SUJET CCINP

LANGUE VIVANTE A – ANGLAIS

3 heures

Le candidat attachera la plus grande importance à la clarté, à la précision et à la concision de la rédaction. Si un candidat est amené à repérer ce qui peut lui sembler être une erreur d'énoncé, il le signalera sur sa copie et devra poursuivre sa composition en expliquant les raisons des initiatives qu'il a été amené à prendre.

RAPPEL DES CONSIGNES

- Utiliser uniquement un stylo noir ou bleu foncé non effaçable pour la rédaction de votre composition ; d'autres couleurs, excepté le vert, peuvent être utilisées, mais exclusivement pour les schémas et la mise en évidence des résultats.
- Ne pas utiliser de correcteur.
- Écrire le mot FIN à la fin de votre composition.

CONSIGNES SPECIFIQUES AU CONCOURS BLANC

- Ecrire une ligne sur deux et laisser une marge à gauche et à droite pour faciliter la correction

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L'usage d'un dictionnaire et de machines (calculatrice, traductrice, etc.) est strictement interdit.

Rédiger en anglais et en 400 mots une synthèse des documents proposés, qui devra obligatoirement comporter un titre.

Vous indiquerez impérativement le nombre total de mots utilisés (titre inclus) et vous aurez soin d'en faciliter la vérification en mettant un trait vertical tous les vingt mots.Des points de pénalité seront soustraits en cas de non-respect du nombre total de mots utilisés avec une tolérance de +/- 10 % .

Concernant la présentation du corpus dans l'introduction, vous n'indiquerez que la source et la date de chaque document. Vous pourrez ensuite, dans le corps de la synthèse, faire référence à ces documents par « doc.1 », « doc.2 », etc.

Ce sujet de 5 pages comporte les 4 documents suivants qui sont d'égale importance :

- **document 1** – "The Splinternet of Things threatens 5G'spotential", *The Economist*, December 25, 2019,

- **document 2** – "UK should revisit 5G ban now Trump is defeated, says Huawei", *The Guardian,* November 20, 2020,

- **document 3** – "5G conspiracy theory threatens economies and risks leaving people with slow connections, EU countries warn", *The Independent*, October 19, 2020,

- **document 4** – cartoon, *Newswatch.com*, December 2018.

Document 1

The Splinternet of Things threatens 5G's potential

The transformative potential of 5G will be diminished by America's blacklisting of Huawei

FOR YEARS, technologists have gushed about the promise of the "Internet of Things" (IOT). With ubiquitous sensors and universal connectivity, punters have been told, the IOT will transform ordinary workshops into smart factories. Passengers will enjoy safe travel in autonomous cars and cargoes will be tracked seamlessly across borders. Consumers will enjoy blazing-fast connections on mobile devices that allow whole films to be downloaded in an instant.

This heady vision was promoted so heavily for so long by tech vendors that it began to seem like a chimera. It is not. The two essential technologies speeding the IOT's arrival, inexpensive sensors and super-fast networking kit, are advancing fast. Gartner, a research group, predicts that the global number of devices embedded with sensors will leap from 8.4bn in 2017 to 20.4bn in 2020.

The second enabler is 5G, a telecoms-networking technology superior to today's 4G mobile networks. Hans Vestberg, chief executive of Verizon, an American telecoms giant, has restructured his entire firm around 5G's potential, arguing that it will bring many benefits beyond blazing-fast speed. For example, an IOT network based on 5G connections would allow a million devices to be clustered within a square kilometre, as they might be on a dense factory floor or at a crowded sports arena—far more than the 60,000 or so possible with 4G.

Alas, the once-bright prospects for a speedy global roll-out are turning into a tale of the good, the bad and the ugly. The good news is that several big markets will see 5G networks deployed at scale in 2020. Verizon expects three-quarters of the phones it launches in 2020 in America to be 5G-capable, and AT&T, a rival firm, expects to offer nationwide coverage by mid-year. Huawei, China's telecoms-equipment giant, has spent $46bn developing 5G kit, and expects to deploy 1.5m base stations across hundreds of Chinese cities by the end of 2020. Europe has been held back by market fragmentation, but the European Commission is pushing to have an EU-wide commercial roll-out of 5G by the end of 2020.

The bad news is that the usefulness of all this will be limited at first. Unless consumers spend a fortune on the latest 5G handsets, they will not be able to enjoy super-fast downloads. Most companies will not have sensors embedded in all of their factory machinery for a few years yet, though vendors like Siemens and GE will be keen to help them set up such "industrial internets". There are also barriers to the use of IOT devices in some industries (privacy concerns in health care, for example) that require policy reforms. As the various hurdles are overcome over the next few years, reckons Michael Chui of the McKinsey Global Institute, a think-tank, IOT technologies will create between $3.9trn and $11.1trn in economic value globally by 2025.

The ugly aspect of the 5G story involves geopolitics. A decision to ban Huawei from America's telecoms networks and to deny it access to vital intellectual property from American suppliers has dealt a severe blow to the market leader. President Donald Trump has cited security concerns. Huawei points out that no evidence of wrongdoing has ever been presented.

America has also been strong-arming its allies around the world to reject Chinese kit. Some, like Australia, have done so. Others, like Britain, may restrict Huawei to peripheral parts of their networks. In countries where Huawei is banned, telecoms operators must rely on more expensive, non-Chinese 5G kit made by Finland's Nokia, Sweden's Ericsson or South Korea's Samsung. Sensing opportunity, Ericsson plans to open a new manufacturing plant in Texas in 2020 to make 5G equipment that is palatable to the White House.

Still, vast swathes of the globe, from Russia to Malaysia to Peru, will remain open to Huawei in 2020. This is not only because they are in China's geopolitical orbit, though this is true for many Asian and African countries. Huawei's 5G equipment is also more advanced: Chinese firms represent over a third of global patent applications for 5G-related technologies, with Huawei alone representing 15% of the world total. And Huawei's equipment is less expensive than rivals' kit.

The result is likely to be a bifurcated IOT, dividing the world between countries willing to use Chinese telecoms gear and those that share America's concerns over security. Part of the 5G dream was that of a unified global standard for networking. Once that is fractured, the resultant divide poses huge headaches. Multinational firms with operations in Shenzhen and Silicon Valley cannot use the same IOT systems in both. Global developers of IOT devices relying on seamless 5G, such as new virtual- and augmented-reality applications, may be handicapped by interoperability issues among markets.

Frank Appel, chairman of Deutsche Post DHL, a giant logistics and package-delivery firm, warns that if information cannot be exchanged easily between different networks, "we have to go back to paperwork and print and input into the system...I don't know how we will manage." Verizon's Mr Vestberg observes that 5G would then be a step back to 1G and 2G, which used network standards that did not allow seamless global connectivity. Vincent Peng, a board member at Huawei, warns that this could result in a disastrous "digital Berlin Wall". Unless a political settlement is soon reached between China and America on 5G, 2020 will be remembered for the arrival of the Splinternet of Things.

Adapted from *The Economist*, December 25th 2019

Document 2

UK should revisit 5G ban now Trump is defeated, says Huawei

The UK should revisit its decision to ban the Chinese telecoms equipment maker Huawei from its 5G network in the post-Trump era and recognise that it will worsen England's north-south divide, the vice-president of Huawei has told the Guardian. (...)

In July the UK government, after pressure from the Trump administration, reversed a plan to let Huawei be a controlled 5G supplier, and instead ordered Huawei equipment be stripped out of the country's 5G networks by 2027.

Ministers at the time said the reversal was not caused by a new security services analysis of the security threat posed by Huawei, but by the Trump administration's decision to block US conductors being used by Huawei.

Zhang said: "The decision is going to have a huge economic impact on the UK. The UK wants to see a balance of investment between London, the south-east, the Midlands and the north of England. World-class connectivity is crucial to this objective, and without that it is very difficult to close the gap in the economic imbalance in the UK."

He added: "The government itself has said it will lead to a three-year delay in the rollout of 5G, and this will have a huge economic impact. Many people are surprised by the scale of the impact of this delay. Third- party research by Assembly, an independent research firm, shows this delay will have an £18.2bn impact. (...)

Urging ministers to revisit the decision, Zhang said: “As a global company we want to work with governments to ensure they have the policies to secure growth. The decision was a political one motivated by US perceptions of Huawei and not those of the UK. This is not really motivated by security, but about a trade war between the US and China.” He said he hoped the new US administration would adopt a different approach to that of Donald Trump.

Zhang also expressed fears that the UK’s traditional role as an open, free trading nation was under challenge, and rejected claims that his company represented the “dragon in the nest”, a phrase used by the chair of the foreign affairs select committee, Tom Tugendhat.

He said: “Something is worrying me about the UK because discussions here are focused on the geopolitical conflict rather than how to improve the UK economy and make sure the country grabs the opportunity again to be a global leader post-Brexit, at the end of this year. All this is vital for the UK’s recovery post-Covid and after Brexit – trade, technology, digitalisation and how to attract foreign investment to the UK.

“The UK was the birthplace of the first Industrial Revolution and it was going to lead the digital revolution. The UK has the DNA to develop the right policies to seize leadership in innovation.”

Critics of Huawei claim that despite the independent shareholder structure, the company can be directed at any minute by the Chinese Communist party to give its regime a backdoor to spy on British communications.

Zhang pointed out: “GCHQ concluded the technical risks were manageable and so did two parliamentary select committees. Personally, I don’t think there is a security reason for the UK to stop using Huawei. America put pressure on the UK through sanctions on Huawei, and the UK – impacted by these new, unjustified sanctions – responded.” (...)

Zhang argued for the importance of 5G, saying it was a massive step up from 4G in terms of capacity, speed and volume. “This makes it essentially the foundation for next-generation technology – AI/robotics/smart healthcare and education ... The fast speed and near-instant

latency mean tech can talk in almost real time ... Those who come earlier to this will have considerable advantages over those who come later.”

Adapted from *The Guardian,* Monday 16 November 2020

Document 3

5G conspiracy theory threatens economies and risks leaving people with slow connections, EU countries warn

Conspiracy theories and “escalating disinformation” surrounding 5G pose a threat to economies and risk leaving people without fast data connections, 15 European countries have warned.

In a letter to the European Commission, the countries highlighted an increase in vandalism against telecommunication infrastructure that has resulted in more than 150 arson attacks on 5G masts throughout the continent.

It stated that special regard should be given to the false claims that electromagnetic fields (EMF) radiation from next generation networks pose a health threat and are linked to the coronavirus pandemic.

"We would like to stress that acts of vandalism against telecommunication infrastructure and escalating disinformation on EMFs and 5G are not only a threat to the economy of the affected member states but hinder also the ability for the European Union to meet its ambitious 5G goals," the letter states.

"It is important to act now to inform the public of the benefits of 5G as enablers of the digital and green transformation of our businesses and society."

The UK appears to be worst affected by the anti-5G movement, accounting for 87 of the arson attacks on 5G masts.

France and the Netherlands have also seen a significant number of attacks, with 80 masts set on fire in both countries to date.

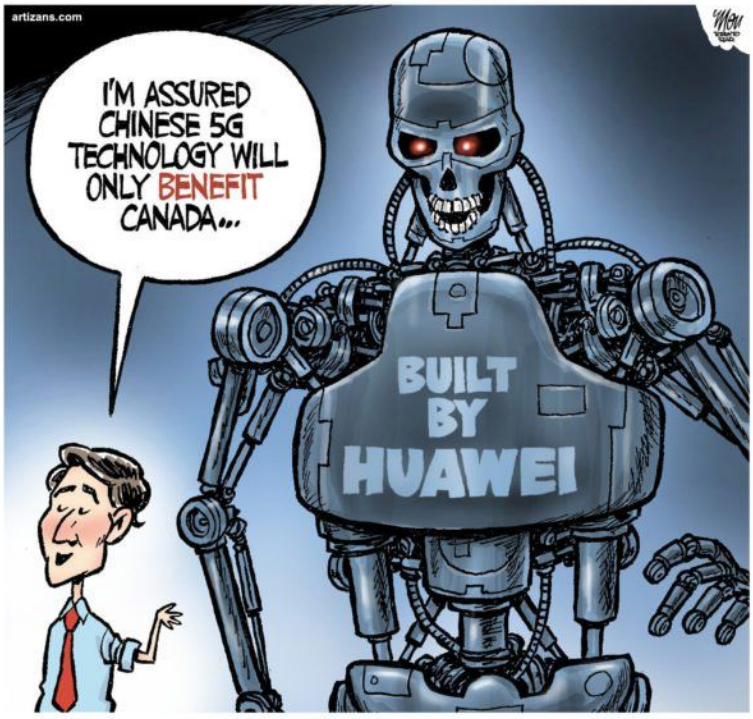
Conspiracy theories linking the roll-out of 5G to the spread of the Covid-19 coronavirus have been fuelled by dozens of Facebook groups promoting the false claims.

Facebook has taken action against the groups that proliferated on its platform earlier this year, forcing many of the conspiracy theorists to establish a presence on other apps like Telegram and WhatsApp.

The World Health Organisation's International Electromagnetic Fields Project has analysed potential EMF health concerns since 1996 and are yet to identify any adverse effects.

Adapted from *The Independent*, Monday 19 October 2020

Document 4



Justin Trudeau approves of China's 5G technology Huawei terminator robot, *Newswatch.com*, December 2018