ZERAKI ACHIEVERS' EXAMS TERM THREE
GEOGRAPHY 312/2 MARKING SCHEME
FORM ONE

SECTION A (25 marks)

1. (a) Define the term field work. **(2mks)**

This is the scientific study of geography outside the classroom using the environment as a laboratory.

(b) Name three types of field work. (3mks)

- Field study • Field excursion
- Field research.

2. (a) Explain what each of these areas of human geography study:

(i) Population geography. (2mks)
This is the study of population which deals with the size, characteristics, and distribution of the population.

(ii) Agricultural geography. (2mks)
This deals with types of farming and the reasons for the differences in farming practices in various parts of the world.

(b) Give a reason which makes the study of geography important. (1mk)

- Opens the learner's mind into career life e.g., piloting.
- Teaches learners on time management.
- Develops positive attitude towards different human communities.
- Creates environmental awareness and the need to conserve it.
- Provides useful information about places one would like to visit.
- Provides information about location and characteristics of features on the earth's surface.
- Provides a variety of skills such as observation, reading and interpretation of maps.

3. **(a) Define a map.** (2mks)

This is a representation of part of or the whole of the earth's surface on a piece of paper or a flat surface drawn to scale.

(b) State three characteristics of a good sketch map. (3mks)

- Should have a compass direction.
- Enclosed in a frame.
- Must be neat.
- Has a key.
- Has a title.

4. The table below shows climatic characteristics of a station Y. Use it to answer the questions below:

Month	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temp. ^{0}C	21	20	20	17	14	13	12	12	14	16	18	20
Rainfall (mm)	12	19	17	42	67	98	68	76	36	45	12	13

(a) Calculate (i) the temperature range of the station. **(2mks)**

Range = 20 – 12

= 8^0C

(ii) mean annual rainfall **(2mks)**

Mean annual rainfall =

12 + 19 + 17 + 42 + 67 + 98 + 68 + 76 + 36 + 45 + 12 + 13 =

505 mm pa.

(b) Name the instrument used to measure amount of rainfall. **(1mk)**

- Rain gauge.

5. (a) What is precipitation? **(2mks)**

- This is any form of moisture that falls from the atmosphere.

(b) Name any three forms of precipitation common in Kenya. (3mks)

- Rainfall
- Dew
- Fog
- Mist

SECTION B (75 Marks)

6. Study the table below and then answer the questions that follow:

Month	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temp. ^{0}C	20	20	18	16	13	10	10	13	16	18	19	16
Rainfall (mm)	112	97	75	61	22	9	8	5	25	69	116	111

(a) (i) Using a scale of 1cm to rep. 20mm and 1cm to rep. 5^{0}C, draw a combined bar and line graph. (8mks)

- Title – 1mk
- Axes well labelled – 1mk
- Bars correctly drawn – 2mks.
- Line correctly drawn – 2mks.
- Scales correctly applied – 2mks.

(ii) **State one relationship between rainfall and temperature as shown by your graph. (1mk)**

- Rainfall is high when the temperature is high.

(iii) State any two advantages of using above method to represent data. (2mks)

- Appealing to the eye.
- Comparison is easy.
- Trend is easy to follow.

(b) (i) Define an air mass? (2mks)

A large volume of air whose temperature and humidity are uniform horizontally.

(ii) State any three general characteristics of air masses. (3mks)

- Cover extensive surface area.
- Derive characteristics from source region.
- Some air masses are warm and wet, some are cold and dry.

(c) Your class intends to conduct a field study of a weather station near your school.

(i) State three preparations you would make before the study. (3mks)

- Carry out reconnaissance survey.
- Read from refence books and other relevant resources.
- Seek permission from the relevant authorities.
- Formulate objectives and hypotheses for the study.
- Draw a work schedule.
- Prepare and avail relevant stationary.
- Decide on methods of data collection and recording.

(ii) Suggest any three follow up activities you would be engaged in.(3mks)

- Writing a report about the study.
- Displaying photographs of the station.
- Analysing data collected.
- Discussing the findings.
- Comparing notes.

(iii) Give three reasons why weather data may be inaccurate. (3mks)

- Use of obsolete instruments.
- Poor location of the weather station.
- Human error during reading of the data.
- Vagaries of nature e.g., occurrence of very strong storms.

7. (a) (i) Differentiate between a rock and a mineral. (2mks)

A rock is an aggregate of mineral particles forming the solid part of the earth's crust while a mineral is a naturally occurring crystalline inorganic substance with definite chemical and physical composition.

(ii) Apart from sedimentary rocks name two other types of rocks. (2mks)

- Igneous rocks
- Metamorphic rocks

(iii) State any three characteristics of sedimentary rocks. (3mks)

- Have bedding planes.
- Occur in layers.
- Are non-crystalline.
- Some contain fossils.

(b) (i) Give three factors that influence occurrence of minerals. (3mks)

- Vulcanicity.
- Sedimentation.
- Evaporation.
- Weathering.
- Erosion
- Metamorphism.

(ii) Name two underground mining methods. (2mks)

- Adit/drift method
- Shaft method
- Solution method
- Slope mining.

(iii) Give any three mineral fuels. **(3mks)**

- Petroleum
- Coal
- Uranium
- Natural gas.

(c) Explain five benefits of rocks. **(10 mks)**

- Some rocks weather to form fertile soils for crop farming.
- Some rocks like the crying stone are tourist attraction.
- Some rocks are curved to form artefacts that are sold to earn income.
- Some rocks act as water reservoirs which are exploited for industrial and domestic use.
- Some rocks are exploited for building and construction.

8. (a) (i) State three sources of information about the interior of the earth. (3mks)

- Carrying out seismic experiments.
- Studying erupted volcanic materials.
- Studying deep seas and ocean beds.
- Studying of minerals obtained from deep mines.
- Crustal boring to obtain rock materials for study.

(ii) Suggest two reasons why the interior of the earth is still hot. **(2mks)**

- Radioactivity processes during nuclear fission generate heat.
- Weight of overlying crustal materials exert pressure leading to heat.
- Slow rate of cooling of the earth's interior after its formation.

(b) (i) Apart from the atmosphere, name one other external structure of the earth. **(1mk)**

- Hydrosphere.

(ii) State any two importance of the constituents of the atmosphere. (2mks)

- Control atmospheric temperatures.
- Scatter incoming insolation thus cooling lower atmosphere.
- Act as condensation nuclei.

(iii) State three characteristics of the troposphere. **(3mks)**

- Has high humidity.
- Air is unstable.
- Atmospheric pressure falls with increase in height.
- Temperature decreases with increase in altitude.
- Has most weather elements.

(c) (i) Define the term eclipse. **(2mks)**

- An eclipse is a shadow cast when the sun rays are blocked from reaching either the moon or earth surface.

(ii) Using well labelled diagram describe how lunar eclipse occurs. (4mks)

- The earth comes between the sun and the moon in a straight line.
- The shadow of the earth is cast on the moon.

sun – earth – moon

Penumbra and umbra

(d) (i) Differentiate between rotation and revolution. **(2mks)**

- Rotation refers to the spinning of the earth on its own axis in anticlockwise direction once after 24 hours while revolution is the movement of the earth round the sun on its own orbit in anticlockwise direction once a year.

(ii) State four effects of revolution of the earth. **(4mks)**

- Causes solar eclipse.
- Causes change in position of overhead sun at different times of the year.
- Causes variations in length of day and night at different times of the year.
- Causes different seasons like summer, spring, autumn, and winter.

(iii) State four characteristics of continental crust. **(4mks)**

- Consists of aluminium and silica.
- Has light rocks.
- Low density of $2.7g/cm^3$.
- Most rocks are granitic.
- It is solid.