



**gymnase
de
nyon**

NOTE :

NOM : _____ **Prénom :** _____

**EXAMENS D'ADMISSION AUX GYMNASSES VAUDOIS
SESSION 2021**

ÉCOLE DE MATURITÉ

ANNÉE : 1^{RE} ANNÉE
BRANCHE : ANGLAIS
SIGLE : EXAD-1M-ANG-02
EXAMEN : ÉCRIT

Durée : 3 heures

Matériel autorisé : néant.

Consignes :

- Le candidat rédige les réponses à l'encre de façon soignée.
- Les feuilles de brouillon sont remises avec l'épreuve.
- Les feuilles doivent rester agrafées.

1. Partie technique : _____ / **30 pts**

2. Partie compréhension : _____ / **30 pts**

3. Partie expression : _____ / **24 pts**

Pondération : **partie technique 20%, partie compréhension 40%,
partie expression 40% de la note finale**

1. PARTIE TECHNIQUE (20%)

total points : / 30 pts

1.1 Verb Tenses and Verb Forms

Read the following article and circle the correct verb tense or form for each gap from the choice given at the end of the text. Make sure your choice is indicated clearly.

Is Riding an E-Bike Good Exercise?

As most of us are probably aware, bike riding (1) extremely popular and aspirational so far this year, since so many of us are otherwise confined at home. Riding generally (2) people outside, making them active and heading somewhere, anywhere else. But it also involves distances, hills, wind, and this can be discouraging. E-bikes, which (3) *electric bikes*, are road or mountain bikes, with an added battery-powered motor to help pedalling power.

In the US, e-bike sales (4) by 70% more each month since the pandemic began. But this popularity may carry a price. Many of us (5) stories about e-bike accidents. Even more, some people (6) that riding one, with its pedal assistance, does not count as workout.

On that account, a German team (7) a reassuring study last year in *The International Journal of Environmental Research and Public Health*. The researchers wanted to see how people, on their own initiative, (8) the different bikes and if their riding would change with e-bikes. Scientists monitored volunteers while they (9) their e-bikes. Electric assistance did change their habits. The results show that in the end the volunteers accumulated sufficient minutes of moderate physical activity to meet the standard exercise recommendation of 150 minutes per day. When they rode the standard bikes, they (10).

(adapted from *The New York Times*, June 2020)

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| 1. a. became | b. has become | c. will become |
| 2. a. is getting | b. got | c. gets |
| 3. a. means | b. is meaning | c. will mean |
| 4. a. increased | b. were increasing | c. have increased |
| 5. a. will hear | b. have heard | c. are hearing |
| 6. a. now believe | b. are now believing | c. have now believed |
| 7. a. has published | b. was publishing | c. published |
| 8. a. were using | b. will use | c. used |
| 9. a. ride | b. were riding | c. have ridden |
| 10. a. did not | b. do not | c. will not |

.... / 10 pts

1.2 Other Grammatical and Vocabulary Features

Read the following article and circle the correct word or expression from the choice given at the end of the text to fill the gaps. Make sure your choice is indicated clearly.

Five Smart Things Honeybees Can Do

These insects' brains (1) be tiny, but they're better with numbers than many human (2) and they are masters at communicating life skills.

Crunch numbers - Last week, Australian scientists announced that honeybees (3) learn to add and subtract. Fourteen bees were (4) through 100 training exercises in a labyrinth – and got the correct answer between 64% and 72% of the time. “It is not that (5) bee could do this spontaneously, but we could teach them to do it,” said Dr Adrian Dyer, co-author of the research.

Solve tasks - (6) 2017, researchers from Queen Mary University of London demonstrated that bees are able to learn to gain a reward¹ and then show (7) to do the same. A fake bee taught (8) to move a small ball to a particular location – and (9) of them even managed to solve the task more efficiently by (10) the distance.

Give directions - Karl von Frisch was awarded the 1973 Nobel Prize for decoding the “waggle dance” performed by bees (11) inform hive-mates² about the location of pollen sources. On returning (12) the hive, a bee vibrates (13) wings in such a way as to relay information (14) the location of food in relation to the position of the sun.

Understand zero – Scientists observed that honeybees understand the concept of zero, a numerical notion (15) a child finds difficult to learn. Researchers from RMIT University in Melbourne last year showed that bees conceive zero as a number, (16) it was unclear why they had (17) mathematical skill.

Share decisions - Bees have also developed a sense of democracy. When looking (18) a location for a new home for, say, 10,000 bees, 300 (19) bees form a “senate” and fly off to find options. They use the waggle dance described above to communicate the potential locations, and it is the number of dance repetitions (20) indicates the quality of the site.

(adapted from *The Guardian*, February 2019)

¹ *reward* = something given in exchange for good behaviour

² *hive-mates* = other bees living in the same hive, which is where the bees live

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- | | | |
|-----------------|---------------|--------------|
| 1. a. could | b. may | c. must |
| 2. a. children | b. child | c. childs |
| 3. a. could | b. must | c. should |
| 4. a. putting | b. putted | c. put |
| 5. a. every | b. all | c. some |
| 6. a. At | b. In | c. On |
| 7. a. other's | b. others | c. other |
| 8. a. them | b. it | c. her |
| 9. a. some | b. none | c. any |
| 10. a. shorten | b. shortening | c. shortened |
| 11. a. by | b. for | c. to |
| 12. a. from | b. at | c. to |
| 13. a. their | b. her | c. its |
| 14. a. about | b. towards | c. over |
| 15. a. what | b. that | c. who |
| 16. a. but | b. because | c. so |
| 17. a. this | b. that | c. these |
| 18. a. like | b. at | c. for |
| 19. a. more old | b. older | c. oldest |
| 20. who | b. when | c. which |

.... /20 pts

2. PARTIE COMPREHENSION (40%)

total points : / 30 pts

2.1 Text 1

*Read the following article and circle the correct answer from the choices given at the end of the text, according to context. Only **one** answer is correct. Make sure your choice is indicated clearly. The questions follow the order of the text.*

Human Body Temperatures Are Dropping

The average human body temperature has dropped over the past 150 years, according to a new study, though it remains unclear what is behind this decrease. Researchers at the Stanford University School of Medicine have established that people's bodies are now typically cooler than the textbook figure of 37°C, first established by German physician Carl Reinhold August
5 Wunderlich in 1868.

The study shows that modern-day men have a body temperature 0.58°C lower than their 19th century counterparts, while women's are 0.32°C lower. This decrease has been attributed to "changes in our environment over the past 200 years, which have in turn driven physiological changes". However, the study acknowledges that establishing cause and effect remains
10 "inherently unprovable".

Senior author Julie Parsonnet, a professor of medicine and of health research and policy at Stanford University, says: "Our temperature is not what people think it is. What everybody grew up learning, that our normal temperature is 98.6°F [37°C], is wrong." The study offers a number of explanations for the drop in temperature, including a reduction in the human
15 metabolic rate¹. Advances in medical treatments, better hygiene, greater availability of food and improved standards of living, which provide humans with a constant ambient temperature, could all have contributed to this drop-off, the authors say.

They also suggest the cooling may be due to a population-wide decline in inflammation, with our bodies subjected to fewer infections and diseases as a result of improvements in modern
20 medicine. "Inflammation produces all sorts of proteins that speed up your metabolism and raise your temperature," says Dr Parsonnet.

"We've changed in height, weight – and we're colder. I don't really know what [the new measurements] mean in terms of health, but they're telling us something. They're telling us that we are changing and that what we've done in the last 150 years has made us change in
25 ways we haven't before. Physiologically, we're just different from what we were in the past. The

¹ *metabolic rate* = taux de métabolisme

environment that we're living in has changed, including the temperature in our homes, our contact with microorganisms and the food we have access to. All these things mean that although we think of human beings as if we're monomorphic and have been the same for all of human evolution, we're not the same. We're actually changing physiologically."

- 30 Researchers analysed temperatures from three datasets covering distinct historical periods. The earliest set, compiled from military service records, medical records and pension records from Union Army veterans of the American Civil War, captures data between 1862 and 1930 and includes people born in the early 1800s. The second set contained data from 1971 to 1975, while the third covered 2007 to 2017.
- 35 As part of the study, the authors investigated the possibility that the decrease could reflect improvements in thermometer technology. Researchers checked for body temperature trends within the three datasets and, based on the assumption that scientists took the measurements with similar thermometers for each historical group, found their observations were consistent with the broader picture. Each group saw a similar decrease every decade.

(adapted from *The Independent*, January 2020)

Multiple Choice

1. The study presented in this article has been conducted
 - a. by a German physician called Carl Reinhold August Wunderlich.
 - b. by researchers at the Stanford University School of Medicine.
 - c. over the past 150 years.
2. The study has shown that our bodies are colder than before because of
 - a. changes in the environment only.
 - b. reasons we cannot fully explain yet.
 - c. unrelated biological changes in humans.
3. People think that 37°C is our normal body temperature because
 - a. this is what we learn as children.
 - b. it is a scientific fact.
 - c. it has been this way for a long time.
4. A reduction in our metabolic rate is
 - a. the most important reason for the drop in body temperature.
 - b. of minimal consequence for the drop in body temperature.
 - c. one out of many possible causes for the drop in body temperature.

5. Inflammations

- a. are rare today because of our dropping body temperature.
- b. cause our body temperature to rise.
- c. have led to improvements in modern medicine.

6. The drop in our body temperature is

- a. one out of many changes that our bodies have experienced.
- b. the result of changes in our body height and weight.
- c. having a positive effect on our health.

7. The study was conducted using

- a. the bodies of Union Army veterans.
- b. data from three different time periods.
- c. volunteers from three different time periods.

8. The drop in body temperatures can be noticed

- a. only from one historical period to the next.
- b. within each time period.
- c. only thanks to the latest thermometer technology.

9. Choose the most appropriate summary for this article:

- a. Scientists finally understand why our bodies are getting colder.
- b. Scientists worry about our bodies getting colder.
- c. Scientists explore the reasons why our bodies are getting colder.

.... /9 pts

2.2 Text 2

Read the following article and complete the two exercises that follow it according to the instructions.

Is The Office Finished?

Most people associate the office with routine and conformity, but it is fast becoming a source of economic uncertainty and **heated** dispute. Around the world workers, bosses, landlords and governments are trying to work out if the office is **obsolete**, and are coming to radically different conclusions. Some 84% of French office workers are back at their desks, but less than

5 40% of British ones are.

Jack Dorsey, the head of Twitter, says the company's staff can work from home "forever" but Reed Hastings, the founder of Netflix, says home-working is a "pure-negative".

The pandemic has revealed just how many offices were being **run** as relics of the 20th century. Two hundred years ago steam⁴ power brought workers to factories. As corporate giants emerged in the late 19th century, staff were needed to administer them. All this **required** workers to be close together and create the pattern of people commuting⁵ by car or train in order to meet in a central office.

This system always had obvious **shortcomings**, some of which have become worse over time. Most people hate the stress and expense of commuting, which eats up over four hours a week for the **average** American worker. Some dislike the noise and formality of offices or suffer from discrimination within them. Office-bound workers find it harder to look after their children, a growing issue as more families have two working parents.

You might think that new technologies would have shaken up this unsatisfactory status quo. Yet inertia has allowed the office to escape serious **disruption**. Before Covid-19 struck, for example, flexible-office companies had a tiny global market share of under 5%. The arrival of Covid-19 **upended** all this. Before the pandemic only 3% of Americans worked from home regularly; now a huge number have tried it.

How much of this change will stay when the vaccine arrives? The best available guide is from countries where the virus is under control. There the picture is of an "optional office", which people go to, but less frequently. Rather than resist technological change, it is far better to anticipate its consequences.

(adapted from *The Economist*, 12th September 2020)

Exercise 1: Vocabulary

Circle the correct synonym for the following words in the context of the article. Only **one** answer is correct. Make sure your choice is indicated clearly.

1. **heated** (1.2)

a. tranquil

b. exciting

c. passionate

2. **obsolete** (1.3)

a. out of fashion

b. modern

c. useful

3. **run** (1.8)

a. ridiculed

b. remembered

c. managed

⁴ *steam* = water vapour

⁵ *commuting* = travelling to and from work

4. **required** (l.10)

- | | | |
|----------------|-----------|------------|
| a. recommended | b. forced | c. stopped |
|----------------|-----------|------------|

5. **shortcomings** (l.13)

- | | | |
|--------------|---------------|------------|
| a. solutions | b. advantages | c. defects |
|--------------|---------------|------------|

6. **average** (l.15)

- | | | |
|-------------|----------------|------------|
| a. standard | b. exceptional | c. popular |
|-------------|----------------|------------|

7. **disruption** (l.19)

- | | | |
|-----------------|-----------------|-----------------|
| a. continuation | b. perturbation | c. organisation |
|-----------------|-----------------|-----------------|

8. **upended** (l.21)

- | | | |
|------------|---------------|-----------|
| a. changed | b. maintained | c. showed |
|------------|---------------|-----------|

.... /8 pts

Exercise 2: True or false

Are the statements below true or false? Circle the correct option and indicate the line number(s) from the text which support(s) your answer. In order to get the point, both T/F and the line numbers need to be correct. There are no half-points. The statements follow the order of the text.

1. The office remains a place of economic stability.

True	False	Line(s) _____
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2. A majority of both French and British workers have now returned to the office.

True	False	Line(s) _____
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3. Not all directors believe that working from home is beneficial.

True	False	Line(s) _____
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4. The central office appeared at the end of the 20
- th
- century.

True	False	Line(s) _____
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5. Travelling to work can prove costly and stressful for most people.

True	False	Line(s) _____
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6. Even before Covid-19, new technologies had already led a lot of Americans to work from home.

True	False	Line(s) _____
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7. The best alternative seems to be an office where a regular presence is not needed.

True	False	Line(s) _____
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.... /7 pts

2.3 Text 3

Read the article and decide which sentence from the choice given at the end of the text fills which gap. Write the correct letters next to the given numbers. There is one sentence you will not need.

Study Finds Key to Good Pop Music

Enjoyment of music comes from the right combination of uncertainty and surprise, according to an analysis of more than 700 pop songs.

Scientists have learnt that a "good balance" between knowing what to expect and being charmed by the unexpected is what makes classic hits (1).

Vincent Cheung, the author of the study and a PhD student at the *Max Planck Institute for Human Cognitive and Brain Science* in Germany, said: "Understanding (2)."

Based on this understanding, the team developed a computer model to measure the predictive uncertainty and surprise in songs. (3)

The researchers removed elements including lyrics and melody from the songs, keeping only chord progressions. The team then looked at the brain activity of 79 study participants listening to music, using a technique known as functional magnetic resonance imaging. (4). These brain regions play a role in processing emotions, learning, memory, and processing sound.

The team said it found that music evokes pleasure "(5)" Based on their findings, the researchers suggested that further studies could explore "the combined roles of uncertainty and surprise on humans' appreciation of other art forms such as dance and film."

Mr Cheung said: "We think there is great potential in combining computational modelling and brain imaging to further understand (6)."

(adapted from *The Independent*, November 2019)

- A. Mr Cheung said: "Songs that we find pleasant are likely those which find a good balance between knowing what is going to happen next and surprising us with something we did not expect."

- B. The scientists found that the brain activity in the three regions – the amygdala, the hippocampus, and the auditory cortex – increased their activity when the test subjects were listening to music.
- C. – such as James Taylor’s “Country Road”, Tina Turner’s “What’s Love Got to Do with It?”, or The Beatles’ “Ob-La-Di, Ob-La-Da” – so “irresistibly enjoyable.”
- D. not only why we enjoy music, but also what it means to be human.
- E. because most studies in the past only looked at the effects of surprise on pleasure but not the uncertainty of the listeners’ predictions.
- F. how music activates our pleasure system in the brain could explain why listening to music might help us feel better when we are feeling blue.
- G. by encouraging the listener to continuously generate and resolve expectations as the piece continues in time.

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(6) _____

... / 6 pts

3. PARTIE EXPRESSION (40%)

total points : / 24 pts

Write a text of 200 to 250 words about the following topic. Your language use will be evaluated.

Consider the story *Ligeia* by Edgar Allan Poe. In a well-structured text, tell the events that happen in this story from Ligeia’s perspective, in the first person singular (***I*** was ...), including her feelings at the different moments of the story as well as her reasons for returning from the dead at the end.

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