{2}$ a kilometre on the ground.
1 cm represents 50,000 cm on the grounds. (2 marks)
- iii) 3200m (2 marks)
- iv) full square = 6
half square = $1\frac{1}{2} = 5\frac{1}{2}$
 $= 6 + 5\frac{1}{2} = 11\frac{1}{2} \text{ km}^2 \pm 1$ (2 marks)

- b) i) thicket
scrub
woodland
scattered trees (3 marks)
- ii) 135° (2 marks)
- iii) main track
all weather loose surface
dry weather roads (3 marks)
- c) - No settlement in forested areas.
- Even distribution on the upper part of the main all weather road-bond surfaces.
- No settlement on the hilly areas represented by dense contours.
- Little settlement in swampy areas.
- Little settlement in plantation areas.
- Little settlement along the transport line (4 marks)
- d) - Dense forests on the south eastern part of the map that attracts heavy rainfall.
- Presence of tea research institute.
- High altitude due to dense contours.
- Good communication network in the area.
- High population thus providing adequate labour in the farms.
- Adequate labour lines within the tea estates.
- Presence of river Kimugun, Dimlitch, Kitings etc within the tea estates.
- Forest station to check on the existence of the forest. (6 marks)

7. a) - Magma is the molten rock within the earth crust.
- Lava is the extruded magma that is flowing on the surface and has lost the gases contained. (2 marks)
- b) E - Dyke
F - Lapolith
G - Sill (3 marks)
- c) i) A crater - formed after eruption has taken place leaving a hollow feature at the top of the mountain. e.g. Menengai, Suswa etc. (3 marks)
- Geyser - Hot water that is accompanied by steam is thrown out at a greater force. e.g at Olkaria and L. Bogoria. (5 marks)
- Lava Plateau- Form from fissure eruption in a flat land that lies high in relation to surrounding area. e.g Yatta plateau, Nyandarua, Lary, Sotik, Nyika, Loita, Laikipia etc. (4 marks)
- d) - Attracts settlement due to rich volcanic soils.
- Quarries for construction rocks.
- Attracts minerals exploitation.
- Acts as catchments areas for rives.
- Tourist attraction e.g on snow capped mountains.
- Falling rocks can cause loss of life and property damage.
- Geothermal energy from hot springs. (8 marks)

8. a) i) - Mountains
- Hills
- Lakes
- Underground (through flows) (2 marks)

- ii) Youthful stage - Interlocking spurs
Water falls and rapids
Gorges
Stream cut valleys
Plunge pools
Pot holes
- Mature stage - River bends start to appear
Bluffs
Ox-bow lake
Concave banks
Wider valley flow
Gentle river gradient
- Old stage - Deltas
Flood plains
Incised meanders
Meanders and ox-bow Lake
Natural levees and deferred tributary (6 marks)

- b) Suspension - fine light material transported in suspension form.
Saltation - material are rolled on the ground, collide and bounce back as they move.
Surface creep - heavy material are rolled on the ground. (6 marks)

- c) Dendritic pattern - the river/stream join the main river at acute angle; develops on rocks with uniform structure. (3 marks)
Trellis drainage - the river tributaries join the rive at right angles; develops on rocks alternating both soft and hard rocks. (3 marks)

- d) i) - Observation
- Interviewing
- Photograph taking
- Drawing sketches/ diagrams/ maps (2 marks)
- ii) - It gives first hand information
- One can seek clarification
- One can extract information on broad area of the river
- One can collect deposit samples for study (3 marks)

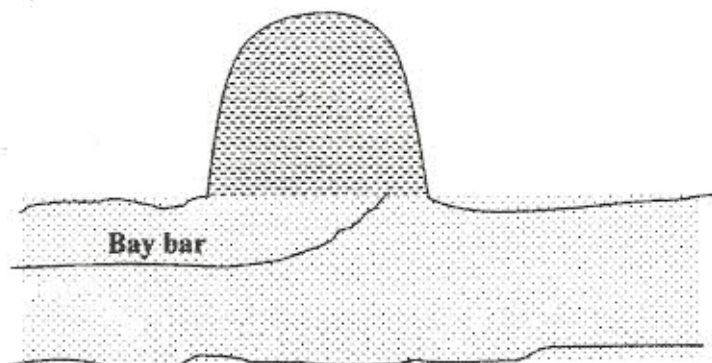
9. a) i) Water vapour condenses in the atmosphere. At temperature below the freezing point 0°C (32°F . this turns to white crystals called snow. When snow falls, pile up and compacted at 0°C it forms ice. (3 marks)

- ii) cirque glacier
piedmont glacier (2 marks)

- b) i) Temperature - high temperature results to melting thus fast movement.
- low temperature encourages more solidification thus reducing the movement. (2 marks)

- ii) Width of the glacier channel - wide width gives a wide spread thus showing the movement.
- narrow width gives a compression of glacier in the channel thus speeding up the movement. (2 marks)

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- c) i) corrie - armchair-like in shape
 - it cuts backward
 - it has deepened floor
 - it forms a lake when filled with water (3 marks)
- ii) a pyramidal peak - it is a steep sided peak
 - it is surrounded by cirques
 - it is smooth and pointed (3 marks)
- iii) a fiord (fjord) - submerged glacial trough on a highland coast
 - has terminal moraine or rock sill
 - has steep sides that are almost parallel (3 marks)
- d) i) M - Hanging valley
 N - Alp/Bench
 P - U-shaped valley (3 marks)
- ii) Formation of crag and tail - resistant rock outcrops obstruct ice movement and protect weaker rocks on the downstream side from erosion. This results in a mass with an elongated tail.
- 10 a) i) H - Trough
 J - Crest
 K - Swash (3 marks)
- ii) Backwash is the backward movement of water after the wave has broken. It takes back the deposited material to the sea. (2 marks)
- b) Corrosion - Pebbles, sand and all sorts of rock are hurled against the feet and face of the cliff.
 Hydraulic action - Takes through the compression of air and direct wave force that leads to breaking up of rocks.
 Attrition - Pebbled and boulders hit against each other while transported.
 Solution - Soluble material like limestone is dissolved through the chemical action of the water. (6 marks)
- c) (i) Gradient of the shore gentle - slope reduced velocity of the backwash thus triggering off deposition. (4 marks)
 (ii) Depth of the sea - it takes long for material to be deposited in deep sea as compared to shallow sea. (4 marks)
- d) It is formed when a spit grows completely across a bay or sea inlet.



(6 marks)