**MARKING SCHEME SENIOR 5 2019**

**COMPREHENSIVE ASSESSMENT EXAM OF END OF YEAR GEOGRAPHY**

**SECTION A**: **These sections (50marks)**

1. A ship sails from A to B on a bearing of 060°. On what bearing must it sail if it is to return from B to A? **(2marks)**

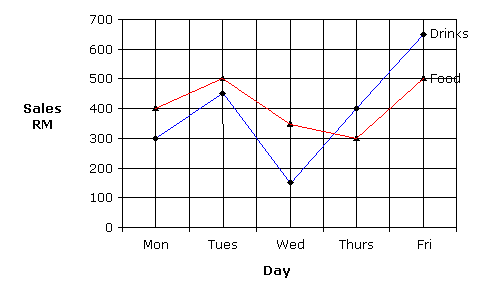
* Draw the diagram shows the journey from A to B. Extending the line of the journey allows an angle of 60° to be marked at B. Bearing of A from B=60°+180°+°=240°and this is called a back bearing or reciprocal bearing.

2.The table shows the daily sales in Serena Hotel of different categories of items for five days.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Day | Mon | Tues | Wed | Thurs | Fri |
| Drinks | 300 | 450 | 150 | 400 | 650 |
| Food | 400 | 500 | 350 | 300 | 500 |

a) Construct a line graph for the frequency table. **(2marks)**

b) On what days were the sales for drinks better than the sales for food? **(2marks)**



* Sales for drinks were better than sales for food on Thursday and Friday

3. Describe three characteristics of factory farming**.(3marks)**

* Large numbers of animals are usually held together indoors in closed confined pens and sheds.
* There are physical restraints to control unnecessary movement of animals.
* Under factory farming, huge amount of antibiotics and pesticides are used to fight the spreading of diseases and bacteria.
* Factory farms are highly standardized for efficiency.
* Sigle type of animals is reared.
* Feed crops are created highly unified through gene manipulation to help increased yielding to ensure consistent production every year.

4. Describe the characteristics of the core.**(3marks)**

* Solid to semi molten state.
* Radius of about 3,470 km
* Average density of 12.0 g/cc.
* Divided into inner core and outer core.
* Temperatures between 40000c to 45000c.
* Dominant mineral is iron

5.Describe the solar system**. (3marks)**

* It is the sun, planets and other celestrial bodies.
* They are held together by the force of gravity.
* The celestrial bodies revolve / orbit the sun.
* Most celestrial bodies are spherical in shape.

6. Briefly describe climatic characteristics of tropical desert climate**. (3marks)**

* Hot deserts have the highest temperatures recorded.
* They have cloudless skies and little or no water vapour.
* The daily ranges of temperature vary between 22° to 28° C. In rare cases, the diurnal range may be as high as 41.7° C.
* The annual average precipitation is less than 250 mm.
* Relative humidity is high.
* There is little plant cover.

7. (a)What evidence did Alfred Wegener used to support his theory of continental drift? **(5marks)**

* Arthur Holmes later proposed mantle convection for that mechanism. The idea of continental drift has since been subsumed by the theory of plate tectonics, which explains that the continents move by riding on plates of the Earth's lithosphere.
* Evidence of glaciers is present in regions with warm, dry climates. This indicates that continents that are close to the equator today were once closer to the South Pole in the distant past.
* Matching mountain ranges in North America, Africa, and South America.
* Matching early mammal fossils found in South America, and Africa. Fossils in South America and Africa are found in rocks of identical age and type.
* Matching plant fossils in South America, Africa, India, Australia, and Antarctica.
* Matching reptile fossils have been found in South America and Africa.

8. Explain the characteristics of deciduous forests. **(3marks)**

* Trees shed their leaves in the dry season to conserve water.
* Deciduous forests are characterized by existence of epiphytes, which include mosses.
* Trees like sandalwood, teak, ebony, bamboo, etc. are the common trees found here.
* Deciduous forests have a short growing gestation.
* Deciduous forests grow in pure stands.
* Deciduous forests require low sunshine supply.
* They contain hard wood tree species such as maple, oak, beech and hazel.

# 9.What are the reasons why population growth in developing countries is forecast to exceed population growth in developed countries?(4marks)

* The developed countries are often symbols of modernization and greater levels of education among general society.
* Western countries often characterized as a Western style of thinking, combined with emphasis on education, results in having children at later ages and later marriages because many people decide to work towards becoming financially stable before trying to support a family.
* Population growth in developing countries will be greater due to lack of education for girls and women, and the lack of information and access to birth control.
* In some countries the lack of education for females is enforced due to old traditions or fear of educated women. In other countries the resources are not available.
* Information about birth control has not reached some of the most remote places - mostly in Africa.
* Access to birth control is even less common and unplanned pregnancies occur unchecked.
* The biggest problem with a huge human population is the ever increasing demand on the world's resources for food, water, and shelter for everyone.

10. Why is a chain of extinct volcanoes often found trailing away from a hotspot? **(3marks)**

* Hot spots cause mantle to melt. The magma rises up and breaks through the overlying plate. The hotspot stays in one place, but the tectonic plate above it moves. As the plate moves, so does the volcano.  The volcano that moved away from the hot spot becomes extinct, and another one forms right above the hot spot. This process continues, forming a line of extinct volcanoes.

11. (a) Define the term counter- urbanization. **(2marks)**

* Counter- urbanization is the movement of people out of cities, to the surrounding areas.

(b)Give and explain there are four main reasons for counter -urbanization. **(4marks)**

* The increase in car ownership over the last 40 years means people are more mobile. This has led to an increase in commuting. Also, the growth in information technology (e-mail, faxes and video conferencing) means more people can work from home.
* Urban areas are becoming increasingly unpleasant places to live as a result of pollution, crime and traffic congestion.
* More people tend to move to rural areas, when they retire to lead a peaceful life.
* New business parks on the edge of the cities (satellite towns) mean people no longer have to travel to the city centre. People now prefer to live on the outskirts of the city to be near where they work.

12. Explain the ways in which faulting influences drainage systems.**(5marks)**

* Vertical faulting across rivers cause waterfalls.
* Rift faulting results in the formation of lakes/basin drainage / centripetal drainage patterns.
* Some rivers flow along fault lines, forming fault-guided drainage pattern.
* Land uplift may cause reversal in direction of rivers
* Rivers may disappear into faults.
* Fault scarps expose impermeable rock layers to the surface resulting in formation of springs.

13. Explain four factors that have led to a decline of the natural grassland in Africa**.** (**4marks)**

* Frequent outbreak of bush fires.
* Human activities – due to increasing population encroachment on grasslands is a common feature replacing them with farms and settlements.
* Frequent droughts destroy grass degenerating vegetation semi-arid type.
* Domestic and wild animals overgraze causing stunted growth of grasses while clearing some of the grass.
* Pests such as army worms locusts destroying grass.

**SECTION B: Attempt all questions**. **(50marks)**

# 14. (a)What is an Anticyclone?(2marks)

* An anticyclone is a large scale circulation of winds around a central point of high atmospheric pressure.

(b)Explain the weather characteristics associated with anticyclone.**(8marks)**

* During the winter seasons, anticyclones are associated with light cloudy, cold frosty and clear day weather conditions.
* During summer, anticyclones tend to influence of the occurrence of a warm dry and sunny weather.
* Clouds in anticyclones don't give rise to rain summer.
* Clouds in anticyclones tend influence the formation of clouds and fog.
* Fog and smog formed during an anticyclone are associated with temperature inversion
* Hazy conditions are experienced due to the blowing of cold anticyclones over the Sahara towards the low latitudes.
* Anticyclones are associated with descending air which is warm adiabatically and dried there by leading to stability in the atmosphere.
* Anticyclones characteristics by prolonged drought before rains are received.
* At night anticyclones are associated with radiation surface cooling which leads to development of fog.

15. Writes shorts notes on following:

(i) Truck farming. **(2marks)**

* Truck farming is a horticultural practice of growing one or more vegetable crops on a large scale for shipment to distant markets. It is usually less intensive and diversified than market gardening. At first this type of farming depended entirely on local or regional markets. The common crops grown include apples, asparagus, cabbages, Irish potatoes, string beans, cherries, and lettuce.

(ii)Market gardening. **(2marks)**

* A market garden is a form of farming that is relatively small-scale specializing in cultivation of fruits, vegetables and flowers as cash crops, frequently sold directly to nearby consumers and restaurants. This form of farming is an example of intensive commercial farming. This so because it involves growing of crops on small plots of land which are scientifically managed.

### [(b). Explain the advantages and disadvantages of market gardening for the economy of Netherland. (6marks)](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjOlLDjvt7jAhXtz4UKHc1YBrUQFjAAegQIBRAB&url=https%3A%2F%2Fwww.kenyaplex.com%2Fquestions%2F13889-what-is-the-significance-of-market-gardening-for-the-economy-of-kenya.aspx&usg=AOvVaw0MrHdawiPtgTjbSQ2AqMxq)

* This farming practice provide large profits to the producer, investors or the owners.
* It does not require large tract of land.
* Farmers have more opportunities to obtain farming skills such as application of fertilizers, controlling pests, seed selection and irrigation and nursery management
* Under this farming, the Government gets much revenue from taxes. •Market gardening creates employment opportunities since most of the activities are labour intensive.
* It develops infrastructure since its products are sold while still fresh to avoid risk of perish ability however it has disadvantages
* It puts traditional farmers out of business. Since intensive farming allows the production of much greater volumes of fruit off a much smaller area of land, traditional farmers are unable to compete.
* Sometimes it is very harmful to the environment due to the use of highly concentrated liquid fertilizers and a lot of deadly chemicals.
* It encourages use of marginal lands near urban centres which promotes environmental degradation and ecological problems.
* Fluctuation in market prices of the crops grown hence affecting the income of the farmers

16. Assess the significance of warping on drainage system of East Africa. **(10marks)**

* Upward warping areas receive heavy rainfall on the windward side favouring crop cultivation, while the downward side receives little or no rainfall favoring livestock farming under pastoralism.
* The water of river flowing from the warped areas is clean and may be used by human beings in various activities.
* The upward areas may be used for lumbering activities.
* During warping, some valuable minerals are brought closer to the earth‘s surface. This promotes mining activities.
* Some features resulting from warping attract tourists which bring foreign exchange.
* Basin lakes stimulate various activities like fishing, water transport and provision of water for irrigation.
* Hills formed under warping stimulate the development of communication by favouring the construction of communication masts, ***whoever it has negative***
* The destructive Foehn winds are common in warped mountain areas.
* Warped areas are barriers to the development of transport and communication, where they lead to high cost of construction of roads.
* The steep and rugged slopes of warped mountains discourage settlements, agriculture and livestock keeping.
* During warping, some valuable minerals can be taken deeper into the ground and become hard to exploit.

17.With reference to Sweden, explain any five methods of forests exploitation. **(10marks)**

(i)Preparation: the first stage is to survey the area to be exploited. It is important to find out where the best stands of timber are, or where the most valuable trees are most numerous, so that the best parts of the forest can be used.

(ii)Felling: This is the second step in the lumbering process or forest exploitation for lumber. It involves cutting down of trees by the lumbermen. Therefore, the selected and marked trees in step one, are then cut down. This means that only the marked trees are felled down and leaving the young ones to grow to maturity.

(iii)Bucking: This is the third stage in the forest exploitation/lumbering. This involves cutting a felled and lumbered tree into logs of varying lengths. This carried out to facilitate easy transportation of logs to the collection centers and at the same time to make it easy to extract lumber from them. The branches of felled tree are trimmed off. The parts of the tree that may not be straight or are cracked are chopped off too.

(iv)Yarding or dragging: This is the fourth stage of lumbering process. It involves removing logs or the trimmed trunks from the inner part of the forest to the collecting centres ready for transportation to the extraction points (saw mill areas) also called booming ground. Sometime these logs are dragged to the banks of rivers where they are dropped into the river to float to the collection centers.

(v)Loading process: This stage involves loading the logs onto the heavy trucks to be transported to the booming centers. At the booming place lumber and other assorted lumber products are extracted from the logs.

(vi)Barging: This process includes taking logs to the booming grounds using heavy trucks. It is commonly practiced using water transport where logs are floated on water and float towards the collection centers. The logs of less density are the ones that floated on water to flow downstream up to the collection points.

(vii)Booming ground (Extraction of lumber/other products): This is the final stage that involves extraction of lumber and other products from the logs. Here, heavy and high technology are used. Machines are used to extract lumber from the logs. The varying products produced are then packed and readied for marketing or exportation.

18. Examine the economic significance of fishing industry in the world.**(10marks)**

* Source of government revenue, fishing industry has enabled various countries to earn revenue through taxation and payment of company registration fee collections. This is used by those countries to develop their infrastructure and meeting the social needs of the society.
* Provision of foreign exchange, the fish and fish products are exported to other countries. This results into earning of foreign exchange. For example, USA exports fish and fish products to France, China and many other countries.
* Facilitates infrastructural development, fishing industry has come along with the development of various infrastructures such as roads, ware houses, railways and water transport which support general development of the country.
* Urbanization: Several urban centers have developed because of fishing operations in various parts of the world, these urban areas have positive contribution to the development of the economies. Cities such as Shanghai, Seattle, Baltimore, Osaka and Yokohama.
* Generation of employment opportunities, thousands of people are directly or indirectly employed by fishing industry.
* Supports economic diversification, the occurrence of fishing industry has enabled various countries to diversify their economies. This has a handful of additional advantages.
* Sustainable utilization of resources, fish is part of the natural resources provided by nature, therefore, to be able to utilize fully the available resources especially those related with water bodies.
* Development of industries, there are several industries that have come up because of fishing, these include ship building, those that produce fishing nets and other marine related equipment, these too have positive role to play in the entire development of the economy.
* Provision of market for other products, fishing industry provides a ready and steady market for the products produced by other industries.
* Research and study, fishing industries has provided excellent ground for research and education.
* Promotion of better international relations, fishing industry has enabled the countries to forge better international cooperation. For example, Japan and Germany are allies because of the interdependence that has come up as because of Germany imports fish from Japan.
* Acquisition of skills, fishing has become a center of skills acquisition. The fishermen have become experts in marine technologies and understanding marine life and weather conditions.
* Source of proteins, fish and fish products are part of the meals that many families, worldwide put on their table each day. Fish provides proteins to mankind and such has enabled many to live a healthy life.
* Medicinal contribution, fish is used in production of medicine for human beings. For example, the cod liver oil and insulin are used as medicine.
* Supports tourism, many tourists come to various fishing spots to see the types of fish, for example how the whales look like or tracking their long journeys.
* Source of raw materials for other industries, there are several products that are attained from fishing industry that work as raw materials in other industries. The fish bones and inferior fish are used in manufacturing of fertilizers and animal feeds to be utilized by the agricultural sector.