

Directions:

Read the following four texts. Answer the questions after each text by choosing A, B, C or D. Mark your answers on the **ANSWER SHEET**. (40 points)

Text 2

I was shocked to learn recently that some scientists want to scale back their research in an effort to decrease carbon emissions. The crisis is here, they said, and we need to cut back on our energy-intensive modelling. At the very least, we need to make our energy use far more sustainable.

It is unarguable that our laboratories, scientific instruments, rockets and satellites—the tools we scientists need to measure the planet's pulse—demand significant amounts of energy both in their construction and operation. And it is equally true that science's unrelenting appetite for information has caused a mushrooming of energy-intensive data centres around the world. According to the International Energy Agency, these buildings now consume about 1 per cent of the world's electricity.

However, this is a price we must pay for understanding the world. How can we inform decision makers about the best ways to bring down carbon emissions if we can't track the amount of carbon dioxide in the atmosphere, where it's coming from and who's producing it? The carbon emissions from technological research are well spent: ultimately this research will safeguard the future of our planet.

It can be hard for scientists to make the case because our work is complex, often takes place behind closed doors and does not always lend itself to easy interpretation or explanation. But demonstrating the efficacy of science will be crucial if we are to solve humanity's greatest challenges.

Recognising the hope that science and engineering can bring was the impetus behind the creation of the Millennium Technology Prize, which is now entering its 20th year as a celebration of human ingenuity. One of the past winners, Professor Martin Green from the University of New South Wales, Australia, is the inventor of the Passivated Emitter and Rear Cell technology which is now found in most of the world's solar panels. Thanks to his invention, we have a real chance to decrease the world's carbon emissions.

Every day, scientists, technologists and engineers are discovering new ways to exploit renewable energy sources and develop techniques not just to use power more intelligently but to power our intelligence. A great example of this is Europe's largest supercomputer, LUMI in Finland, which is astonishingly carbon-negative. Established in an old paper mill, it is powered by a nearby river and its remote heat warms the people who live in the surrounding town of Kajaani.

If the world is to meet its net-zero ambitions, we must think hard about how we can deliver sustainable computing and deliver more LUMIs.

26. The author expressed great surprise at some scientists' _____.

- [A] unwillingness to cut carbon emissions
- [B] intention to reduce their research
- [C] suspicions about sustainable energy
- [D] waste of electricity in their projects

27. The author believes that carbon emissions from research _____.
[A] have caused grave consequences
[B] have aroused groundless worries
[C] are hard to handle at present
[D] are justifiable in the long run
28. The example of Green in Paragraph 5 is used to illustrate _____.
[A] the achievements of great scientists
[B] the urgency of addressing climate change
[C] the rewards of scientific endeavours
[D] the value of fostering human ingenuity
29. It can be learned from the last two paragraphs that LUMI _____.
[A] is a model of sustainability efforts
[B] is a triumph against energy shortage
[C] owes much to global net-zero initiatives
[D] aims to explore the power of intelligence
30. Which of the following statements would the author agree with?
[A] Emission-free modelling demands extra funding.
[B] The need for supercomputers is difficult to meet.
[C] Energy-intensive research work is inevitable.
[D] The goals of researchers ought to be realistic.