



Universidad de Buenos Aires
Facultad de Derecho

Exercise N°		Professor's Name	Mark
Part I	1. Reading Comp./20
	2. Paraphrasing/30
	Total Part I (Min. 26)		50
Part II	3. Essay/50
	Total Part II (Min.26)		50

CARRERA DE TRADUCTOR PÚBLICO - ENTRANCE EXAMINATION – SEPTEMBER 2022 Tema 2

NOMBRE y APELLIDO:

N.º de ORDEN: (NO es el DNI)

Please read the text carefully and then choose the best answer. Remember the questions do not follow the order of the reading passage

The Science That Could Help You Live to 100

This is what we've learnt from worms, fruit flies and centenarians about defying the steady march of time.

In the early 1990s, Tom Perls met two people who would change his life. Perls, then a gerontology fellow at Harvard, was visiting Boston's Hebrew Rehabilitation Center for Ageing and needed to see a couple of patients who just happened to be over 100. But he couldn't find them in their rooms. He eventually tracked down one patient, a 103-year-old woman. She was busy playing Chopin and Mozart on the piano. Perls' other patient, a 101-year-old former tailor, was discovered in the occupational health room mending his housemates' clothes. "They totally surprised me and that's when the epiphany happened," says Perls. "These folks seemed to be ageing incredibly slowly compared to other people." He wanted to figure out their longevity secrets and vowed to find as many other centenarians as he could. The project became the New England Centenarian Study, the world's largest study of exceptionally old people. We spoke to longevity experts about the science that might help all of us get there and the misconceptions about ageing you should stop believing.

Myth: There's an evolutionary reason for ageing

To figure out how to slow (or even stop) ageing, we need to know why our bodies do it in the first place. But biologist Cathy Slack says scientists just aren't sure yet. "From a purely theoretical perspective, there's no beneficial reason to age," she says. The current most popular explanation is that ageing is an unwanted side effect of biological processes that promote growth and reproduction in our younger years, says Slack. After a certain point, the same mechanisms that once made us fitter start making us sicker and the body fails to turn them off. Scientists call this the 'hyperfunction' theory of ageing.

Myth: Old age automatically means poor health

Findings from Perls' study of centenarians showed the pianist and the tailor weren't outliers. People who make it to 100 aren't just long-living, they tend to avoid serious illness until the final chapter of their lives. His participants' medical histories suggest there are three broad categories of centenarian. Around 43% are 'delayers' who don't exhibit age-related diseases until they reach their eighties. Another 42% are 'survivors' who live with chronic disease from their 60s and 70s but it

doesn't kill them. The remaining 15% or so are 'escapers' - those with no clinically demonstrable disease at 100 years and over. It's true that age is a major risk factor for many serious illnesses. But Perls believes the old adage 'the older you get, the sicker you get' is false. He prefers to think of it as 'the older you get, the healthier you've been'.

Myth: There's nothing you can do to prevent death

It's likely that centenarians, and especially super-centenarians (people who live to 110 and over) have genetic variants which protect them from age-related disease, says Perls. But genetics isn't the full picture when it comes to longevity. Research suggests only about 25% of the variation in human lifespan is down to genes. Nutritional epidemiologist Frank Hu, from Harvard, agrees. His research uncovered five lifestyle factors that could gift you ten extra years of life. People who'd never smoked, didn't drink much, exercised for around 30 minutes a day, and ate a high-quality diet expanded not only their lifespan but also the number of years they lived without serious diseases. The findings are cause for optimism, says Hu. "You don't need to go vegan or run a marathon." Small healthy tweaks from middle age might extend your life significantly.

We can learn a lot from fruit flies and worms

Although studies of exceptionally old people are vital for helping us understand how to reverse ageing in humans, we're also learning a lot about longevity from seemingly unrelated organisms such as worms and insects. "I often get an incredulous look when I say I work with fruit flies," says Slack. "But what we recognise now is that animals across very diverse species actually age in quite similar ways." Slack's research focuses specifically on insulin signalling and how it contributes to ageing. "What we know is this signalling pathway allows the animal to grow bigger and to reproduce when they're young," says Slack. But she's found that if you inhibit this pathway, the laboratory creatures live far longer than they're supposed to. Slack says she can extend the life of a fruit fly by up to 20% with no ill effects, other than the organism no longer being able to reproduce. Her work builds on a discovery from nearly 30 years ago when scientists removed the insulin-signalling receptor from a worm and doubled its lifespan. But more research is needed to determine whether such findings could be extrapolated to humans, and how you would manipulate vital signalling pathways without causing harm.

Fasting might have a longevity benefit

Scientists can help flies and worms live longer using genetic manipulation tools, but they also know an easier way of prolonging the lifespan of organisms: starvation. In the 1930s, biochemist Clive McCay discovered that rats with severely restricted diets lived up to 33% longer than was previously thought possible. More recent research from the Salk Institute in California compared rats who had eaten 30% fewer calories than normal since middle age with animals on a standard diet. When the scientists analysed cells from multiple body tissues, they found cells from older dieting rats closely resembled those of much younger animals. Such work raises the possibility that calorie restriction in humans would see similar gains in lifespan, and perhaps other health outcomes. But it's not an attractive, or advisable, pursuit for most. Intermittent fasting diets where people eat normally the majority of the time – save for a couple of days on a low-calorie diet – are popular for people trying to lose weight. And some experts believe these plans could have a longevity benefit, but the evidence is far from clear yet. "Some people find intermittent fasting is a great way to maintain a healthy weight," says Slack. "But whether or not it's going to be proven beneficial in terms of living longer is yet to be seen."

PART I (Minimum Passing Mark: 26 points)

PAPER1

1. READING COMPREHENSION
All the correct answers are awarded 2 points each.

- 1- The main purpose of the article is to:
 - a) Provide different suggestions on how to live longer
 - b) Show the result of different studies performed in animals and insects
 - c) Debunk some myths related to ageing
 - d) Provide a scientific explanation for longevity
 - e) Show a possible correlation between fasting and longevity
 - f) C), D) and E) are correct
 - g) All of the above

- 2- According to biologist Cathy Slack, there are no theoretical grounds to support the idea that we have sound reasons to explain ageing.
 - a) True
 - b) False
 - c) Not stated

- 3- Choose the right option. With the underlined statement in paragraph 3, Perls:
 - a) Shows that centenarians haven't suffered from serious illnesses.
 - b) Debunks the myth "old age automatically means poor health".
 - c) Shares a point of view according to which if you live longer it is because you've had a healthy lifestyle.
 - d) All of the above.
 - e) None of the above

- 4- Choose all that apply. Findings from Perls' study showed that:
 - a) Most centenarians haven't suffered from serious illnesses during their lives.
 - b) Almost the same percentage of centenarians have either delayed age-related diseases or survived them.
 - c) There is a small percentage of centenarians who haven't shown evidence of disease.

- 5- According to the article, we could live longer only if we followed a strictly healthy lifestyle during all of our lives.
 - a) True
 - b) False
 - c) Not stated

- 6- Paragraph 3: "*Findings from Perls' study of centenarians showed the pianist and the tailor weren't outliers*" can be best paraphrased as:
 - a) They were in fact being honest about the way in which they managed to make it to 100 years.

- b) They were merely lucky to have lived that long.
- c) They weren't just isolated centenarians but a part of a long-ageing group that can be used to draw general conclusions when it comes to longevity.

7- The conclusion that can be drawn from the article is that:

- a) There's no way to defy the passing of time and its consequences in our health
- b) Only our genes can determine whether we will make it to 100 years or not
- c) Our genes may have an impact on our lifespan, but our healthy lifestyle makes the difference when it comes to longevity.

8- People who have never smoked, don't drink much and exercise for around 30 minutes a day are expected to expand their lifespan and totally avoid serious diseases.

- a) True
- b) False
- c) Not stated

9- According to the article, the intermittent fasting diet: (Choose all that apply)

- a) is an eating plan that helps to live longer
- b) is likely to help people live longer
- c) does not help to live longer
- d) prevents serious diseases
- e) is an eating plan that allows people to eat normally and fast during a period of time
- f) All of the above
- g) None of the above

10- According to Slack, species which appear to be unrelated in fact develop and age quite similarly.

- a) True
- b) False
- c) Not stated

2. USE OF ENGLISH: PARAPHRASING (30 points)

All the correct answers are awarded 3 points each.

Use the given beginnings.

DO NOT change the meaning. There is no limit to the number of words you can write

1. Fasting might have a longevity benefit, but that is yet to be seen.

(likely)

Fasting

2. Everyone believes that old age automatically means poor health. **(Use the passive)**

(result)

Old age

(AD229JZ)

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3. Perls was so surprised by the centenarians at the Hebrew Rehabilitation Center for Ageing that he wanted to figure out their longevity secrets.

Such that he wanted to figure out their longevity secrets.

4. Perls being greatly surprised by those centenarians, the New England Centenarian Study project started.

But for, the New England Centenarian Study project wouldn't have started.

5. Although studies of exceptionally old people are vital for helping us understand how to reverse ageing in humans, we're also learning a lot about longevity from worms and insects. (**do NOT use the fact that...**)

Despite,
.....we're also learning a lot about longevity from worms and insects.

6. Frank Hu, a nutritional epidemiologist, said: "You don't need to go vegan or run a marathon. Small healthy tweaks might extend your life significantly." (**Use reported speech AND emphasis**)
(what)

Frank Hu, a nutritional epidemiologist, said that

7. We need to stop believing that genetics is all that matters when it comes to longevity (**deemed**)

It is essential that genetics.....
when it comes to longevity.

8. It's not advisable to restrict calories in order to extend one's lifespan or lose weight, according to scientists.
(contribute)

Little

(AD229JZ)
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9. Scientists can help insects live longer using genetic manipulation tools, but they can also prolong the lifespan of organisms through starvation.

(as well)

Not only

.....

10. Further research is required to determine whether the findings could be extrapolated to humans.

(determined)

Only after

PART II (Minimum Passing Mark 26)

3. ESSAY WRITING (350 words)

Write an opinion essay on ONE of the topics below:

Credit will be given to an orderly presentation and clear handwriting

(A) **Opinion Essay:** Life expectancy depends on the country you live in. Do you agree?

(B) **For and Against Essay:** Pros and Cons of living over 100 years.

Make sure you include:

- Complex structures (inversion of order, conditionals, passive voice, correct linkers)
- Relevant vocabulary
- Meaningful and clear ideas to support your point
- Well-ordered and cohesive paragraphs
