

SECTION B

Read the following extracts (A to D) before answering Question 6.

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The electronics industry

Extract A

Rising prices of electronics devices

Computer chips act as the “brain” in all electronic devices. Makers of electronic devices face significant increases in the price of computer chips as they try to source enough components, including games consoles, computers and smartphones. The price of some computer chips has jumped from \$0.20 each to more than \$1. The prices of electronic devices have risen for a range of reasons, including higher material costs and the growing popularity of home entertainment.

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(Source: adapted from <https://www.ft.com/content/8c718a74-cd95-4b2d-ac0e-de0682e4e3cd>)

Extract B

Labour shortages in the electronics industry

Every year, highly skilled and experienced employees in the electronics industry retire. The current tight labour market has made an already difficult problem of hiring suitable engineering and computing graduates worse, especially since the nature of the industry is becoming increasingly technical. As production becomes more automated, electronics jobs are more likely to require problem solving and analysis than just assembling skills. However, artificial intelligence and other new technologies can help fill some of the skills gap. In addition, by giving hazardous, repetitive, grimy work to robots, human beings can focus on more creative, analytic tasks.

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(Source: adapted from <https://www.ericsson.com/en/blog/2021/12/manufacturing-problems-that-keep-ceos-awake-at-night>)

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Extract C**Serious concerns over merger**

The Competition and Markets Authority (CMA) has said the takeover of the Cambridge-based computer chip designer Arm by its US rival Nvidia raises serious competition concerns. It has launched an in-depth investigation into the £29.5 billion deal. The CMA said the merger could reduce choice for firms reliant on computer chips, pushing up prices of products including cars, games consoles and mobile phones. In addition, severe global shortages of computer chips has disrupted the manufacture of a range of electronic goods pushing up costs for firms.

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Despite this, large electronics firms benefit from economies of scale and are able to finance high-risk innovation and global advertising.

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(Source adapted from: <https://www.theguardian.com/business/2021/aug/20/watchdog-expresses-concerns-over-nvidias-takeover-of-uk-chip-designer-arm>)

Extract D**The growing problem of electronic waste**

Electronic waste is the fastest growing element of the world's household waste problem. The problem in the UK is particularly bad. The country produces 24.9 kg a person a year – nearly 10 kg more than the EU average. In 2018, 1.2 million tonnes of electrical devices were sold in the UK, and 500 000 tonnes made it to recycling centres. Some appliances are more likely to be recycled than others. The recycling rate for big appliances, such as fridges and cookers, is about 80%. Of small appliances, barely one in five makes it to the recycling centre. As items such as toasters, hairdryers and headphones fit into household bins, they are not often taken to a recycling centre. This causes many problems, such as hazardous substances contaminating soil, water pollution and other external costs.

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Policy makers have a long list of options to combat this problem including stricter regulation, environmental education, taxation and financial incentives. In some countries, for example, household rubbish is weighed and recycling initiatives are subsidised.

(Source adapted from: <https://www.ft.com/content/26e1aa74-2261-11ea-92da-f0c92e957a96>)