ÉPREUVE DE LANGUE VIVANTE — ANGLAIS

SYNTHÈSE DE DOCUMENTS/TEXTE D'OPINION

Durée : 4 heures (X/ENS ou Centrale) / 3 heures (CCINP)

Sujet modulable X-ENS/Centrale-Supélec/CCINP

Vous composerez au choix l'épreuve type X/ENS OU Centrale-Supélec OU CCINP (merci d'indiquer le choix retenu en tête de copie).

Pour **l'épreuve type X/ENS**, la partie A consiste en une synthèse de 600 à 675 mots qui traitera de tous les documents de la partie A.
La partie B consiste en la rédaction d'un texte d'opinion de 500 à 600 mots, en réaction au texte d'opinion proposé.

Pour **l'épreuve type Centrale**, vous composerez une synthèse de 500 mots (+/- 10%) qui traitera de tous les documents de la partie A. La partie B ne vous concerne pas.

Pour **l'épreuve type CCNIP**, vous composerez une synthèse de 400 mots (+/- 10%) qui traitera uniquement des documents 1, 2 et 4. Vous pourrez les numéroter de 1 à 4 et vous y référer ainsi dans votre rédaction. La partie B ne vous concerne pas.

Le dossier de synthèse (partie A) se compose des documents suivants :

1. Un document iconographique extrait de *Fortune Magazine* (décembre 1957)
2. Un article de *The Guardian* (février 2021)
3. Un discours de J.F. Kennedy (juillet 1960)
4. Un essai de Glen E. Swanson (avril 2020)

Consignes de rédaction :

- Veuillez sauter des lignes, indiquez clairement le total des mots pour la synthèse ainsi que pour le texte d'opinion (si vous composez le sujet X/ENS), et ayez soin de faciliter la vérification à l'aide d'une barre tous les vingt mots.

- Rédigez votre devoir sur une feuille à grands carreaux et, en plus de la marge à gauche, tracez une marge à droite (4 carreaux).

- Veuillez laisser la page de garde vide pour la note/commentaire. Pas de bandereau, s'il vous plaît.



An advert in *Fortune Magazine,* December 1957

US billionaires vie to make space the next business frontier, Jasper Jolly, *The Guardian*, 6th Febuary 2021

Later this year Jeff Bezos, the first person to have led a business from nothing to a trillion-dollar valuation, will step down from his job as head of Amazon. But as you'd expect from a tech multibillionaire, his eyes are on a potentially biggerprize: outer space. Bezos will be dedicating more time to a space race between entrepreneur rivals that hopes to push the frontiers of society – and commerce – beyond planet Earth.

Having completed its 14th mission last month (successfully carrying a dummy, "Mannequin Skywalker", into space) Bezos's space company, Blue Origin, believes relatively cheap travel for humans is not far off. That would finally deliver a return on the

$1bn (£730m) of Amazon stock Bezos has to sell annually to fund it. Blue Origin was one of four projects flagged by the Amazon boss as likely recipients of his attention now, alongside the Washington Post newspaper, his Day One charitable fund and the environmental Earth Fund. [...]

But competition in the stratosphere will be as tough as in retail. Rival billionaire Elon Musk's SpaceX is arguably ahead of Blue Origin. Despite an uncrewed test flight last week ending in a fiery crash, SpaceX is already able to reuse its Falcon 9 rockets. Musk (no stranger to making and sometimes breaking bold promises) aims to fly to Mars as soon as 2024.

There had already been a private-sector revolution in the space industry, as US government enthusiasm for huge spending waned. Commercial companies now account for about 80% of the $424bn global space industry, according to Professor Heracleous of Warwick Business School, who has written extensively on the business of space.

Most of the industry is focused on IT, but experts believe the billionaires' efforts are about to usher in a new era, with the start of space tourism, manufacturing and more. [...]

It will be overdue in the eyes of many. Sir Richard Branson predicted that Virgin Galactic, the space tourism company he founded, would first fly in space in 2009. Nonetheless, despite false starts and a fatal crash in 2014, analysts at UBS say Virgin Galactic will in 2021 offer "the only way for consumers to gain entry into the [roughly] 560-member astronaut club in the next five years".

Cheaper technology – such as "cubesats" the size of a loaf of bread – mean more players can turn their eyes skywards. A global wave of investors looking for returns has loosed a wave of easy money, much of it through special purpose acquisition companies (Spacs) – "blank-cheque" vehicles that raise money on stock exchanges before boldly going to look for investments.

Spacs have made some investors nervous about too-easy money, but they are delivering funding. Astra, a California-based rocket company founded by a former Nasa chief technology officer, last week announced it would use a merger with a Spac to list on the Nasdaq exchange, with a valuation of $2.1bn. Momentus, a company aiming for "last-mile" transportation in space, announced last October that it, too, would take the Spacroute, for a billion-dollar valuation.

The total space industry could grow by $1tn in the next decade, according to Ron Epstein, aerospace analyst at Bank of America Merrill Lynch. He sees a turning point as technology improvements and capital combine, making space tourism and in-space manufacturing – of space stations, or even pharmaceuticals – increasingly viable. Deep-pocketed investors were playing a role similar to that of predecessors who had helped aerospace grow into a global industry, he said.

Heracleous agreed: "Accidents for SpaceX and other commercial players show that space-faring is unpredictable and dangerous. But this is the price for solving challenges and pushing the frontiers of technology and, ultimately, humanity." […]

Governments are still involved. A mission to land the first woman on the moon by 2024 appears to be one of Donald Trump's few legacies. Joe Biden's administration said last week that it would continue the programme. [...]

Taking people to the moon and beyond is a key part of both Musk's and Bezos's visions, which can verge on the apocalyptic. Bezos talked in 2019 of a trillion humans populating the solar system, far beyond the resources of Earth; Musk has made clear his belief that a Mars colony could save humanity.

[...] [The] hope for the space industry is that, by lowering the cost of space access, this billionaire race may have as-yet-unknown benefits for the world, even as the existential threat from the climate crisis looms.

Jim Cantrell, who worked with Musk at SpaceX in its early days, sourcing rockets, said the company's success had made it easier for other space projects to get off the ground. These include his latest company, Phantom Space, which aims to drive down launch costs by mass-producing small rockets.

Cantrell said cheaper access to space had started something like the "New World economy" that followed the discovery of America: "It's just beyond imagination how big it is.

Kennedy's speech on the 'New Frontier', J. F. Kennedy, 15th July 1960.

For I stand tonight facing west on what was once the last frontier. From the lands that stretch three thousand miles behind me, the pioneers of old gave up their safety, their comfort and sometimes their lives to build a new world here in the West. They were not the captives of their own doubts, the prisoners of their own price tags. Their motto was not "every man for himself"--but "all for the common cause." They were determined to make that new world strong and free, to overcome its hazards and its hardships, to conquer the enemies that threatened from without and within.

Today some would say that those struggles are all over--that all the horizons have been explored--that all the battles have been won-- that there is no longer anAmerican frontier.

But I trust that no one in this vast assemblage will agree with those sentiments. For the problems are not all solved and the battles are not all won--and we stand today on the edge of a New Frontier--the frontier of the 1960's--a frontier of unknown opportunities and perils-- a frontier of unfulfilled hopes and threats.

Woodrow Wilson's New Freedom promised our nation a new political and economic framework. Franklin Roosevelt's New Deal promised security and succor to those in need. But the New Frontier of which Ispeak is not a set of promises--it is a set of challenges. It sums up not what I intend to offer the American people, but what I intend to ask of them. It appeals to their pride, not to their pocketbook--it holds out the promise of more sacrifice instead of more security.

But I tell you the New Frontier is here, whether we seek it or not. Beyond that frontier are the uncharted areas of science and space, unsolved problems of peace and war, unconquered pockets of ignorance and prejudice, unanswered questions of poverty and surplus. It would be easier to shrink back from that frontier, to look to the safe mediocrity of the past, to be lulled by good intentions and high rhetoric--and those who prefer that course should not cast their votes for me, regardlessof party.

But I believe the times demand new invention, innovation, imagination, decision. I am asking each of you to be pioneers on that New Frontier. My call is to the young in heart, regardless of age--to all who respond to the Scriptural call: "Be strong and of a good courage; be not afraid, neither be thou dismayed."

For courage - not complacency - is our need today - leadership - not salesmanship. And the onlyvalid test of leadership is the ability to lead, and lead vigorously. A tired nation, said David Lloyd George, is a Tory nation--and the United States today cannot afford to be either tired or Tory.

There may be those who wish to hear more-- more promises to this group or that--more harsh rhetoricabout the men in the Kremlin--more assurances of a golden future, where taxes are always low and subsidies ever high. But my promises are in the platform you have adopted--our ends will not be won by rhetoric and we can have faith in the future only if we have faith in ourselves.

For the harsh facts of the matter are that we stand on this frontier at a turning-point in history. We must prove all over again whether this nation--or any nation so conceived--can long endure--whether our society--with its freedom of choice, its breadth of opportunity, its range of alternatives--can compete with the single-minded advance of the Communist system.

Can a nation organized and governed such as ours endure? That is the real question. Have we the nerve and the will? Can we carry through in an age where we will witness not only new breakthroughs in weapons of destruction--but also a race for mastery of the sky and the rain, the ocean and the tides, the far sideof space and the inside of men's minds?

Are we up to the task--are we equal to the challenge? Are we willing to match the Russian sacrifice of the present for the future--or must we sacrifice our future in order to enjoy the present?

That is the question of the New Frontier. That is the choice our nation must make--a choice that lies not merely between two men or two parties, but between the public interest and private comfort--between national greatness and national decline--between the fresh air of progress and the stale, dank atmosphere of "normalcy"--between determined dedication andcreeping mediocrity.

All mankind waits upon our decision. A whole world looks to see what we will do. We cannot fail theirtrust, we cannot fail to try.

"Space, the final frontier": *Star Trek and the national space rhetoric of Eisenhower, Kennedy, and NASA*, Glen E. Swanson, 20th April 2020.

"Space… the final frontier. These are the voyages of the Starship Enterprise, its five-year mission… to explore strange new words… to seek out new life and new civilizations… to boldly go where no man has gone before." These are the words of perhaps the most famous opening lines of narration in all of television history.

The introductory monologue by Captain James T. Kirk (William Shatner) invited viewers to join the crew of the starship Enterprise to watch a brand-new science fiction television series called *Star Trek*. [...]

Those words that launched each opening episode were the result of a postwar popularization of space that was very much present at the time of *Star Trek*'s creation. A mid-century belief in the viability of space exploration saw a revitalization of the American frontier by those who sought to use the growing popularity of the nation's space rhetoric to spread their message of exploration and conquest. This Cold War cultural effort to explore space reawakened a sense of manifest destiny in postwar America by reviving freedom, courage, and exceptionalism—the same ideals that originally drove expansionist boosters to America's west. After all, how could a country that had tamed the great North American frontier by the end of the nineteenth century not succeed in conquering the frontier of space by the 23rd century?

By the mid to late 1950s, space became the realm in which writers sought to understand and portray the changes that were rapidly occurring all around them. Science fiction mushroomed as new pulp magazines emerged to address the growing popular interest. As a result of the growing aerospace industry, trade publications such as *Missiles and Rockets* and *Aviation Week* either adapted their original editorial content or were founded anew to cover the broad spectrum of space-related, scientific, and engineering culture that began to emerge in this new industrial field.[...]

In the midst of the Cold War, space started to become a real place in popular culture as both fiction and fact began riding on the back of a galloping technology and could not dismount for fear of breaking their necks. Together, they were on a convergent course, and the lines separating fact from fiction became more blurred. Nonfiction books that romanticized humanity's future in the new frontier of space started to borrow the look and feel of many of thepopular pulps. [...]

Frederick Jackson Turner, an American historian, claimed that the American frontier had shaped America and defined the characteristics of beingAmerican. Turner posited that it was the idea of the Western Frontier that drove American history and, as a result, explained why America is what it is. [...]

Even though Turner's thesis has largely been rejected by later historians, the myth of the Western Frontier still held a powerful grip on American consciousness, and books, movies, and eventually television shows about the West became wildly popularin the twentieth century. [...]

At the same time that some people lamented what they considered the closing of the American Western frontier, some Americans searched for a "new" or "final" frontier, both in popular rhetoric and in culture. By the middle of the twentieth century, many Americans found it through television. *Star Trek* was heavily influenced by these discussions of a new frontier, particularly the language that politicians and government officials applied to space flight.

As television became more popular by the late 1950s, the main genre was Westerns. By 1959, 30 Westerns aired on prime time each week. [...] The Western as a genre held such a prominent place in America's culture because it provided a reliable formula for filmmakers to explore American history and character. Westerns would still remain popular as a television mainstay into the 1960s, but a new frontier was beginning to attract people's attention, heralded by a young senator from Boston [later becoming President Kennedy]. [...]

In the October 10, 1960, issue of *Missile and Rockets*, Kennedy issued a campaign statement on space: *"We are in a strategic space race with the Russians, and we are losing… Control of space will be decided in the next decade. If the Soviets control space they can control Earth, as in past centuries the nation that controlled the seas has dominated the continents. This does not mean that the United States desires more rights in space than any other nation. But we cannot run second in this vital race. To insure peace and freedom, we must be first… This is the new age ofexploration; space is our great New Frontier."*

For those who lamented the end of the frontier, there now emerged the new frontier of space that allowed fearlessness, rugged individualism, and other American qualities to re-emerge in the face of imminent danger posed by the Soviet Union.

On May 25, 1961, less than three weeks after astronaut Alan Sheppard safely splashed down in his Mercury spacecraft marking the first time an American had flown into space, President Kennedy addressed a joint session of Congress where he outlined an audacious plan to raise America's eyes to the stars and land men on the Moon. [...]

Seizing on the popular interest generated by the President's speech, NASA issued a publication that helped explain to the public what the less-than-five-year-old federal space agency planned to do to realize the national goal of achieving a manned lunar landing before the end of the 1960s.

PARTIE B — REDACTION D'UN TEXTE D'OPINION

The Washington Post

We asked an AI bot hundreds of questions. Here's what we learned

Humanity tends to treat any notable advance in artificial intelligence with a mixture of reverence and dread. If computers can do this, what *can't* they do? This much is certainly true of OpenAI's ChatGPT: What's world-rocking about the conversational robot, in the words of philosopher Nick Bostrom, "is not what it is but what it portends." ChatGPT, for now, is basically a useful kind of toy. You can prompt it to, say, write a rap about Electoral Count Act reform or a speech about the ethics of AI in the style of former president Donald Trump.

What's new is how convincingly human the outputs are, at least superficially. ChatGPT is conversant in a way previous chatbots haven't been — not limited to a specific subject area or confined to a limited set of responses, but instead capable of participating in open-ended "discussion". Probe a little deeper, though, and even the most fluent answers sometimes suffer from collapses of logic or contain complete fabrications.
That's because ChatGPT doesn't "think" but instead predicts: The program was trained on a trove of internet text from which it identified patterns; later, humans "fine-tuned" it by ranking the quality of its responses to certain prompts. ChatGPT makes its best guess what *should* come next, based on the words, phrases and concepts most commonly strung together in the set from which it learned.

What this means for now and what this means for the future are two different things. Give too much credence to their squawking and stochastic parrots can be dangerous. Leave aside the trouble of malicious use — whether it be lazy college students asking computers to write essays or agents of disinformation generating false news. Relying on robots for accurate answers, even with benign intentions, can be perilous. Though they will become more advanced, they will still commit errors — something, psychologists tell us, people tend to assume they won't. In other words, we can trust them *too much*. What's more, these models can repeat whatever biases existed in the data they've absorbed. And worse, when we share AI-generated text, we reinforce those biases. OpenAI has done its best to rid ChatGPT of these tendencies, but the effort hasn't been foolproof — and meddling with raw data to encode a better worldview raises questions of its own. Whose responsibility is it to instill values into AI? Whose values should those be, anyway? And how will we ever really know what's behind a bot's "brain" as we rely on it to inform our daily lives.

The more we rely on AI, the more urgent these concerns become. That's why it makes sense to demand rules of the road for these models, both from the companies that produce them and from Congress, covering everything from transparency to testing to use limitations (maybe there are some things robots just shouldn't do). But there are bigger questions, too, about how AI might transform society to the same sweeping extent as other technological revolution (…).

Some pursuits may be reserved for humans, either because they are still the most skilled at completing them or because we associate them so closely with humanity's soul and genius. AI can make art, but does that mean we'd rather the best painters and novelists put down their brushes and pens? Should we trust AI's judgment when the trade-offs involve quintessentially human values? The downside of handing so many tasks to machines is obvious: people end up out of a job. OpenAI chief executive Sam Altman predicts in his essay "Moore's Law for Everything" that "the price of many kinds of labor … will fall toward zero."

AI utopians believe humanity will find more of life's meaning elsewhere, because while the machines are busy doing the drudgery of daily living, they'll be set free to explore. Maybe they'll discover poetry they never had time to read, or go on more hikes — or maybe they'll spend all day in front of screens after all, having conversations with robots.

Whether this new world will actually come to be, and whether we're prepared for it, remain to be seen. It would require a change in the way we think about our lives. Humans today are still in control. We have the ability to decide what systems to build, and to shape the future in which we want to live. Ultimately, unleashing the full potential of the technology that appears tantalizingly close to our grasp comes down to this: What do we as a species hope to gain from artificial intelligence, and — perhaps more important — what are we willing to give up?