Consider the following information:

**Source 1**
Some studies have found the following kinds of behaviour common among Hong Kong people:

- Switching on the computer, the TV, air conditioners, or lights in all the rooms once they arrive home
- Not switching off lights or air-conditioners when a room is not in use
- Leaving electrical appliances plugged in while they are not in use

**Local consumption of electricity by type of users**

<table>
<thead>
<tr>
<th>Year</th>
<th>Quarter</th>
<th>Domestic</th>
<th>Commercial*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4</td>
<td>6 775 (20.2)</td>
<td>23 614 (70.5)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>7 298 (24.2)</td>
<td>20 105 (66.7)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>8 320 (22.3)</td>
<td>25 793 (69.0)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>13 878 (30.5)</td>
<td>28 337 (62.3)</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>7 604 (22.2)</td>
<td>23 829 (69.4)</td>
</tr>
<tr>
<td>2008</td>
<td>1</td>
<td>6 874 (22.9)</td>
<td>20 820 (69.2)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>9 133 (24.3)</td>
<td>25 558 (67.9)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>15 094 (31.6)</td>
<td>29 531 (61.9)</td>
</tr>
</tbody>
</table>

Notes:

1. 1 terajoule = 10^12 joules.
2. Figures in brackets denote percentage shares against the total consumption of electricity for the respective quarter. Industrial consumption is not shown in the table.
3. *Includes street lighting, which is charged to the Government’s account.
(a) **Exemplar 1**

Describe the electricity consumption pattern of Hong Kong people shown in Source 2. (4 marks)

In general, the electricity consumption for both domestic and commercial uses has increased. For domestic uses, the consumption in general increases. We can see this from comparing the consumption between different years in the same quarter. In quarter 4, 2007, consumption was 67.7 terajoules, while that of 2008 was 70.6 terajoules. Compare quarters 4 of 2008 with first of 2009. There was also an increase. Also, for all the years, we can see that in general domestic consumption of electricity is higher in quarters 1, 3 and lower for quarters 2, 4. For commercial use, there is the same pattern across the year too. Commercial use in general increases. Compare 3rd quarter of 2007 and 2009. 2009 has a higher consumption. As for share of total electricity consumption, commercial share is always larger than domestic share, but during 3rd quarter of the year, the domestic share would be higher than that of other quarters, with a drop in share of commercial use, the difference between shares of domestic and commercial use decreases. For example, for quarter 2 in 2008, difference between the shares is 6.47% but that for quarter 3 was 11.6%. In general, commercial use consumes more than domestic use.

**Marks: 4**

**Exemplar 2**

Describe the electricity consumption pattern of Hong Kong people shown in Source 2. (4 marks)

Comparing the first three quarters of 2008 and 2009, we can observe a steady rise in Hong Kong people's electricity consumption; and comparing the fourth quarters of 2007 and 2008, we can also see a rise; hence we may deduce that Hong Kong people's consumption is rising steadily. From the source, we can see almost a 10%–15% of electricity consumption goes to commercial use, spending up to 28,000 terajoule of energy. We can also see the highest electricity consumption falls in the third quarters of 2008 and 2009, which is possibly caused by the increased use of air conditioners during the summertime.

**Marks: 4**
Exemplar 3

(a) Describe the electricity consumption pattern of Hong Kong people shown in Source 2. (4 marks)

Marks: 2

Exemplar 4

(a) Describe the electricity consumption pattern of Hong Kong people shown in Source 2. (4 marks)

Marks: 2

Exemplar 5

(a) Describe the electricity consumption pattern of Hong Kong people shown in Source 2. (4 marks)

Mark: 1
Exemplar 1

(b) With reference to Sources 1 and 2, in what ways do you think that the electricity consumption of Hong Kong people may reflect their personal living styles? (5 marks)

From the behaviors in Source 1, we may deduce that many Hong Kong people live an affordably high standard of living, being able to switch on appliances that consume much energy (e.g. TV, computer, air conditioners) and leave them on endlessly without worrying about the cost that incurs. To leave appliances on with electric flow also reflects Hong Kong people’s lack of awareness of the problems of wasting precious energy and their lack of indifference to the environmental impacts caused by such act. Leaving electrical appliances plugged when unused also shows their lack of knowledge in catering to their personal items as well as the environment, reflecting a significant rise in the third quarter (summer time) in Source 2 shows Hong Kong people puts their personal comfort as the first priority and is willing to forgo energy conservation just because of a slight change in temperature. A steady rise in the percentage of domestic use of energy also indicate a growingly luxurious lifestyle of people and their poor attitude to treating the environment well.

Marks: 5
Exemplar 2

With reference to Sources 1 and 2, in what ways do you think that the electricity consumption of Hong Kong people may reflect their personal living styles? (5 marks)

The high electricity consumption reflects a luxurious living style of most HK people. We can see from Source 1, that Hong Kong people generally leave electrical appliances on, even when they are not used. Electricity is used even when there is no need. Also, as from the data in Source 2, with higher consumption of electricity in quarters 2 and 3 each year, it could be predicted that Hong Kong people tend to turn on the air-conditioners on when temperature is relatively higher in quarters 2 and 3 (summer and autumn). This account for the higher electricity consumption in quarters 2 and 3. The use of air-conditioners reflect a comfortable and luxurious living style. Hong Kong people tend to use electrical appliances to make life more comfortable, at the expense of some of their income for the electricity fees. Hong Kong people use more than needed. For example, a fan can always replace an air-conditioner for cooling down, but most just use an air-conditioner. It is luxurious. It could also be considered wasteful to leave the electrical appliances idle reflected on, even when not used, as reflected from Source 1.

Marks: 4

Exemplar 3

With reference to Sources 1 and 2, in what ways do you think that the electricity consumption of Hong Kong people may reflect their personal living styles? (5 marks)

As shown in Source 2, HK people consume electricity per quarter as much as around 30,000 terajoules per quarter. This reflects that HK people have a low awareness of saving energy and there’s probably an energy wastage. The electricity consumption for domestic use amounts for over 6,775 per quarter every year. This reflects that HK people tend to switch on the computer, the TV, air-conditioners or lights in all rooms once they arrive home, having electrical appliances plugged in can explain this. The electricity consumption for commercial use amounts for at least 23,644 terajoules per quarter every year can be explained by the fact that HK people waste energy at office.

Marks: 2
Exemplar 4
(b) With reference to Sources 1 and 2, in what ways do you think that the electricity consumption of Hong Kong people may reflect their personal living styles? (5 marks)

I think that the electricity consumption can reflect that how long does a person spend at home as people who spend more time at home, they need to consume more electricity for electrical appliances. Also, it can show that Hong Kong people are also active at night as the use of commercial electricity in commercial is high, we can see that street lights need to be turned on at night for a long time and the shop also opens at night and this will also consume a large amount of electricity.

Mark: 1

Exemplar 5
(b) With reference to Sources 1 and 2, in what ways do you think that the electricity consumption of Hong Kong people may reflect their personal living styles? (5 marks)

During the summer, about the third quarter, Hong Kong people have the habit of turning on the air-conditioner when they get home. However, in the winter, people don't turn on the air-conditioner often, though the consumption doubled. At the same time, the problem of people not turning off the conditioners may occur as shown in Source 1. Since the people turn on the conditioner more often, there's a higher chance of not turning them off. During the summer holidays, students don't have to go to school and they may use the computer more frequently, causing the consumption figure to be the highest.

Mark: 1
With reference to the sources, explain how the electricity consumption of Hong Kong people may have a negative impact on the quality of life in Hong Kong.

The electricity consumption is high, as seen from source 2. A high electrical consumption can first affect people economically. By paying more on electricity bills, people have less income to spend on other things. Quality of life may be lowered with fewer things to consume and less income, as life could become less convenient with less income. Most significantly, quality of life would be lowered due to the environmental impacts. With a high demand of electricity, electricity companies had to produce more electricity. Hong Kong is currently using fossil fuels for main electricity generation. Combustion of the fossil fuels would lead to emission of greenhouse gases and soot as pollutants. Greenhouse gases could intensify the problem of global warming, which could lead to consequences like rising sea levels and extreme weather. Dangers could be done and lower quality of life with a higher temperature. Hong Kong people would have to use more electricity for air conditioning, and it leads to a vicious cycle. With the pollutants, people with respiratory diseases may suffer, health is affected. Quality of life lowers. As a whole, the current high electricity consumption is not sustainable. Quality of life on a long term, for the future generations, would decrease.
Exemplar 2

(c) With reference to the sources, explain how the electricity consumption of Hong Kong people may have a negative impact on the quality of life in Hong Kong.

(5 marks)

From Source 1, turning on all electrical appliances and leaving them on when not in use can wastes much energy, which directly puts weight on the consumer's electricity bill. As electricity is still mainly generated by fossil fuels, an increased demand for it will cause a greater supply, wasting the precious fuel as well as giving out more air pollutants from its generation. Leading appliances plugged could cause fires and other electrical malfunctions. As electricity consumption is constantly present in the appliance, causing harm to both the user and the environment. From Source 2, a rising electricity consumption together with the usage mentioned in Source 1 causes worse outdoor increase in temperature as air conditioners give out hot air and forms a vicious cycle which leads to even more electricity consumption as global warming deteriorates, thus causing harm and inconvenience to the consumer, the society and even the world, the consumption pattern of Hong Kong people lowers their own quality of life.

Marks: 3

Exemplar 3

(c) With reference to the sources, explain how the electricity consumption of Hong Kong people may have a negative impact on the quality of life in Hong Kong.

(5 marks)

Quality of life can be measured with reference to social, political and environmental criteria. Hong Kong people's electricity consumption will cause negative impact on the environment. Electricity production requires burning fossil fuels, which emits CO2 during the burning process. This can lead to air pollution. Poor air quality affects people's health. Many past studies have shown that more people are suffering from respiratory disease, this is likely due to the poor air quality. The poor health of people is a social problem, and that it leads to higher expenditure this adds financial burden to the government.

Marks: 3
Exemplar 4

With reference to the sources, explain how the electricity consumption of Hong Kong people may have a negative impact on the quality of life in Hong Kong.

As Hong Kong people always turn on lights, computers, and television even if they are not used and there will be a large demand of electricity. Then they may need to pay more for the electricity as the fee may increase and this will affect the life of the poor. Also, generating electricity may create greenhouse gases and may lead to global warming and make Hong Kong a very hotter city. Also, the street lights of Hong Kong may cause light pollution and make people can't sleep nor work and become very uncomfortable.

Marks: 2

Exemplar 5

With reference to the sources, explain how the electricity consumption of Hong Kong people may have a negative impact on the quality of life in Hong Kong.

Hong Kong people love to turn off the lights in the room when not in use. These may cause light pollution. Light pollution may cause good scenery of streets.

During festivals like Chinese new year and Christmas, there are light decorations everywhere.

Mark: 1
Exemplar 1

(d) Discuss measures to help alleviate the negative impact you mentioned in (c). (6 marks)

Firstly, the government could issue regulations for commercial sectors, to reduce their electricity consumption. With lower commercial consumption, total electricity consumption and demand can be lowered too. Secondly, there could be education to people, to reduce domestic electricity consumption, by switching unused electrical appliances. This could be done through education in schools, or promotion through different forms of media like TV and radio advertisements. This helps reducing electricity consumption too. Thirdly, campaigns can be held to actively reduce consumption of electricity through symbols and concrete actions, for example, turning off the lights for an hour. Besides reducing electricity consumption, this could raise people’s awareness towards the environment for the future generation too. Finally, the government can help developing renewable energy sources, less pollution and how is done for the environment of electricity is generated by renewable energy sources, like solar power or wind power. Using renewable energy sources can help reduce negative impacts due to pollution, at the same time, can meet the rising demand of electricity consumption in a long run.

Marks: 5
Exemplar 2

(2) Discuss measures to help alleviate the negative impact you mentioned in (c). (6 marks)

The government and schools can work hand in hand to educate the public on the correct use of electrical appliances and promote energy conservation through talks, lessons, discussions and posters. It is important to instill a green mindset through propaganda and public activities (e.g., TV commercials), but raising people's awareness of the environmental impacts of uncontrollable electricity consumption causes us to change our mindset to prioritizing the economic benefit of their comfort. The government can also pass laws to regulate electricity consumption, especially in the commercial sector, which often uses extravagant means to attract customers and neglect the environmental problems these cause. For example, concerning light pollution, the government can pass laws to regulate the usage of lightboards to lower energy consumption (e.g., add standards for better projector light). It can redesign public lighting and import energy-saving appliance modules to save energy as well as raise efficiency. The government can also subsidize the use of eco-friendly appliances (e.g., energy-saving bulbs) in commercial and major consumers of electricity. Such measures can cut electricity consumption and solve the problems raised in (c).
Exemplar 3

(d) Discuss measures to help alleviate the negative impact you mentioned in (c). (6 marks)

To help alleviate the negative impact of high electricity consumption, we must lower the electricity consumption. To do this, we can educate the public about the concept of saving through public talks, advertisements, posters and videos. If people understand the importance of energy saving and the negative impact of high electricity consumption, they'll tend to use less energy. The students in TK should receive such kind of education as soon as possible so as to ensure the future energy consumption can be lowered. If everyone takes a small step, the society will benefit as a whole.

Legislation is also a possible way. The government can impose laws so as to restrict the use of electricity. E.g., offices must turn off the lights after a certain time. The government can also increase the price of electricity.

The government should promote electricity saving in their office, so as to act as a role model to the citizens.

Marks: 3

Exemplar 4

(d) Discuss measures to help alleviate the negative impact you mentioned in (c). (6 marks)

The government should educate people not to use many electricity as this may create a lot of problems and will affect a lot of people. Also street light should be turned on for too long and time should be less. Street lights in residential area should also be controlled as not to affect the people who live around them.

Marks: 2
Exemplar 5

(d) Discuss measures to help alleviate the negative impact you mentioned in (c). (6 marks)

- Use less fans than air conditioners
- Hold a campaign where people will turn off their lights for one hour.

Mark: 1