Cambridge IGCSE

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Cambridge International General Certificate of Secondary Education

FIRST LANGUAGE ENGLISH **0500/33**

Paper 3 Directed Writing and Composition **May/June 2019**

2 hours

READING BOOKLET INSERT

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READ THESE INSTRUCTIONS FIRST

This Reading Booklet Insert contains the reading passage for use with **Section 1**, **Question 1** on the Question Paper.

You may annotate this Reading Booklet Insert and use the blank spaces for planning.
This Reading Booklet Insert is **not** assessed by the Examiner.

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Read the passage carefully, and then answer **Question 1** on the Question Paper.

In this article, the writer discusses new ideas for taking care of elderly people.

How a robot could be Grandma's new carer

Designer Sebastian Conran walks me through a worst-case scenario in his studio. 'The sensor is looking for a break in routine,' he explains, pointing to a drawing of an elderly woman, collapsed on the floor of her home. 'The sensor in the room notices that you've fallen over. MiRo goes to investigate.'

MiRo is a robotic dog. Conran describes it as a companion robot, and says it will work with facial recognition technology to make life easier for its owner – to prompt them to take medicine, or to remind them of visitors' names, or to question them if it thinks they're in trouble. 'It tries talking to you,' he continues, 'and then it will send a signal saying there seems to be a problem.'

Conran points at the wristband the woman in the picture is wearing. It monitors the vital signs of its wearer 24 hours a day. 'If you don't respond it will communicate with a carer who can see your heart rate and body temperature, and rewind your life using the cameras in the home to see what happened.'

'Unless you're particularly disabled you don't need someone there all the time,' Conran says. 'But you do need to deal with loneliness and fear if a carer only comes to see you twice a week for an hour.'

Conran is not the only one to find answers in technology. In Japan, where 26 per cent of the population is aged 65 years or older, Dr Toshiharu Mukai of Meijo University has developed a robot to lift patients out of beds and into wheelchairs. It's called Robear, is designed to look like an approachable white bear, and could do a job that would normally involve several care workers. In the UK, a prototype care robot was recently introduced to a sheltered housing centre for elderly people. The robot is also designed to combat loneliness, as well as to carry out practical tasks such as reminding people to take their medication.

At a time of rising elderly populations and dwindling public resources, these innovations raise important questions about the future of care. Can robots serve as a useful addition to human contact, or will some of society's most vulnerable be passed into the loving arms of machines?

There's a two-storey building in Hatfield in the UK that looks from the outside just like any other suburban home. There is a doorbell beside the front door. There are sofas, chairs and beds. It isn't until you glimpse a 200 kg care robot that you can tell this isn't exactly a normal household.

Kerstin Dautenhahn, professor of artificial intelligence at the University of Hertfordshire, explains: 'In our research, we found that participants didn't really buy into the idea. We realised that we needed to provide a more natural environment. Something real.'

The entire home observes a person's activities, and then makes judgements based on those observations. If the house can tell that a person is making breakfast, it could send a robot to approach and offer help. The sensors notice if the routine has changed – if they are eating or exercising less, for example, or sleeping more. Sit in front of the TV for too long, and a robot could come around to encourage you to move.

The last thing the researchers want is for people to feel bossed around, though Dautenhahn admits it's a difficult balance to strike.

'We're investigating people's sense of control,' says Dautenhahn. 'If you have a system in your house that is with you 24/7, monitoring everything that you do, then what you really don't want is to have the feeling that you're no longer in control. If you have someone all the time criticising you, telling you that you haven't had anything to drink for five hours, you'll ask yourself: whose house is this?'

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There are other, very different solutions being considered too. There's a nursing home in the Netherlands which offers rent-free apartments to students in exchange for 30 hours of work each month with their elderly neighbours. The village of Hogewey, near Amsterdam, has been built to accommodate frail, elderly patients. The buildings are exact replicas of homes from the 1950s and the 1970s, each built to fit a person's perception of reality.

Lydia Nicholas, a digital anthropologist, outlines some drawbacks. 'These kinds of villages employ a lot of people; they are expensive to run and have very long waiting lists. For a system under pressure it can be tempting instead to turn to technology solutions. It's possible that one nurse could look after many people because she has so much data on how all of them are moving and sleeping, whether they're eating on schedule, etc. In the short term, sensors are cheap and people are expensive and that just can't be ignored. But people can provide that essential human touch and connection that supports our health over the long term.'

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