**MARKING SCHEME**

1. (a) What are earth movements? (1marks)

* ***Earth movements are motions that occur within rocks of the crust due to tectonic forces***

(b) Outline four causes of earth movements (4marks)

* ***Magma movement within crustal rocks***
* ***Convection currents within the mantle***
* ***Isostastic adjustment of crustal rocks***
* ***Collapsing of crustal rocks due to gravitative pressure.***

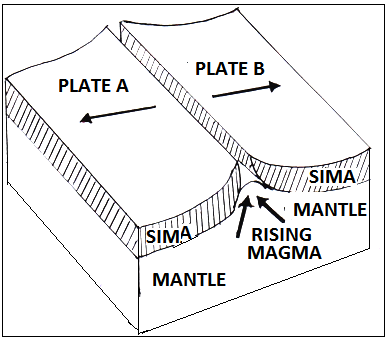
(c)Differentiate between horizontal and vertical earth movements (2mrks)

* ***Horizontal earth movements are motions that operate along a lateral plane within crustal rocks causing them to shorten ,stretch or shear whereas vertical earth movements operate along the earth’s radius either towards the interior or towards the earth surface***

1. Describe the theory of continental drift (5marks)

* ***According to Wegener, the earth was initially a single landmass called pangaea.***
* ***Pangaea was surrounded by a sima floored ocean called panthalassa***
* ***During the late pre-cambrian, Pangaea split to form two super continents called laurasia and Gondwanaland.***
* ***The two were separated by a narrow ocean called tethy’s***
* ***Laurasia split during the Mesozoic era to form Eurasia and North America.***
* ***Gondwanaland split later to form Africa, south America, Australia, Antarctica Arabia and India.***
* ***Africa and India drifted Northwards to their present day location Australia drifted Eastwards the Americas westwards while Antarctica and Eurasia remained relatively static***

1. The diagram below represents a tectonic plate boundary



1. Identify the type of tectonic plate boundary represented (1mark)

***Extensional boundary***

1. Name three features formed along the tectonic plate boundary represented by the diagram (3marks)

* ***Rift valleys***
* ***Mid-ocean ridges***
* ***Sub-marine volcanoes***
* ***Volcanic islands***

1. ( a) Define the term folding (2marks)

* ***Folding is the process through which young sedimentary rocks bend upwards or downwards due to compressional forces***
* ***Folding is a process of crustal distortion which causes crustal rocks to bend upwards or down wards***.

(b) Give to factors that determine the extent of folding (2marks)

* ***The strength of the compressional forces***
* ***The amount of nature of rocks (rock resistance)***

(c) State two differences between symmetrical and asymmetrical folds (4marks)

* ***Symmetrical folds form due to compression forces of equal magnitude while asymmetrical folds occur due to compressional forces of unequal magnitudes.***
* ***In symmetrical folds, both limbs slope uniformly from the axis whereas in asymmetrical folds, one limb is steeper while the other is gentle***.

1. Explain three problems facing gold mining in south Africa (6marks)

* ***Shortage of water***
* ***high cost of mining***
* ***Decreasing quality of gold***
* ***Exhaustion of gold in some mines***
* ***Increasing depth of mines***
* ***Shortage of skilled labour (to be well explained)***