

Consider the sources A and B and answer the questions.

Source A: Adapted from a report by the United Nations University (UNU) and the International Telecommunication Union (ITU)

Table 1: Distribution of global e-waste in 2016

Indicator	Africa	Americas	Asia	Europe	Oceania
Countries in region	53	35	49	40	13
Population in region (millions)	1,200	1,000	4,400	700	40
Waste generated (kg per inhabitant)	1.9	11.6	4.2	16.6	17.3
Indication waste generated (Mt)	2.2	11.3	18.2	12.3	0.7
Documented to be collected and recycled (Mt)	0.004	1.9	2.7	4.3	0.04
Collection Rate (in region)	0%	17%	15%	35%	6%

Table 2: Global e-waste generated

Year	Total (Mt)
2014	41.8
2016	44.7
2018	48.5

(Source: United Nations University (UNU) and International Telecommunication Union (ITU))

Source B: Adapted from a newspaper commentary dated 15 November 2019

With rapid advancement in communications technology, the world of electronic products has seen breakthrough development. Their costs of development and retail prices are becoming progressively lower, and model update and replacement more frequent. This prompts people to replace their electronic products indiscriminately and thus produces a large amount of e-waste.

E-waste contains a large amount of toxic chemical products such as lead, chromium and silver. If the waste is not handled properly, they would pollute the environment and hamper people's health, for example, damaging people's nervous system and causing endocrine disorder. Although the international community is aware of this potential danger, a large amount of e-waste is still transported from developed countries to developing countries for handling every day. At present, consensus has not yet reached among the international community on controlling the amount of e-waste or recycling electronic components. Only a few countries implement the strategy of extended producer responsibility or assign private recycling companies to recycle e-waste. Some countries and corporations have a misunderstanding that recycling e-waste would increase their costs of production. In fact, e-waste contains high-value gold. Take mobile phones as an example. A total of 50,000 mobile phones could generate 1kg of gold and 10kg of silver. Besides, recycling e-waste helps implement the mode of green production and thus enhances production sustainability.

(b) **From Sources A and B, explain *TWO* challenges that the international community might face in tackling e-waste. (6 marks)**

Suggested Marking Guidelines	Marks
<p>The candidate:</p> <ul style="list-style-type: none"> ● from Sources A and B, identifies and clearly explains two challenges (the difficulties, limitations, obstacles to be tackled) that the international community might face in tackling e-waste by clearly integrating the situation about the international community; shows an in-depth understanding and an appropriate application of the relevant knowledge and concepts (e.g. international consensus, international cooperation, living habits, etc.) <p>Possible challenges and explanations may include the following:</p> <ul style="list-style-type: none"> ■ Countries hold different attitudes towards e-waste and do not have a consensus on handling the problem of e-waste together. This poses challenges to the international community in countering e-waste. Americas, Asia and Europe produced a total of 41.8 million tonnes of e-waste, accounting for 94% of the total amount of e-waste (Source A). As most developed countries are situated in these continents, it could be deduced that developed countries are the major export countries of e-waste. Even though they are the main sources of e-waste, they would not carry out recycling on their own. Some countries think that recycling e-waste might increase their costs of production, and thus habitually send e-waste to developing countries for handling. Only a few countries implement the strategy of extended producer responsibility to reduce the amount of e-waste through recycling (Source B). As a result, it is difficult for the international community to coordinate the needs of different countries and control the amount of e-waste together. ■ Some people lead a wasteful lifestyle. It is difficult to change their living habits in a short period of time and this poses another challenge to the international community in handling the problem of e-waste. With technological advancement, the costs of development and retail prices of electronic products continue to decrease. Model update and replacement also become more frequent. This prompts people to replace electronic products indiscriminately and thus produce a large amount of e-waste (Source B). The amount of e-waste increased to 48.5 million tonnes in 2018, which represented an increase of 6.7 million tonnes, i.e. a percentage increase of 16%, in four years (Source A). The disposal of e-waste has become commonplace and it is difficult to change people's living habits in a short space of time. <ul style="list-style-type: none"> ● makes appropriate and full use of Sources A and B ● provides a well-structured, clear and in-depth elaboration 	5 – 6
<ul style="list-style-type: none"> ● identifies and attempts to explain two challenges from the sources, but does not explain fully or clearly; or identifies and explains fully only one challenge; applies relevant knowledge and concepts, but the analysis might lack detail in parts ● makes use of some points of relevance in the sources, but not comprehensively ● provides a well-structured elaboration, though it might lack clarity/ detail in parts 	3 – 4
<ul style="list-style-type: none"> ● points out one/two challenges and attempts to offer a brief explanation for the challenge(s) (e.g. international consensus, international cooperation, living habits, etc.), but the challenge(s) is/are not totally correct or relevant to the sources; ● uses the sources in a limited manner or sometimes inappropriately, e.g. showing discrepancies between the challenges and the sources ● gives a superficial answer with little organisation/ without focus; expresses his/her ideas vaguely 	1 – 2
<ul style="list-style-type: none"> ● fails to identify any challenges/ makes no attempt to answer the question ● gives an answer which is not relevant to the question 	0