Environmental Science Final

Student’s Name

Institution

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**Q1a**. The source of Co2 and No2 are mostly combustion. A lot of combustion being registered in the morning is because of vehicles. This is because in the morning hours many vehicles are out and people are heading to different locations for work. Vehicles produced a lot of gases, followed by the mining sectors but in this case a lot gases are produced by vehicles as a result of combustion.

**b**. the lose curved occurred during the day. It is because the number of vehicles on the road has reduced and therefore, the combustion level hence low emission of gases NO2, and CO2.

**C**. the ozone curved is because of high and low temperature. It is evident that when the temperature is high especially during high usage of roads the ozone level melts.

d. the decrease trend of NO2 is due to introduction of green energy policy. The United States stated to use clean energy in most sectors. The urban air pollution reduced overtime due to change in policy to use clean energy instead of traditional diesel which pollutes the environment. The introduction of electric cars and move of industries away from urban setup also contributed to the decline of pollution. The policy formulation against the greenhouse gases and the introduction of other clear energy could be the cause of decline of N02 level.

**Q2**. a September, May and July.

b. March, September and May

c. they most takes place during the same month. However, the Town Brook is more intense compared to Charles River.

d. In 2018, the discharge at Town Brook and discharge high in Town Brook was very low and few but in 2019, the discharge has increased and high. This could me the increase of temperature between 2018 and 2019 in the two regions.

e. The Charles River appears to be more impermeable because of fewer occurrences. Looking at the two watersheds, it is evident that the Charles River delayed in occurrence and this could mean that it has high resistance compared to Town Brook in Quincy. However, there is different in the way discharge takes place. The width is high in 2019 in both cases and these could mean a change in certain environmental factors.

**Q3**a. Chesapeake Bay Watershed is not healthy. The bay is 200 miles and therefore, one of the longest watersheds. The feet are about 21 feet.

**b**. the healthy and clean watershed would be worth $129.7 billion. The value is based on the economic activities taking place using the water and the number of households which depend on the watershed as well.

**c**. Chesapeake Bay Watershed provides water for filter for both domestic and industrial use, agricultural activities and sea food production and enhancing of the values of properties.

Q4a. The chances of increase hurricane are caused by increased human activities. The hurricane is caused by the decrease of temperature between the two poles. However, the decrease of temperature is caused by the emission of gases into the atmosphere and therefore, the use of hydro and other elements which release a lot of gases are the cause of decrease of temperature and the hurricane.

b. The tippling element on the earth and industrial emission are some of the causes of global warming. The threshold is when the temperature reaches them. The rapid end of ice age, mega drought and rapid warming are some of the thresholds.

C. The arctic is melting faster than scientist predict due to increased temperature on the North Pole. The increased temperature is due to global warming.

d. Another example of feedback is change of rain pattern in some regions, decline of the level of ocean, seas and other water bodies.

e. Cloud plays an essential role in regulation of temperature of the earth. It can either warm or cool the temperature of the earth therefore; the cloud can play both negative and positive feedback hoop.

**Q5a.** The sparrow cannot survive for more than10 years understand the Biosphere condition. The survival rate of sparrow depends on the environmental factors such as temperature. The sparrows survived on woods and greens and with high rate of biodegradation it would be difficult for the sparrow to survive for more than ten years in a location.

b. Rhino cannot survive in a Biosphere 2 for more than 10 years. Rhino is herbivorous and needs a lot of water for survive. In a biosphere there is a lot of reduction of things like water, trees, plants and others and therefore, the rhino would not live for long.

**c**. the excess CO2 is used by plants. CO2 is used by plants and for growth and photosynthesis. It is the reason people are advised to plan several trees as measure to reduce the emission of gases.

**Q.6a**. Approximation of waste leaving the house requires proper understating of the type of groceries and whether is raw or dry. Otherwise the waste leaving house would be less than 100 pounds. It is evident that part of the groceries would be used for consumption for the production of energy. The waste cannot add up to 100 pounds. The groceries bought and brought in the house were used for daily consumption for the energy. Not everything from the grocery is waste and therefore, the waste was less than 100 pounds.

**b.** If a low flow (1.6 gallon/min) showerhead is installed in the house instead of (3.8 gallon/min), it is likely that the water will be saved for 15 mins shower and 33 gallon will be saved.

**C.** 24.508 196 721 gallon [U.S.] of automotive gasoline. The distance which can be covered with the gallon of gasoline depends with the type of car or vehicle. The high fuel consumption cars would cover approximately 200kms. The low consumption cars would cover more than 420 kms with 24.5 gallon of gasoline.

**Q7**a. The concentrated solar power generate work through the use of mirror to covert energy to heat, which is used to drive turbine that is used to generate electrical power. The technology applied on the process uses the sunlight to generate heat, which is stored and used to generate electricity during the cloudy period. The process of involve the use of sunlight to generate heat for industrial and domestic use. The energy use for generating power comes from sunlight and reflected by mirror to be used to drive turbine. The energy therefore, comes from the sunlight. Electricity is generated through the use of energy to drive the turbine. The electricity is produced from the heat energy when fueled by combustion and therefore, the electricity is generated from energy.

**b**. The advantages of using concentrated solar panel are high efficiency, an inherent thermal storage which allows the generation of electricity during cloudy period. It has lower investment cost compared to other types of energies. However some of its limitations are; it could destroy wildlife inhabitant and promotes deforestations. It is also produce some potent greenhouse gases, which can result to global warming.

**C**. The potential impact of the use of concentrated solar power is land use and the loss of habitat. The use of solar energy can reduce the emission of greenhouse gases into the atmosphere and this could lead to a decline in temperature.