**GEOGRAPHY FORM ONE**

**END OF TERM TWO 2015**

**Marking scheme**

**NAME…………………………………………………….ADM NO……………….**

**INSTRUCTIONS : Answer all the questions**

1. **a) Trace the origin of the word Geography. (2 marks)**

-originates from two Greek words;geo and graphiein

-geo meaning the earth and graphien meaning to draw, to describe or to write about

-put together they form Geography meaning to draw,to describe or to write about the earth.

**b) Briefly describe the following sub-branches of Physical and Human Geography. (8 marks)**

**i)Climatology**

-involves the study of the atmospheric conditions that influence the climate of place

- it involves measurement, collection and analysis of information on weather conditions and study of climates.

-it studies precipitation, wind systems, atmospheric pressure, temperatures, cloud cover and amount of sunshine.

**ii)Geomorphology**

-it’s the study of landscapes

-it studies the structure and composition of the earth

-it deals with the formation of features on the earth’s surface and the interior

-it involves the study of internal land forming processes such as faulting, folding and vulcanicity and external landforming processes such as weathering, action of water and wind, glaciations e.t.c.

**iii) Social-cultural Geography**

-deals with distribution of people and their cultural activities

-it studies language groups found in any geographical unit,

their population characteristics and their movements

-it tries to understand the interactions of one community with one another and their environment.

**iv)Population Geography**

-deals with distribution of populations and their characteristics

-it tries to find out the number of people living in an area,their ages,gender and means of livelihood

-it seeks to understand increases and decreases in population through births,deaths and migrations.

-It looks at populations’ utilization of resources and provision of social services by the government.

**c) State five reasons why it is important to learn Geography in secondary schools. (5 marks)**

-one may develop a career in Geography e.g. a geography teacher,a game/forest ranger e.t.c. it is also a requirement for admission to particular career related courses.

-to gain skills and knowledge to contribute to local, regional and national development.

-it gives the skills of data collection, recording,analysis ,presentation and interpretation. It equips one for the research field. it also gives skills of observing, reading, analyzing and interpreting maps,photographs,charts,diagrams and statistical information.

-through fieldwork, Geography teaches one on how to manage time properly by drawing time schedules and adhering to them.

-it encourages international awareness, interaction and cooperation for it teaches independence among all people at all levels.

-It helps one to understand the origin of the earth and the solar system and also know about the internal structure of the earth.

-It creates awareness on environmental management and conservation.

-it’s a tool for good citizenship. It helps one to understand the environmental influences at work on different societies therefore helping one to understand other peoples ways of life as they interact with the environment.

**-2. a) Differentiate between the following terms(6 marks)**

**i) Meteors and Meteorites**

-meteors are heavenly bodies seen entering the earth’s atmosphere from space at great speed as shooting stars but they burn up and disappearWhile

-meteorites are meteors which do not burn up, they fall on the ground as large rocks forming creaters where they fall or break/crash into several pieces upon landing.

**ii) Aphelion and Perihelion**

-aphelion is the time of the year when the planets are far from the sun in their elliptical shaped orbits while perihelion is the time of the year when the planets are near the sun in their elliptical shaped orbits

**iii) Equinox and Solstice**

-equinox is the time of the year when the sun is overhead at mid-day along the equator on 21ST March and 23RD SeptemberWhile

-solstice is a time of the year when the sun is overhead at mid-day along the tropics on 21ST June and 22ND December.

**b)Give two reasons why Pluto is no longer termed as a planet. (2 marks)**

-its orbit is highly elliptical and overlaps the orbit of Neptune. planets should have orbits clear of all objects.

-it is very small in size and far away from the sun. it was revealed that there were other far-off objects bigger that it

**c) Describe the origin of the earth according to the following theories. (4 marks)**

**i) Passing Star Theory**

-it suggests that a star with greater gravitationl pull than the sun passed close by the sun drawing off materials in form of dust and gases.

-the materials split, cooled and condensed to form planets-the earth included, set in their orbits by the passing star.

**ii) Nebula Cloud Theory**

-it suggests that the solar system formed from a cloud or nebula of gas and dust.

-as the nebula rotated, it flattened into a disc with high concentration of materials at the centre.

-the outer sections of the disc formed the planets while the concentrated centre where temperatures were high formed the sun.

**d)Briefly explain any three proofs that the earth is spherical and not flat. (6 marks)**

-circumnavigation- you can sail or fly around the earth from a point towards one direction and come back to the same place where you begun.

-when a ship is approaching a port,an observer standing on a cliff will not see the whole ship until it is very close. He will first see the smoke, then gradually the other parts will appear.

-during the eclipse of moon, the shadow of the earth cast on the moon appears round. Only spherical bodies cast round shadows.

-the earth’s horizon is always circular or appears curved.

-since all other planets are spherical when observed from a telescope, it then follows that the earth is spherical because it is one of the planets.

-rotation of the earth-the sun appears earlier in the east than in the west. If the earth was flat all areas would receive sunshine at the same time.

e) Describe how the rotation of the earth causes day and night. (2 marks)

-during rotation one side of the earth faces the sun therefore experiencing( sunlight (day time) while the other side faces away from the sun experiencing darkness(night time)

-as the earth rotates, the side which was facing the sun gradually faces away from the sun and the side that was facing away from the sun gradually faces the sun therefore resulting into day and night.

**f) Mention any three effects of earth’s revolution. (3 marks)**

-changes in the position of the mid-day sun at different times of the year.

-the four seasons i.e. summer, autumn, winter and spring.

-varying lengths of day and night at different times of the year.

**g) If the local local time in Cairo 30 degrees East is 15:00 hours, what will be the time in New York 74 degrees West. (2 marks)**

-get the difference in degrees

30+74 =104 degrees

-get the difference in minutes by multiplying by 4

104x4 =416minutes

-convert the minutes into hours by dividing by 60

416/60 = 6hours 56minutes

-subtract the 6 hours 56 minutes from 15:00 hours

15:00 – 6 hours 56 minutes = 08:04 hours

**3a) How does weather differ from climate? (2 marks)**

-weather is the condition of the atmosphere of given place within a short time while

-climate is the average weather conditions of a place over a period of 30 – 35 years/ over a long period of time.

b**) Name the instruments used to measure the following elements of weather. (3 marks)**

i)Atmospheric pressure…………………barometer.

ii) Relative humidity………………hygrometer

ii) wind speed……………………anemometer

**c) Describe any two factors that influence the weather of a place. (4 marks)**

-Altitude and relief

Nearness to waterbody

Cloud cover

Aspect

Winds and airmasses

Latitude

Ocean currents

**d) Withthe aid of a well labeled diagram describe how relief rainfall is formed. (4 marks)**

clouds

…………………………………………………………………………………………..condensation level

/ / / / / / / / / / / /

rain / / / / / / / / Warm air rises

/ / / / / / / /

/ / / / // / /

Warm moist air is

Forced to rise Dry cool wind descends

Windward side leeward side

-warm moist air is forced to rise over a relief feature like a hill, an highland or a mountain.

-the air rises until it reaches condensation level where it cools and condenses to form clouds.

- when the clouds are heavy enough they fall as rain on the wind ward side of the mountain.

-on the leeward side, dry cool wind descends bringing little or no rainfall.

**e) Using well labeled diagram explain how land and sea breezes are formed. (6 marks)**

night

warm moist air rises

cool wind from land to sea

land(cool) sea(warm)

high pressure

Land breezes

-during the night the temperatures over land are cold but warmer over the water body.

-this creates a low pressure zone over the water body and a high preesure zone over land.

-warm air rises over the sea while cool air moves from land to sea to replace the rising air

-the cool air moving from land to sea at night is called land breeze.

Warm air rising over land

Cool air from sea to land

Land(warm) sea (cool)

Low pressure

Sea breeze

-during the day the temperatures over land are high but cooler over the water body.

-this creates a high pressure zone over the water body and a low pressure zone over land.

-warm air rises over the land while cool air moves from sea to land to replace the rising air

-the cool air moving from sea to land during the day is called sea breeze.

**f) Outline the three major types of winds. (3 marks)**

-prevailing winds e.g. trade winds,easterlies and westerlies

-monsoon winds

-local winds like land and sea breezes,anabatic and katabatic winds

**g) State the conditions necessary for the siting of a weather station. (4 marks)**

-it should be located in an open place for free flow of air

-the ground should be relatively flat to prevent flooding

-it should be away from buildings and other objects which can interfere with the measurement of the elements of weather

-it should be fenced to protect the equipment from theft or damage.

**h)What the significance of weather forecasting. (3 marks)**

-it helps determine –the farmers calendar

-suitable clothing

-suitable housing

-fishing habitats

-times for air and sea travels

-sporting activities

**i) Describe how temperature is measured. (3 marks)**

-temperature is measured using a minimum or a maximum thermometer or a six’s thermometer.

-when temperature rises the mercury in the mercury column expands rising in the column and pushing the metallic index upwards to record the maximum temperatures.

-when the temperatures decrease the mercury contracts leaving the metallic index at the point where it recorded the maximum temperature.

-the thermometer is adjusted by placing a magnet against the thermometers glass tube and moving it against the tube till it comes into contact with the mercury meniscus.

- when the temperatures decrease alcohol in the minimum thermometer column contracts and pull along the metallic index as it drops in level within the column.

- the metallic index will mark the level of the lowest temperature even when temperatures increase the metallic index does not move, the alcohol passes by its sides and leaves it indicating the level of the lowest temperature.

. once the temperature is read and recorded, the thermometer is adjusted by tilting the thermometer gently until the metallic index comes into contact with the alcohol meniscus.

- temperature is read and recorded twice in a day at 9: 00am and at 3:00 pm.

**4. a) Define statistics. (2 marks)**

-means facts and figures collected and arranged in a systematic manner with the aim of drawing valid and useful conclusions from them.

b**) State any four significance of statistics in Geography. (4 marks)**

-making comparisons and identifying spatial relationships between geographical features.e.g. comparing crop production from different regions, rainfall amounts, trade data in countries e.t.c

-predicting future trends such as changes in price levels and climatic conditions like drought and floods.

-for planning purposes-e.g. population data helps in planning for provision of social services.

-showing changes which have occurred over time e.g. population increase

-to know the exact measure or value of a phenomena-accuracy of measurement.

**c) i) Give any three advantages of observation as a method of data collection. (3 marks)**

- it saves time because one records what they see.

-the data recorded is reliable since one makes his/her own observations

-only relevant data is collected and recorded

--it gives first hand information

**ii) Outline any three disadvantages of questionnaires as a method of data collection. (3 marks)**

-it can only be administered to people who can read and write. It’s not a suitable method to collect data from people who cannot read and write.

-some respondents do not answer all the questions

**d) Mention any four methods of data recording. (4 marks)**

-photographing

-note taking

-video recording

-drawing diagrams and mapping

-tabulation

-tallying

-labeling samples

-filling-in questionnaires

**e) Use the following data to answer the questions that follow.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | J | F | M | A | M | J | J | A | S | O | N | D |
| Temp oC | 28 | 30 | 30 | 30 | 27 | 25 | 25 | 25 | 26 | 27 | 28 | 28 |
| Rainfall mm | 35 | 35 | 62 | 170 | 256 | 123 | 63 | 68 | 76 | 103 | 98 | 51 |

1. Calculate the mean annual temperature for this data. (2 marks)

-Add all the temperature values and divide the sum by twelve

28+30+30+30+27+25+25+25+26+27+28+28 = 329/12 =27.42

1. Calculate the total mean annual rainfall for this data. (2 marks)

-add all the values on rainfall

35+35+62+170+256+123+63+68+76+103+98+51

= 1140mm

1. On the graph paper provided draw a combined line and bar graph to represent the data above. (6 marks)