

CONCOURS INTERNE POUR LE RECRUTEMENT :

► d'INGÉNIEURS DES ÉTUDES ET DE L'EXPLOITATION DE
L'AVIATION CIVILE (I.E.E.A.C.)

&

► d'INGÉNIEURS DU CONTRÔLE DE LA NAVIGATION AÉRIENNE
(I.C.N.A.)

ÉPREUVE OBLIGATOIRE

ANGLAIS

Durée : 3 heures

IEEAC : Coefficient 3

ICNA : Coefficient 3

Cette épreuve comporte :

- 1 page de garde (recto)
- 1 page de consignes (recto)
- 14 pages de sujet numérotées de 1 à 14 (recto-verso)

TOUT DISPOSITIF ELECTRONIQUE EST INTERDIT (EN PARTICULIER L'USAGE DE LA CALCULATRICE)

ÉPREUVE OBLIGATOIRE D'ANGLAIS

A LIRE TRÈS ATTENTIVEMENT

L'épreuve obligatoire d'anglais de ce concours est un questionnaire à choix multiple qui sera corrigé informatiquement.

- 1) Pour remplir ce QCM, vous devez utiliser un stylo à bille ou feutre à encre foncée bleue ou noire. Vous devez **cocher** la case en vue de la lecture informatisée de votre QCM.
- 2) Utilisez le sujet comme brouillon (ou les feuilles de brouillons qui vous sont fournies à la demande par le (la) surveillant(e) qui s'occupe de votre rangée) et ne retranscrivez vos réponses qu'après vous être relu soigneusement.
- 3) Votre QCM ne doit pas être souillé, froissé, plié, écorné ou porter des inscriptions superflues, sous peine d'être rejeté informatiquement et de ne pas être corrigé.
- 4) Si vous voulez **modifier** votre réponse, n'utilisez pas de correcteur mais indiquez la nouvelle réponse sur la 2^{ème} ligne.
- 5) Si vous voulez **annuler** votre réponse, vous devez cocher la case « An ». Dans ce cas-là, **aucune** réponse ne sera prise en compte.
- 6) Cette épreuve comporte 80 questions. Vous devez donc porter vos réponses sur les lignes numérotées de 1 à 80. Veillez à bien porter vos réponses sur la ligne correspondant au numéro de la question.

Pour chaque ligne numérotée de 1 à 80, vous vous trouvez en face de 2 possibilités :

► soit vous décidez de ne pas traiter cette question,
la ligne correspondante doit rester vierge

► soit vous décidez de traiter cette question :
vous devez cocher l'une des cases A, B, C, D, E

Complétez les phrases à l'aide des mots ou groupes des mots proposés.

1. Turkish football bosses _____ all leagues after a referee was punched to the ground by a club president following a top-flight game on Monday.
A: suspected B: suspended C: superseded D: selected E: severed
2. Cacao beans began to reach Europe through Spain from 1585, after the Spanish _____ the Americas.
A: had settled B: came C: had colonised D: travelled E: had gone
3. There was a heavy _____ of snow overnight.
A: drop B: precipitation C: gust D: fall E: burst
4. Iron _____ iron oxide (rust) when exposed to water and air.
A: turns to B: turns out C: turns off D: turns back E: turns up
5. Some students find it difficult to adapt _____ life away from home.
A: with B: to C: for D: on E: in
6. The EU agreement _____ for legal oversight of technology used in popular generative AI services such as ChatGPT.
A: paves the way B: spurs the way C: stokes the way D: sets up E: lays away
7. An area of the Isle of Wight coast where a stretch of cliff _____ is at risk of further landslides, a council has warned.
A: constructed B: considered C: destroyed D: collapsed E: collapsing
8. From the way he speaks, he _____ be from London.
A: sounds as if B: sounds like C: originates D: could E: can
9. Young people experiencing loneliness at school are more likely to _____ of university.
A: drop in B: drop on C: drop out D: drop by E: drop
10. Toni Morrison was _____ an excellent writer.
A: counted B: considered C: consulted D: construed E: concluded

11. The vinyl record, a music format once _____ dead, has its groove back.
A: thought B: known C: speculated D: heard E: seemed
12. For two days this week former British prime minister Boris Johnson _____ questions at the UK's Covid inquiry.
A: had answered B: answers C: was answered D: will have answered E: has answered
13. Significant changes to the assistance being offered to people fleeing the war in Ukraine are under consideration _____ the huge pressure on Ireland's system for housing refugees.
A: within B: between C: on D: amid E: among
14. Henry Kissinger, US diplomat and Nobel Peace Prize winner, dies aged 100. George W Bush leads tributes to the former Secretary of State who left a _____ mark on American foreign policy.
A: lively B: long C: lengthy D: life E: lifelong
15. Marconi _____ send a radio signal from Britain to Newfoundland in 1901.
A: have B: should C: was able to D: had E: ought to
16. The supplier may subcontract the _____ or part of the performance of the purchase order to subcontractors.
A: all B: several C: whole D: some E: total
17. The contract _____ manufacturing, completion and maintenance of the equipment.
A: concludes B: complies C: composes D: comprises E: compromises
18. There was no bomb in the building, it was a _____ call.
A: hot B: bad C: hoax D: wrong E: false
19. Electrolysis is the passing of an electrical current through a liquid or solid _____ separate chemical compounds.
A: therefore B: in order to C: for the purpose of D: so E: thus
20. He went out _____ the fact that it was raining.
A : although B : despite C : though D : although E : regardless

Lisez le texte suivant. Complétez chaque blanc à l'aide des mots ou groupes de mots proposés à la fin du texte.

US student, 14, wins award for developing soap to treat skin cancer

A middle-school teen has been named "America's top young scientist" after developing a bar of soap that could be useful in the treatment of melanoma, a skin cancer that is diagnosed in about 100,000 people in the US each year and kills approximately 8,000. Heman Bekele, a 14-year-old ninth grader from Annandale, Virginia, won the award after beating out nine other finalists.

Bekele's idea **21)** _____ living in Ethiopia to the age of four where, he told the Washington Post, he had seen people constantly working under the hot sun : "I wanted to make my idea something that not only was great in terms of science but also could be accessible to as many people as possible."

According to American Cancer Society (ACA), skin cancer is the **22)** _____ common of all cancers, with melanoma accounting for only 1% but causing the majority of skin cancer deaths.

The society says the rates of melanoma **23)** _____ rapidly over the past few decades, particularly among women over 50, and it is more than 20 times more common in white people than in Black people.

At the same time, melanoma mortality rates have declined over the past decade **24)** _____ advances in treatment.

After winning the award, Bekele told the judging panel he hoped to turn the soap into a "symbol of hope, accessibility and a world where skin cancer treatment is **25)** _____ for all".

21. A : came along B : came from C : came across D : came down E : came to

22. A : more B : main C : most D : first E : major

23. A : have been rising B : are on the rise C : are rising D : may have risen E : must have been rising

24. A : according to B : because of C : owing D : thanks E : due

25. A : within reach B : beyond reach C : within limits D : within reason E : within rights

Lisez le texte suivant. Complétez chaque blanc à l'aide des mots ou groupes de mots proposés à la fin du texte.

Eight-year-old Brit Bodhana Sivanandan makes chess history

An eight-year-old British schoolgirl has « entered chess history » after an outstanding performance at a blitz championship in Croatia, **26)** _____ she beat a chess master more than 30 years her senior.

Bodhana Sivanandan, from Harrow, northwest London, put on a « superlative » performance, totalling a « remarkable » 8.5/13 against a field of « highly rated grandmasters, international masters and experts », said the Financial Times. The blitz tournament, which **27)** _____ in Zagreb, saw a « mammoth » entry of 555 players, including 48 grandmasters and 50 international masters.

In the **28)** _____ round of the tournament, Sivanandan beat her first international master, 39-year-old Lorin D'Costa, England's women's chess coach, before **29)** _____ with 54-year-old two-time Romanian champion Vladislav Nevednichy in the final round.

It made her the « youngest player to avoid defeat against a grandmaster in a competitive game », said The Times. Writing on X, international master Lawrence Tent called Sivanandan « one of the greatest talents I've witnessed in recent memory. The maturity of her play, her sublime touch, it's truly breathtaking. » Sivananda **30)** _____ playing chess during lockdown when she was just five years old after she « rescued an old chess board out of a bin bag », said the Daily Mail.

- | | | | | | |
|-----|-------------|-----------------|---------------|----------------|-----------------|
| 26. | A : during | B : where | C : while | D : which | E : whereas |
| 27. | A : held | B : carried out | C : performed | D : took place | E : held forth |
| 28. | A : end | B : former | C : late | D : timely | E : penultimate |
| 29. | A : drawing | B : swaying | C : facing | D : matching | E : squaring |
| 30. | A : adopted | B : launched | C : began | D : initiated | E : begun |

PAGE BLANCHE

Lisez le texte suivant. Complétez chaque blanc à l'aide des mots ou groupes de mots proposés à la fin du texte.

Catastrophic breeding failure' of emperor penguin colonies for first time due to record low Antarctic sea ice

Emperor penguins have suffered their first "widespread breeding failure" due to record low Antarctic sea ice, **31)** _____ projections the species will be virtually extinct by 2100, scientists have said.

Last year the cover of sea ice around Antarctica - ice floating on the sea surface, on **32)** _____ emperor penguins rely to hatch and rear their chicks - dropped to its lowest ever cover.

The ice is **33)** _____ stable between about April and the end of December, with chicks fledging around mid to late December.

But when it breaks up early, thought to be due to warmer seas, chicks likely drown or freeze to death because they have not yet **34)** _____ their waterproof feathers or are not ready to fledge. Emperor penguins only live in Antarctica, which is completely dark during winter, with temperatures plummeting as low as -50C.

In the Bellingshausen Sea, all sea ice **35)** _____ by November last year, well before the chicks would have developed waterproof feathers, meaning they would have drowned or frozen to death.

Sea ice **36)** _____ last year was worst in the Bellingshausen Sea region, which had lost all sea ice by November. In four out of five colonies in that region, it is **37)** _____ no chicks survived, according to a paper published on Thursday in the journal Communications Earth & Environment.

Lead author of the study, Dr Peter Fretwell, from British Antarctic Survey, called it "catastrophic". "We have never seen emperor penguins fail to breed, at this scale, in a single season," he said.

His team **38)** _____ the colonies with satellite imagery, which picked up the stains of penguin faeces on the bright white ice surface.

He called the largest of the penguin species a "window" into Antarctica, whose white surface cools the world by **39)** _____ the sun's heat, and whose currents influence weather patterns **40)** _____.

31. A: reinforcing B: replacing C: realizing D: remembering E: recommending
32. A: where B: which C: whom D: which of E: that
33. A: usually B: periodically C: probably D: commonly E: chiefly
34. A: grow B: grew C: grown D: growing E: gained
35. A: had been B: had gone C: had melt D: have gone E: could have gone
36. A: drop B: dip C: loss D: fall E: slump
37. A: doubtless B: bound C: acceptable D: likely E: leaning
38. A: trialed B: recorded C: trailed D: trawled for E: tracked
39. A: reflecting B: mirrors C: catching D: shining E: reversing
40. A: wherever B: abroad C: somewhere D: overseas E: elsewhere

Lisez le texte suivant. Complétez chaque blanc à l'aide des mots ou groupes de mots proposés à la fin du texte.

How weather apps are trying to be more accurate

Travelling the world by bicycle for two years might be too physically challenging for most of us, but Zoe Ashbridge **41)** _____ a way to make the pedalling a little bit easier. She and her partner and travelling companion Stewart use an app called Windy to track the direction of the wind.

"We use it daily," says Zoe, a 33-year-old from Shropshire. "It saves us **42)** _____ time and energy.

"Our bikes weigh around 30 to 40kg, and if we're **43)** _____ the wind, we can get sore knees. It prevents all that. Why spend two hours cycling when the next day it would take 30 minutes ?"

Weather apps **44)** _____ to become ever more detailed and bespoke, as technology and artificial intelligence continue to develop. It means more real-time **45)** _____ and personalised recommendations.

Over at the UK's Met Office, one of its biggest tech developments over the last year has been improving its digital weather maps and the data it pours into **46)** _____.

"You can see where the weather is moving in real time, and where it's coming towards you," says Sophie Yeomans-Smith, product manager at Met Office's app. "If there's a huge **47)** _____ you can look at the live rain forecast and see where it's **48)** _____ .

"We've been improving the tech underpinning it all, and changed host providers to help us make improvements. It used to be one day ahead that it would show, now it's five days."

In a **49)** _____ to tailor its products more, the Met Office has introduced dedicated beach and mountain forecasts. "With the beach forecast, it tells you how windy it is, what the waves are going to be like... and we have partnered with RNLI [the Royal National Lifeboat Institution] on it," says Ms Yeomans-Smith.

Meanwhile, the Met Office announced in August that it had joined forces with Scottish airline Loganair to further **50)** _____ its forecast accuracy. Sensors fitted to Loganair's aircraft monitor environmental conditions around the planes during flights. This data is said to help the Met Office both better predict extreme weather and pinpoint localised thunderstorms and fog.

- | | | | | | |
|-----|-------------------|------------------|--------------------|------------------|-----------------|
| 41. | A: has found | B: might find | C: could find | D: may find | E: finds |
| 42. | A: winning | B: wasting | C: working | D: losing | E: letting |
| 43. | A: going to | B: going against | C: going for | D: going ahead | E: going adrift |
| 44. | A: are continuing | B: are continued | C: were continuing | D: had continued | E: may continue |
| 45. | A: revisions | B: remakes | C: updates | D: reworks | E: revamps |
| 46. | A: him | B: it | C: you | D: us | E: them |
| 47. | A: downpour | B: drizzle | C: puddle | D: lightning | E: thunder |
| 48. | A: tracking | B: heading | C: guiding | D: aiming | E: leading |
| 49. | A: bet | B: request | C: bid | D: try | E: pick |
| 50. | A: drum up | B: foster | C: carry | D: bolster | E: prop up |

Lisez le texte suivant. Complétez chaque blanc à l'aide des mots ou groupes de mots proposés à la fin du texte.

Are Red Sea ship attacks the start of a crisis for the global economy?

Covid provided a revelation of the vulnerabilities of the global supply chain, but now war in Yemen has provided another. Attacks on shipping by Iranian-backed Houthis has reminded the world of how **51)** _____ trade is reliant on free passage through the Bab-al-Mandeb Strait, an 18-mile wide waterway at the southern entrance to the Red Sea. If shipping cannot get through that then it struggles to get through the Suez Canal.

In the past month, 15 ships have been attacked in the strait with missiles and drones, and now shipping lines have had enough. They are instead **52)** _____ their container vessels an extra 3,000 miles **53)** _____ the Cape of Good Hope. That is an extra ten days' sailing time. According to the International Chamber of Shipping, \$3 billion (£2.4 billion) worth of goods every day are carried on ships using the Suez-Red Sea route.

Could this be the beginning of another crisis for the global economy – or is it a mere hiccup? The Suez Canal has not been continuously available since it was completed in 1869. It was closed for eight years following the Six Days' War in 1967. More recently it was closed for six days in March 2021 when the container vessel Ever Given **54)** _____ on a sandbank. In just those six days, a backlog of 450 vessels had built up.

Since 2021, however, Europe **55)** _____ even more reliant on the Suez Canal-Red Sea route. The Ukraine war has led to an increase in imports of liquified natural gas (LNG) from Qatar in order to replace Russian gas.

Ship tracking sites suggest that around a quarter of all container vessels are now taking the long route via the Cape of Good Hope. For now, however, oil and gas tankers have **56)** _____ been getting through the Bab-al-Mandeb Strait. The US this week has also launched Operation Prosperity Guardian, **57)** _____ military vessels in order to protect ships taking the route. Allies have been invited to contribute.

The latest disruption comes at a time when the Panama Canal, too, is under restrictions thanks to a **58)** _____ which has starved the lake feeding the lock system. Air corridors, too, between Europe and Asia have been greatly disrupted by the Ukraine invasion. But it doesn't – yet – look like the kind of body blow which **59)** _____ to the global economy by Covid and then the Ukraine war.

If the US military exercise **60)** _____ to suppress attacks it will involve extra expense for shipping goods from Asia to Europe, but thankfully it comes at a time when inflationary forces are moderating.

- | | | | | | |
|-----|------------------|------------------|------------------|-------------------|-----------------|
| 51. | A: many | B: much | C: plenty | D: hugely | E: a lot |
| 52. | A: routing | B: rowing | C: conducting | D: piloting | E: dredging |
| 53. | A: among | B: about | C: around | D: nearby | E: at |
| 54. | A: ran off | B: ran rife | C: ran up | D: ran aground | E: ran across |
| 55. | A: has become | B: have become | C: must become | D: becomes | E: are becoming |
| 56. | A: still | B: already | C: always | D: ever | E: yet |
| 57. | A: have deployed | B: was deploying | C: deployed | D: to deploy | E: deploying |
| 58. | A: lack | B: drought | C: flood | D: precipitation | E: deficiency |
| 59. | A: is delivered | B: has delivered | C: was delivered | D: were delivered | E: delivered |
| 60. | A: fail | B: failed | C: failing | D: fails | E: will fail |

Lisez le texte suivant. Complétez chaque blanc à l'aide des mots ou groupes de mots proposés à la fin du texte.

The new generation of night trains snaking their way across Europe

The European sleeper aims to take on air travel. "We don't need to persuade everybody to come by train: just 5% of current air travellers would make us 61) _____ booked every day," its founder says.

As climate solutions go, this has to be the most restful. Go to sleep in one European capital, wake up in another with a virtuous glow alongside your fresh croissant.

I am on the first of a new generation of night trains spreading across the continent, the motive is reducing air travel. 62) _____ people are flying than before COVID, but the trends are rising once again.

Carbon emissions per passenger-mile on the train are about one fifth of those on a plane. That is one of the driving 63) _____ for Chris Engelsman, the founder of this crowd funded company : The European Sleeper.

"It's sustainable and pleasant travelling, and we really believe it will be 64) _____," he said.

This inaugural service is a strange mix between the 65) _____ and the spartan.

Night trains inevitably evoke images of retro-glamour, especially if, 66) _____ me, you've watched too many James Bond films or read too many Agatha Christie novels.

The bunk beds are comfortable, the sheets are crisp and there is a revelatory vanity unit, hidden in a corner cabinet, complete with mirrors on three sides. But the rolling stock is decades old, rented from across the continent and, 67) _____ for those hoping for decadent dining room encounters, doesn't include a restaurant car. It costs £70 for a bed in a shared compartment, and double that for a room of your own.

The European Sleeper company is 68) _____ for the construction of new carriages, but Mr Engelsman says they'll aim for affordability rather than top end.

69) _____ in a state of seemingly terminal decline after the explosion of budget flights - Europe's night trains are 70) _____.

Fuelled by a demand for greener travel options - new routes are now once again snaking across the continent - including my train from Brussels to Berlin. The expansion of night trains has support from the EU as part of its mission to cut the continent's carbon footprint.

- | | | | | | |
|-----|--------------------|----------------|-------------------|-----------------------|----------------|
| 61. | A: especially | B: fully | C: positively | D: thoroughly | E: absolutely |
| 62. | A: Least | B: Not many | C: Lesser | D: Few | E: Fewer |
| 63. | A: forces | B: efforts | C: vigor | D: might | E: strengths |
| 64. | A: fruitful | B: commercial | C: serviceable | D: favorable | E: profitable |
| 65. | A: luxury | B: comfort | C: luxurious | D: imposing | E: indulged |
| 66. | A: as | B: to | C: for | D: like | E: with |
| 67. | A: dismally | B: dolefully | C: sadly | D: gloomily | E: sorrowfully |
| 68. | A: extending | B: tendering | C: offering | D: volunteering | E: examining |
| 69. | A: Before | B: Onetime | C: Early | D: Bygone | E: Once |
| 70. | A: having a moment | B: having a go | C: having a surge | D: having a soft spot | E: having luck |

Lisez le texte suivant. Complétez chaque blanc à l'aide des mots ou groupes de mots proposés à la fin du texte.

Dangerously cold temps continue across US as 2024 presidential race begins in Iowa

Much of the United States remained gripped by an Arctic blast on Monday, cutting power to tens of thousands of customers in northern states and Texas and potentially dampening turnout in Iowa, where voters will **71)** _____ the first ballots for a Republican candidate in November's presidential race.

The dangerously frigid weather is expected to **72)** _____ throughout the day, hitting the Midwest hardest but also sending snow and freezing rain across the Southern and Mid-Atlantic states, the U.S. National Weather Service (NWS) said in a Monday bulletin.

Temperatures in Iowa are expected to plummet to a life-threatening -35 degrees Fahrenheit (-37 Celsius) on Monday night, **73)** _____ voters assemble at public gatherings called caucuses to select a Republican presidential nominee.

The hazardous conditions **74)** _____ Republican candidates to cancel campaign events on Sunday as a blizzard blanketed the state, even while they urged supporters to brave the icy temperatures and turn out to vote.

Monday's extreme weather **75)** _____ keep some voters home, but it is unlikely to change the commanding lead that polls give former President Donald Trump over his chief rivals, Florida Governor Ron DeSantis and former U.N. Ambassador Nikki Haley.

Wind **76)** _____ are forecast to dip as low as -58 degrees Fahrenheit (-50 Celsius) in states including Montana, South Dakota and North Dakota.

Thousands of flights within, into, and out of the United States were delayed or canceled on Monday, with Denver International Airport and Chicago O'Hare International Airport experiencing **77)** _____ disruptions, according to flight-tracking website FlightAware.com.

Power **78)** _____ in many places where the winter storm **79)** _____ knocked it out over the weekend, but as of midday Monday, lights remained out for more than 100,000 customers in Oregon as well as tens of thousands in Texas, Pennsylvania, and Michigan, according to data from PowerOutage.US.

The Electric Reliability Council of Texas (ERCOT) asked customers to conserve electricity from 6-10 a.m. on Monday **80)** _____ ongoing freezing temperatures, record-breaking demand and unseasonably low wind, and said similar conditions were expected on Tuesday.

- | | | | | | |
|-----|-----------------|-----------------|------------------|-----------------|--------------------|
| 71. | A: aim | B: cast | C: distribute | D: release | E: shed |
| 72. | A: linger | B: loiter | C: lag | D: disperse | E: wait |
| 73. | A: though | B: which | C: meanwhile | D: whereas | E: when |
| 74. | A: invoked | B: rendered | C: indicated | D: prompted | E: propelled |
| 75. | A: have to | B: could | C: would | D: must | E: likely |
| 76. | A: chills | B: frost | C: shivers | D: bites | E: feelings |
| 77. | A: most | B: the worst | C: highest | D: hardest | E: heaviest |
| 78. | A: had restored | B: was restored | C: would restore | D: has restored | E: hasn't restored |
| 79. | A: had | B: has | C: would | D: may | E: could |
| 80. | A: whereas | B: because | C: thanks to | D: seeing | E: due to |