GOLDEN ELITE EXAMINTIONS 2020

312/2
GEOGRAPHY
PAPER 2
MARKING SCHEME

SECTION A

Question 1.

(a) An *environment* is the physical conditions surrounding an organism and which influence the behavior of that organism. ***(1x2 = 2 marks)***

(b) ***Effects of the following environmental hazards.***

(i) *Earthquakes*

✓ Leads to loss of lives
✓ Destroys property. (***1 x 2 = 2mks)***

(ii) *Nuclear wastes*

✓ Releases harmful radiations
✓ Causes loss of human and animal lives (***1 x 2 = 2mks***)

Question 2.

(a) ***Two species of hardwood forests grown in Kenya.***

✓ Meru oak , Elgon teak, Red Ceda, Mvule, Muringa , Mahogany, Ebony, Cape chestnut ***(2 x 1 = 2mks)***

(b) ***Three factors that favor the development of softwood forest in Kenya.***

✓ Cool climate enable trees to grow / flourish
✓ Highlands receive high amount of rainfall
✓ Rugged highlands discourage settlement and agriculture leaving forestry as the alternative
✓ High demand for softwood products encourage tree planting
✓ Deep soils favour forest growth
✓ Soft woods grow quite fast due to warm temperatures ***(Any 3, 3 x 1 = 3mks)***

Question 3.

(a) *Mining* refers to all attempts to attract valuable minerals either solid, liquid or gas from the earth's crust.

(b) ***Two factors that have influenced exploitation of minerals.***

✓ Minerals that are of high demand and economic value may be mined at a very high cost because they can be sold at high prices e.g. gold, petroleum e.t.c.
✓ Value of the mineral: Valuable minerals like gold are oftenly mined at high costs without loss of profits while less valuable minerals are not readily mined.
✓ The size of any mineral reserve must be big enough to justify the purchase and the use of expensive equipments needed for exploitation. Small deposits are hardly mined.
✓ Quality of mineral ore: High quality ores are economical to mine while low quality ores are rarely mined.
✓ Transport costs:Its more economical to exploit minerals near industrial centres
✓ Labour
✓ Method of extraction (**Any 4 points 4 x 1 = 4mks)**

Question 4

(a) ***Two limitations of using photographs.***

✓ Vertical aerial photographs are difficult to interpret without special instruments e.g. stereoscopes
✓ Photographs are expensive to produce

- ✓ Cameras need well focusing to avoid blurred images
- ✓ Objects that are far away from the camera may not be clear thus leading to wrong interpretation.

(***Any 2 points 2 x 1 = 2mks***)

(b) ***Two types of ground photographs.***

- ✓ Ground close-up photographs
- ✓ Ground general view photographs
- ✓ Ground oblique photographs (***Any two points 2 x 1 = 2mks)***

Question 5.

(a) ***Two exotic dairy cattle breeds reared in Kenya.***

- ✓ Guernsey , Friesian/Holstein, Jersey, Alderney , Aryshire, Brown Swiss (***Any 2 points 2 x 1 = 2mks)***

(b) ***Two physical factors which favour dairy farming in Denmark.***

- ✓ Gentle sloping landscape ideal for grazing
- ✓ Warm climate / sunny summer/ moderate temperatures 10-17^{0}C that allows outdoor grazing
- ✓ Cool climates ideal for pasture growth
- ✓ Moderate rainfall (500-1000mm) that supports growth of pasture / fodder crops
- ✓ Fertile boulder clay soils***(Any 2 points 2 x 1 = 2mks)***

SECTION B.

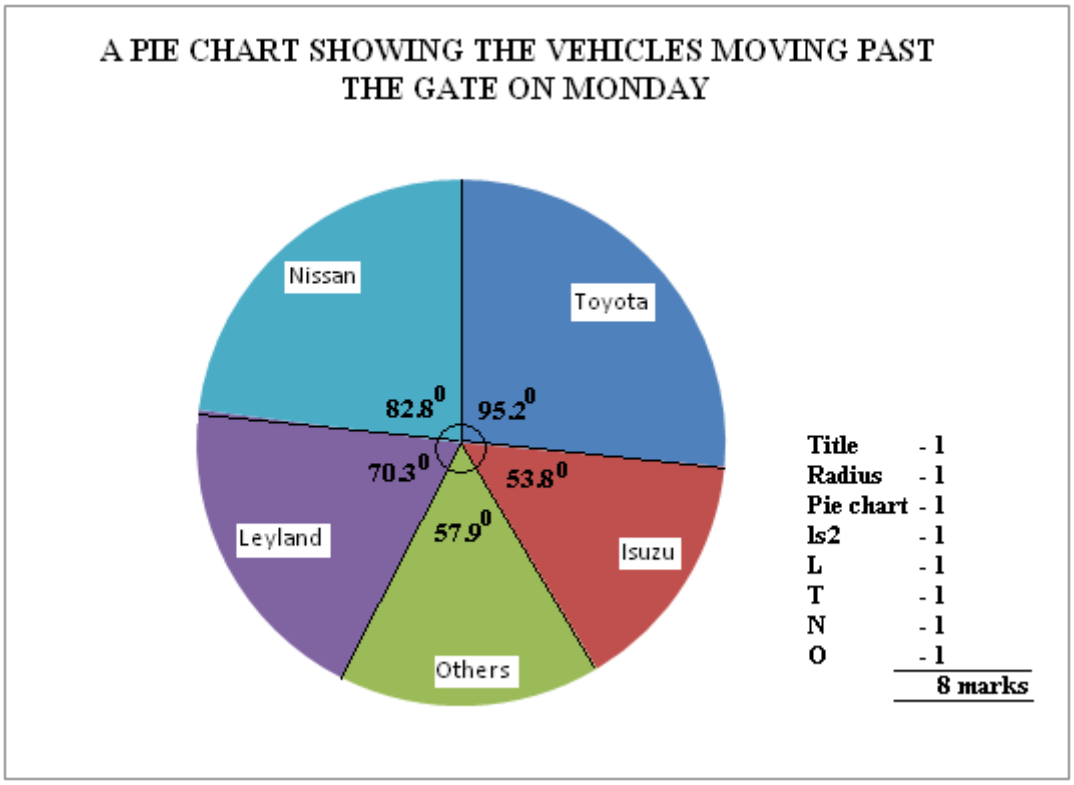
Question 6

(a) Grand total of vehicles moving past the gate on Monday.

- ✓ 1,740 vehicles ***(2marks)***

(b) Simple pie chart showing the type of vehicles moving past the gate on Monday (radius = 3cm)

- ✓ Isuzu – $\frac{260}{1740} \times 360 = 53.8^0$
- ✓ Leyland – $\frac{340}{1740} \times 360 = 70.3^0$
- ✓ Toyota – $\frac{460}{1740} \times 360 = 95.2^0$
- ✓ Nissan – $\frac{400}{1740} \times 360 = 82.8^0$
- ✓ Others – $\frac{280}{1740} \times 360 = 57.9^0$



(c) Merits of using a simple pie chart to represent the above data.

- ✓ It gives clear visual impression of individual components
- ✓ It can be used to represent a wide range of statistical data
- ✓ Easy to read and interpret
- ✓ Clearly shows individual amounts and clear comparison of individual quantities
- ✓ Its simple / easy to construct after angles have been obtained
- ✓ It gives a good visual impression. ***1 x 5 = 5mks***

(d) Other five ways used to present statistical date.

- ✓ Graphs
- ✓ Proportional circles
- ✓ Pie charts
- ✓ Statistical tables / charts
- ✓ Age-sex pyramids
- ✓ Dot maps ***(1 x 5 = 5mks)***

(e) ***Five methods of collecting statistical data***.

- ✓ Questionnaire
- ✓ Interviews
- ✓ Observation
- ✓ Sampling
- ✓ Taking measurements
- ✓ Experimentation
- ✓ Content analysis (secondary sources)
- ✓ Counting ***(Any 5 = 5 x 1 = 5mks)***

Question 7

(a) ***Types of natural forests in the world.***

- ✓ Tropical hardwood forests
- ✓ Temperate hardwood forests
- ✓ Coniferous forests ***(3 x 1 = 3mks)***

(b) ***Significance of forests and forest products in Kenya.***

- ✓ Preservation and conservation of environment
- ✓ Acts as water catchment areas
- ✓ Regulation of climate / create a micro climate
- ✓ Provide habitat for wildlife
- ✓ It's a source of income
- ✓ Acts as a raw material for industries e.g. paper industry
- ✓ It's a source of employment e.g. forest guards, officers
- ✓ It promotes tourism
- ✓ It provides charcoal
- ✓ Provides fodder for animals
- ✓ Forest provide nuts, fruits and dyes, ropes nets, honey.
- ✓ It's a hiding ground for military.
- ✓ Its an educational and research centre
- ✓ Provides wood and poles for building and construction
- ✓ It's a source of tree leaves which are fed to silkworm (***Any 5 explained 5 x 2 = 10mks)***

(c) ***How Kenya government has done to conserve and manage forest.***

- ✓ Carrying out public campaigns on the value of forests through mass media
- ✓ Carrying out research on suitability of soils and effects of pests and diseases
- ✓ It has established training institutions dealing with forestry e.g. KEFRI, Londiani forest training college.
- ✓ It has encouraged rotational felling of trees
- ✓ Infrastructural facilities like roads & mills have been provided by government.
- ✓ The government has introduced alternative sources of energy (fuel) e.g. solar energy, biogas to reduce overdependence on wood fuel
- ✓ It has enacted laws to govern the management of forests.
- ✓ It has employed forest guards and officials to curb destruction of forests
- ✓ N.G.O's like Green Belt Movement and UNEP provide seedlings for forests.
- ✓ It has created forest reserves
- ✓ It has encouraged agro-forestry
- ✓ Extensive afforestation programme is underway***(Any 5 points 5 x 1 = 5mks)***

(d) (i) ***5 factors influencing the distribution of natural forests.***

- ✓ Climate
- ✓ Altitude
- ✓ Soils
- ✓ Human activities
- ✓ Aspects & Slope.***(5 x 1 = 5mks)***

(ii) The ***management of forests*** refers to the effective planning and control of forests and forests resources.

(1 x 2 = 2mks)

Question 8

(a) ***A mineral*** is a naturally occurring, crystalline, inorganic substance with a definite chemical composition and physical properties.***(2 x 1 = 2mks)***

(b) ***Forms in which minerals occur.***

- ✓ Veins and lodes; Minerals deposited in crystalline form in crack / crevice
- ✓ Beds and seams; Coal and other minerals may occur in bed / layers as a result of deposition, accumulation and concentration in horizontal layers of earth crust.
- ✓ Weathering products; Like Bauxite is formed by deep weathering of a variety of rocks due to alternating wet and dry seasons
- ✓ Alluvial / placer deposits;some minerals like gold, tin and platinum occur as alluvial deposits within sand, clay and gravels in the river course. ***(4 x 2 = 8mks)***

(c) ***Significance of minerals in Kenya.***

- ✓ Rocks create beautiful sceneries which attract tourists hence earn Kenya foreign exchange.
- ✓ Rocks act as water reservoirs and store underground water
- ✓ Rocks provide parent material for formation of rich soils for agriculture
- ✓ Rocks are used in building and construction industry
- ✓ Rocks and mineral are sources of income
- ✓ Rocks provide main record of past environment
- ✓ Rocks influence landscape features
- ✓ Exploitation of rocks and minerals has led to dereliction (***Any 5 points 5 x 1 = 5mks)***

(d) (i) ***Preparations made before the study.***

- ✓ Discussing / studying the topic of study
- ✓ Seek permission from authorities
- ✓ Collect required materials
- ✓ Conduct a reconnaissance
- ✓ Prepare questionnaires
- ✓ Divide into groups
- ✓ Prepare a working schedule***(Any 3 pts (3 x 1 = 3mks)***

(ii) ***Problems encountered during the study.***

- ✓ Fatigue
- ✓ Uncooperative respondents
- ✓ Financial constraints
- ✓ Language barrier
- ✓ Unfavourable weather condition like floods
- ✓ Accidents in the field
- ✓ Inaccessibility
- ✓ Thick vegetation that's difficulty to penetrate ***(Any 2 points = 2mks)***

(c) Importance of studying geography through field work.

- ✓ It gives first hand information
- ✓ It breaks classroom monotony
- ✓ Teaches skills e.g. observation skills
- ✓ Enhances learning in the real life situation
- ✓ Encourages critical thinking
- ✓ Enables one to understand his / her environment***(Any 5 points 5 x 1 = 5mks)***

Question 9

(a) (i) ***Social factors which influences agriculture .***

- ✓ Technology , religion, gender roles, foreign influence ***(Any 3 = 3mks)***

(ii) Types of maize grown in Kenya.

- ✓ Dent corn
- ✓ Sweet corn ***(2 x 1 = 2mks)***

(b) (i) ***Areas in Kenya where maize is commercially grown.***

- ✓ Eldoret
- ✓ Kitale
- ✓ Nakuru ***(any 2 x 1 = 2mks)***

(ii) ***Stages involved in the industrial processing of maize.***

- ✓ Maize grains are weighed and then put on trays
- ✓ Any undesirable grains and broken cobs are removed
- ✓ Maize is then sieved to remove any impurities like soil / rock particles
- ✓ The maize is then passed through a milling machine which grinds it into flour
- ✓ The flour is then packed into small packets and sacks according to the desired weight
- ✓ Packets are sized 1 kg, 2 kg, and 10kg while sacks weigh more than 50kg

(Any 4 pts 4 x 1 = 4mks)

(c) ***Problems facing maize farmers in Kenya.***

- ✓ Pests e.g. stalkborers, army worms, weevils
- ✓ Diseases e.g. white leaf blight
- ✓ Adverse weather conditions like drought , floods
- ✓ Parasitic plants and weeds
- ✓ Price fluctuation
- ✓ Poor quality seeds sold by unscrupulous traders
- ✓ Inadequate storage facilities
- ✓ Expensive certified seeds
- ✓ Expensive farm inputs ***(Any 4 pts 4 x 1 = 4mks)***

(d) (i) ***Ways through which the Kenya government assists small scale maize farmers.***

- ✓ Arrange buying of maize through the cereal boards
- ✓ Conduct research to establish areas best suited for maize growing and research on diseases
- ✓ Organize demonstrations firms and field days to update farmers on current methods
- ✓ Employs extension workers who visit farmers and advise them on matters related to maize growing
- ✓ Encourage farmers to set up co-operatives to enable them pool resources together
- ✓ Improves feeder roads to ensure smooth transport of maize produce

(Any 3 x 2 = 6mks)

(ii) ***Uses of maize.***

- ✓ Staple food
- ✓ Stalk, leaves and other remains from maize cobs are used to feed domestic animals
- ✓ Stalks and cobs are used to provide domestic fuel
- ✓ Stalks and cobs are used as organic manure
- ✓ Grains are used in the making of corn oil.***(Any 4 x 1 = 4mks)***

Question 10

(a) (i) ***Natural vegetation*** is the plant cover that exist naturally in an area without the interference of any external modifying influence e.g. man.***(1mark)***

(ii) ***Topographical factors influencing distribution of vegetation***.

- ✓ Relief
- ✓ Aspect
- ✓ Drainage***(Any 2 well state points 2 x 1 = 2mks)***

(b) (i)**Objectives for the study.**

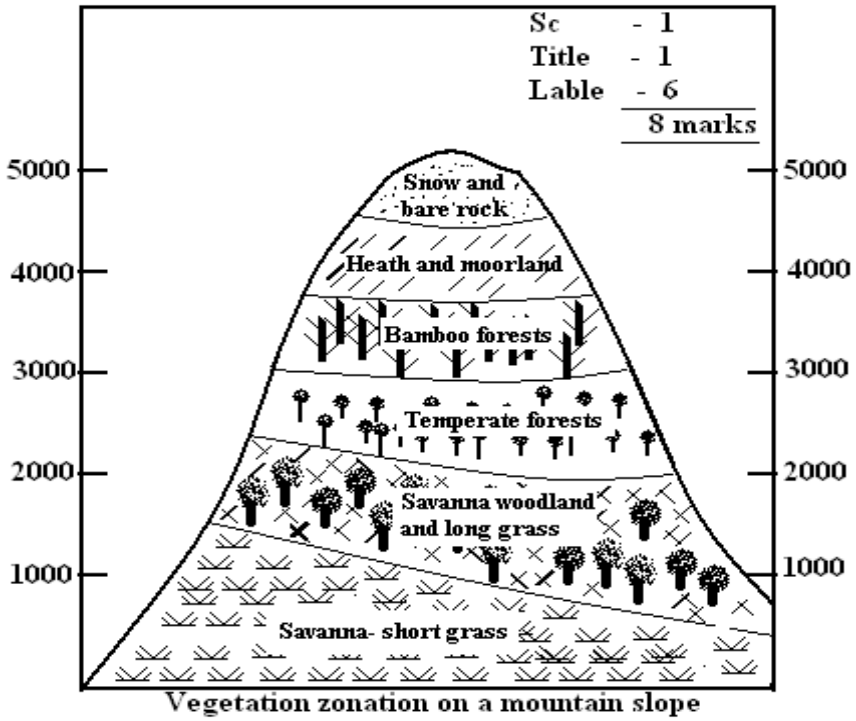
- ✓ To find out the type of vegetation around the school
- ✓ To determine the use of the vegetation around the school.

(Any other relevant point 2 x 1 =2mks)

(ii)***How would you record the findings in your study?***

- ✓ Note taking.
- ✓ Sketching.
- ✓ Tabulating.
- ✓ Phototaking. (***Any other relevant point 4 x 1 = 4 marks)***

(c) ***Well labeled diagram showing vegetation zonation on a mountain slope.***



Vegetation zonation on a mountain slope

(d) (i) ***Adaptation features of tropical desert vegetation.***

- ✓ They have succulent stems
- ✓ Leaves are reduced to thorns / spikes
- ✓ They have long tap roots
- ✓ Some plants complete their life cycle within a short period
- ✓ They shed their leaves during dry season

(Any other relevant point 5 x 1 = 5mks)

(ii) ***Two economic importance of desert vegetation***.

- ✓ The vegetation adds beauty to the landscape
- ✓ The vegetation prevents soil erosion by binding the soil together
- ✓ The vegetation acts as a habitat for wildlife
- ✓ Some plants have medicinal value
- ✓ Some desert vegetation are used in building and construction
- ✓ Some plants are consumed as food by people
- ✓ Fibrous vegetation like sisal are used to make ropes
- ✓ The vegetation is a source of fuel either as firewood or charcoal

(Any 2 points 2 x 1 = 2mks)