

Suggested Answers to 2018 O level Humanities (Geography) 2272/ Paper 2

Section A

- 1(a) 22.8%
- 1(b)i) Does age affect the distance visitors walked in a day in Yosemite National Park?
- 1(b)ii) The information can be presented using a comparative bar graph. The x-axis would represent the distance walked (km) while the y-axis would represent the number of individuals who walked that distance. The bars would be indicated using different patterns to represent the different age groups, and a legend would be used to differentiate the different patterns.
- 1(b)iii) With reference to Fig. 1, the information in Table 2 could be gathered at the start of trail where Nature Centre is at 1220m. The reason for this is because while it is the start of the trail, it is also the exit of the trail as it seems like there is no other exits. As such, all visitors would have to exit via Nature Centre. These visitors would have completed hiking and therefore, have the adequate data that students want to collect. They will be able to give a gauge of the landmarks they have reached within a certain time.
- 1(c) Interviewees may find it difficult to pinpoint the distance they have walked. Hence, students could probably use the landmarks to help interviewees accurately identify where they have reached in a day's time.

In addition, the data collection was only conducted over weekdays. As working adults and students may be busy working or studying during the weekend, the data of these populations are not accurately represented. As such, data collection could take place over weekends as well.

Lastly, data collection was done only in the afternoon and as such, it only captures data of respondents who returned from the trail at this time. As such, data collection could take place over a long span of time, covering evenings as well.

- 2(a) The higher the height, the greater the amount of rainfall.
- 2(b)(ii) In general, as height increases, rainfall increases as well. When height was 1220m, rainfall was 10.1mm and when height increased to 2450m, rainfall increased to 23.4mm. However, at 1880m, rainfall is at 12.9mm which is lower than at 1780m where rainfall was 13.7mm.
- 2(b)(iii) The students could use Fig. 2 to figure out the locations of the various points that they are looking for. In addition, they can use a relief map to reference where they are at to accurately pinpoint the height of where they are at. They can triangulate it with the spot height that is provided in Fig. 2. In addition, to further their accuracy, students may also use a GPS to further verify the reliability of the relief map and Fig. 2.
- 2(c) To ensure accuracy of rainfall data, students should read the rain gauge off the scale at eye level in order to avoid parallax error. They could also ensure that rain gauge is properly dried prior to the collection of rainfall on a daily basis. Students can also position the rain gauge on grass patches instead of hard concrete floors. They should also prevent the gauge from falling over due to winds by sinking it into the ground. They should also place the gauge in an open area preventing interception of rain.

Section B

3(a) The closer one is to the sea, the smaller annual temperature range would be. This is because these areas experience the maritime effect. Due to the difference in heating capacity of land and sea, the sea heats up slower than land in summer. As such, these areas receive the moderating influence of the sea, causing the land areas to be cooler in summer. In winter, the heat loss from sea takes place slower than land. Hence, areas over the sea is warmer, which influences the areas near the sea to experience warmer, milder winters. As such, places near the sea experience smaller annual temperature range. The reverse is true for inland areas, as they do not receive the moderating influence of the sea, hence resulting in hotter summers and colder winters – explaining the larger annual temperature range.

3(b) Online booking of tours and tickets is one of the reasons for growth of global tourism, however it is not the main reason. Developments in information technology have made information more readily available and accessible. This ease of access to information has helped promote air travel and global tourism. For instance, online booking and research enables travellers to buy their own ticket without going through travel agents. This gives tourists more options and control, and better access of information at their destination, including places to see, social etiquettes to observe, and train timetables. Some examples of online booking of tours and tickets can be done through Skyscanner and Tripadvisor. It also allows travellers to do their own research and find out more about their destination. As such, online booking of tours and tickets have given tourists more autonomy over their travels, while at the same time creating greater convenience and hence leading to the growth of tourism.

Other reasons such as better and more affordable transport has also led to the growth of tourism. The rise of budget airlines, in particular, has made air transport affordable. Budget airlines have rapidly expanded within Europe, north and South America and Southeast Asia since the 1980s. Such airlines are cheaper and has enabled more people to travel internationally and more frequently. Examples of budget includes Jetstar Asia and Tiger Airways. As these air fares are cheaper, more people are able to afford it hence leading to a greater demand in travel, resulting in the growth of global tourism.

In addition, changing lifestyle is another reason for growth of global tourism. The ppace of life today is much faster and many people spend long hours at work. Therefor travelling has become a way for people to relax and take a break from their fast-paced lifestyles at work. Travelling is also a way for retirees to spend the remainder of their healthy years productively. Retirees are major contributors to the growth of tourism. For example, in Australia there is a group of retirees called grey nomads. Grey nomads are people who spend much time travelling in mobile homes or vehicles with four-wheel drive to explore remote parts of the country. As such, the proliferation of

such lifestyle has made travelling attractive to individuals thus resulting in the growth of global tourism.

In conclusion, I do not agree that online booking of tours and tickets is the main reason for growth in tourism. This is because while it has made booking of tours and tickets more convenient, it is not as attractive as cheaper air tickets made possible by the advancement of budget airlines. Should air ticket prices remain the same as before, even with the ease of booking, the growth of tourism would not be as strong as it is. In addition, changing lifestyle also plays a huge role in individual's motivation to travel, though not as much as the growth of budget airlines as even if individuals have the motivation to travel but are unable to afford it, they would still be unable to travel. As such, I believe that the growth of budget airlines is the main reason for growth in tourism.

- 4(a) Recession is a period of general slowdown in economic activities. In a recession, many people cut back their spending due to the loss of jobs which results in a loss of income. As such, people's disposable income decreases and are more likely to spend on necessities rather than luxuries such as travelling. As more people are less likely to travel, it leads to a decline in global tourism.
- 4(b) I agree that tourism is largely disadvantageous to the environment. Tourism can lead to negative environmental impacts such as increased carbon footprint and destruction of habitats. However, tourism also brings about conservation of natural environments.

Carbon footprint refers to the amount of greenhouse gas emission that is produced in an activity. Tourism requires individuals to fly from a country to another, and consequently also for individuals to travel within the country itself, they will have to take transport such as cars, trains and buses all of which will involve the emission of greenhouse gas such as carbon monoxide. In addition, electricity consumption by hotels due to the lightings and airconditioning also leaves a huge amount of greenhouse gas emission. As the amount of greenhouse gas emitted increases, there will be more greenhouse gas to trap heat in the atmosphere thus resulting in global warming which is largely disadvantageous to the environment. For example, the carbon footprint of a one-way economy class flight from Singapore to Kuala Lumpur is 30 kilogrammes of carbon dioxide per passenger. With more tourists travelling, there will be a higher carbon footprint which will result in a great amount of greenhouse gas emitted.

In addition, tourism can also lead to the destruction of habitats. Popular tourist sites, such as quiet stretches of sandy beaches and scenic villages can be overwhelmed with visitors during busy times of the year. When too



many tourists visit a destination, they may destroy habitats and wildlife. Careless tourists may trample on plants, while others may collect eggs and feathers of birds as souvenirs. These tourists may also make too much noise which can disturb and frighten off animals. For example, Egypt's Red Sea coast has developed into a major diving and snorkelling destination for around 1.2 million visitors annually. Unfortunately, the habitats of coral reefs and exotic fish have been damaged by some swimmers collecting shells or corals as souvenirs. Thus, bringing about negative impacts to the environment.

That said, however, tourism can also bring about positive impacts. For example, it can provide funding to help conserve environments such as coral reefs, rainforests and mountaineous areas. Revenue from entrance fees to national parks and diving sites, or even levies on nearby accommodations can be used to help protect and conserve these environments. For example, the Sepilok Orang-Utan Rehabilitation Centre in Sabah, Malaysia, partly relies on visitors entrance fees to pay its staff. The staff help to rehabilitate orang-utans that have been orphaned or injured.

However, the negative impacts largely outweighs the positive impacts. This is because while tourism can help to conserve some environments, it is unable to reduce the amount of greenhouse gas that is being produced that may result in climate change which has impact on a larger scale and thereby may result in greater damages to the environment.

Section C

- 5(a)i) In general, the average price of non-organic food is cheaper than organic food. According to the table, organic food typically cost twice as much as its non-organic counterparts. For instance, organic yoghurt cost \$0.52 while non-organic yoghurt cost \$0.24. The same is true for milk as well, where organic milk cost \$1.84 compared to non-organic milk at \$0.95. However, there is an exception in the case of rice where non-organic rice costs 20 cents more than organic rice.
- 5(a)ii) From Fig. 4 and Table 4, the sales of organic food has increased by \$25 billion from 2004 to 2014 despite the significantly higher price of organic food. This could be due to the fact that people are more health conscious and prefer to consume food without pesticides. It could also be due to the growth in world population that may generate a greater demand for all food products, organic or otherwise.
- 5(b) As the percentage of population who are obese increases, the total spending on health care increases as well. The percentage of population who are obese has increased from about 29% in 2000 to 35% in 2015 while the spending on health care has increased from about \$1400 billion in 2000 to \$3200 billion in 2015.
- This could be because obesity can have adverse impacts on health, leading to high blood pressure, coronary heart diseases, diabetes and certain cancers. As such, public expenditure on healthcare would increase as government would need to fund hospitals and individuals who are poor in order for them to seek treatment. In addition, more funds have to spent on educating individuals about the adverse effects of obesity.
- 5(c) Scavenging carries health risks because scavenged food may contain high levels of bacterias or chemicals, such as heavy metals of mercury and lead. It could also promote the spread of diseases easily as these people are congregated closely together. In addition, it could also place people in dangerous or illegal situations in search of food, such as trespassing private property. They are also perceived as nuisance to the public and may be verbally or physically harassed.
- 5(d) Excessive food wastage does shows that there are adequate food supplies throughout the world. Societies with excess food available for consumption may result in large amount of food being wasted. Each year, consumers in DCs waste almost as much food as there is available in Sub-saharan Africa for total consumption. Food wastage is a serious problem in DCs, where food producers and consumers throw away food that is still edible. The amount of food wasted per capita in DCs is 10 times that of food wastage in LDCs. This shows that food is in abundance such that it can be freely thrown away and hence there must adequate food supplies.

However, other factors like malnutrition and starvation go to show that there are inadequate food supplies in the world. Malnutrition is a condition which the body does not get the sufficient or balanced amount of nutrients it needs to remain healthy. It results in death or long-term development problems in individuals. According to WHO, 52.5% of all death in young children under 5 years of age were caused by malnutrition. Each year, 5 million children under 5 years of age in LDCs die of malnutrition. As such, there must be inadequate food supplies in the world.

In addition, the problem of starvation is also prevalent in LDCs. Starvation is the state of extreme hunger from a severe lack of food. It is an extreme form of malnutrition. Starvation is common in LDCs because there are a great number of people living in poverty, there is a lack of resources to recover from natural disasters and there are unstable political situation. For example, in Mali in 2002, 5 million people were threatened with starvation due to a poor harvest and civil rebellion that took place in the year.

As such, this shows that there could be adequate food supplies throughout the world but the supplies are unevenly distributed and hence there is a huge variation in food consumption patterns across the world.

- 6(a) Some countries that are high in debt are receiving food aid, but not all are. This is especially true in the eastern part of Africa, where most along the east coast that are high in debt are receiving food aid. This is with the exception of Madagascar. Ethiopia in particular, receives the most amount of food aid at US\$987000 which is almost 52 times as much aid received in Tanzania's US\$19000. Sudan is second in terms of amount of food aid received at US\$673000. This could be due to the civil war that has plagued Sudan for years. On the western coast of Africa and Central parts of Africa, not much food aid is received with the exception of Guinea and Ghana. Even then, the value of food aid is significantly lower at \$10,000 and \$17,000 compared to in the East Coast.
- 6(b)i) A: Continental-continental
B: Continental-oceanic
C: Oceanic-oceanic
- 6(b)ii) At A, when two continental plates converge, no subduction takes place and the compressional force causes the rock layers to buckle and fold. As they buckle and fold, a fold mountain range is formed.
At C, when two oceanic plates converge, the denser oceanic plate subducts under the less dense oceanic plate. This causes an oceanic trench, which is a linear depression on the sea floor to be formed.

- 6(c) The shape of stratovolcanoes differ from that of shield volcanoes due to the properties of the lava. Stratovolcanoes are characterised by steep slopes, narrow base, secondary volcanoes and sometimes featuring a caldera, which is a blown off top of volcano. This is because the lava is of high viscosity meaning it is resistant to flow, as such it can travel shorter distance before solidifying. This causes the lava to solidify near to the vent of the volcano, resulting in the steep slopes and narrow base. In addition, due to the high viscosity of lava which causes it to travel short distances before solidifying, some lava is often solidify in the pipe or vent which causes lava to force its way through the fractures, forming a secondary volcano in stratovolcano. Lastly, as gases are easily trapped in high-silica lava, this results in explosive volcanic eruptions which may cause stratovolcanoes to blow off their cone, forming a caldera.

On the contrary, shield volcanoes feature gentle slopes, wide base and generally do not have a caldera. This is because the low viscosity lava are less resistant to flow, meaning they can travel longer distances before solidifying thus lava is able to travel further away from the vent, resulting in broader base and gentler slopes. In addition, as gases are not easily trapped, shield volcanoes typically have non explosive eruptions and thus do not have a caldera.

- 6(d) Preparedness measures to help countries cope with the impacts of earthquakes. Preparedness measures include land use regulation, infrastructure, emergency drills, and earthquake and tsunami warning and monitoring systems.

Many homes, office buildings and factories can be fitted with trip switches that ensure all electrical points are switched off in the event of an earthquake. This measure prevents fires from breaking out. For example in Japan, machines in many factories automatically shut down when they sense earthquake vibrations. Even their bullet trains have trip switches installed inside them so that the trains will come to a standstill when seismic activity is detected. This helps to reduce the amount of damage and lives lost should an earthquake occur. All this infrastructure is more readily accessible to the Japanese as they have the funds and technology to install these switches.

Additionally, emergency drills are another way to teach people how to respond in the event of an earthquake. Awareness is created and panic is reduced. This helps to ensure that more people can seek shelter/safety but also be able to help others who are stuck/missing. For example, every year since 1980, Japan conducts emergency drills on 1 September to commemorate Disaster Prevention Day. A high magnitude earthquake is simulated and even young children are involved. This increases the survival rate.



However, aside from preparedness measures, short term responses are also important and effective in mitigating the effects of earthquakes and tsunamis. A short-term response is search and rescue. It refers to the locating and freeing of people trapped under collapse buildings. Search and rescue has been quite successful in countries with responsive rescue teams and powerful financial resources. For example, in Japan, after the earthquake in 2011, sniffer dogs and heat sensors were deployed and successfully rescued many who were trapped. Some survivors are found after being trapped for a couple of weeks without food.

As such, both preparedness measures and short term and long term responses are effective in mitigating the effects of earthquakes and tsunamis as they work hand in hand and neither is more important than the other. For instance, even with good preparedness measures in place, some people may not be able to escape in time despite knowing emergency drills and as such search and rescue is essential. This is especially because earthquakes are not predictable and hence, both are just as effective as the other.