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

SECTION A

Answer ALL the questions in this section.

1. (a) Give three reasons why it is necessary to study the plate tectonics theory. (3 marks)
   (b) Name two types of tectonic plate boundaries. (2 marks)

2. (a) The diagram below shows a Six's Thermometer. Name the parts marked P, Q and R. (3 marks)

   ![Thermometer Diagram]

   (b) The table below shows temperature readings at a weather station for one week.

<table>
<thead>
<tr>
<th>Temp/Day</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thur</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. °C</td>
<td>28</td>
<td>27</td>
<td>28</td>
<td>26</td>
<td>29</td>
<td>29</td>
<td>26</td>
</tr>
<tr>
<td>Min. °C</td>
<td>18</td>
<td>18</td>
<td>20</td>
<td>16</td>
<td>22</td>
<td>21</td>
<td>19</td>
</tr>
</tbody>
</table>

   Calculate the following:
   (i) the diurnal range of temperature for Tuesday; (1 mark)
   (ii) the mean temperature for Saturday. (1 mark)

3. (a) Give two examples of non-metallic minerals. (2 marks)
   (b) Why is industrial diamond used in shaping hard stones and metals? (1 mark)

4. (a) Apart from water vapour, name two other substances that are suspended in the atmosphere. (2 marks)
   (b) (i) Give two factors that are considered when classifying clouds. (2 marks)
   (ii) Name two types of clouds that give rise to rainfall in the tropical regions. (2 marks)
(a) The diagram below shows an eclipse. Name the features marked V and W. 

(b) State four proofs that the shape of the earth is spherical.

SECTION B

Answer question 6 and any other TWO questions from this section.

Study the map of Kericho 1:50,000 provided and answer the following questions.

(a) (i) Give the longitudinal extent of the area covered by the map. 
(ii) Convert the scale of the map into a statement scale.
(iii) What is the approximate height of the hill in the grid square 6770? 
(iv) Calculate the area of Kericho Municipality. Give your answer in square kilometres.
(b) (i) Give three types of natural vegetation found to the west of Easting 53.
(ii) What is the bearing of the trigonometrical station at grid reference 554668 from the factory at grid reference 610626?
(iii) Identify three forms of land transport found to the north of Northing 68 and west of Easting 53.
(c) Describe the distribution of settlements in the area covered by the map.
(d) Citing evidence from the map, explain three factors that favour the establishment of tea estates in the area covered by the map.
(a) Differentiate between magma and lava.

(b) The diagram below shows some intrusive volcanic features.

Name the features marked E, F and G.

(c) Describe how the following features are formed and for each give an example from Kenya:

(i) a crater;
(ii) a geyser;
(iii) a lava plateau.

(d) Explain four ways in which volcanic features influence human activities.

8 (a) (i) Name two sources of rivers.
   (ii) The diagram below shows the three stages of the long profile of a river.

   (i) Youthful Stage  (ii) Mature Stage  (iii) Old Stage

Give two features formed by the rivers in each of the three stages.

(b) Describe the processes by which a river transports its load.

(c) Describe each of the following drainage patterns:

   (i) dendritic pattern;
   (ii) trellis pattern.
(d) You are required to carry out a field study on the materials deposited by a river.

(i) State two methods you would use to collect data. (2 marks)

(ii) State three advantages of studying the work of rivers through fieldwork. (3 marks)

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(a) (i) Describe how ice is formed on a high mountain. (3 marks)

(ii) Apart from a valley glacier, name two types of ice masses found on Mountains in East Africa. (2 marks)

(b) Explain how the movement of a valley glacier is influenced by the following factors:

(i) temperature; (2 marks)

(ii) width of a glacier channel. (2 marks)

(c) Describe the distinctive characteristics of the following features resulting from glacial erosion:

(i) a corrie; (3 marks)

(ii) a pyramidal peak; (3 marks)

(iii) a fjord (fjord). (3 marks)

(d) (i) The diagram below shows a glaciated upland area.

![Diagram of a glaciated upland area]

Name the features marked M, N and P. (3 marks)

(ii) Describe the process through which a crag and tail is formed. (4 marks)

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(a) The diagram below shows a breaking sea wave.

![Diagram of a breaking sea wave]

(i) Name the parts labelled H, J and K. (3 marks)

(ii) What is a backwash? (2 marks)

(b) Describe three processes of wave erosion along the coast. (6 marks)

(c) Explain how the following factors influence wave deposition:

(i) gradient of the shore; (4 marks)

(ii) depth of the sea. (4 marks)

(d) Using well labelled diagrams, describe how a bay bar is formed. (6 marks)