

Proves d'accés a la universitat

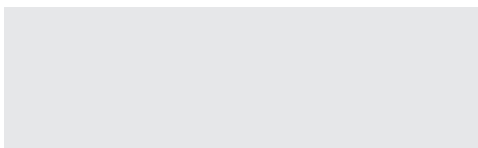
Llengua estrangera

Anglès

Sèrie 2 - A

| Qualificació | | TR |
|------------------------|--|----|
| Comprensió oral | | |
| Comprensió escrita | | |
| Redacció | | |
| Suma de notes parcials | | |
| Qualificació final | | |

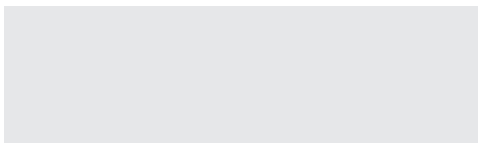
Etiqueta de l'alumne/a



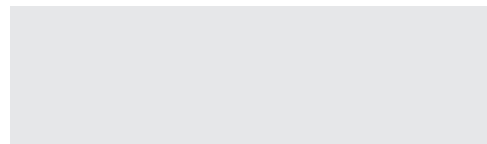
Ubicació del tribunal

Número del tribunal

Etiqueta de qualificació



Etiqueta del corrector/a



Part 1: Listening comprehension

GOALBALL, A UNIQUE SPORT

In this radio programme you are going to hear some new words. Read and listen to them. Make sure you know what they mean.

goalball: golbol

low vision: baixa visió / baja visión

eyeshade: antifaç / antifaz

Ready?

Now read the questions on the following page. Read them carefully before listening to the radio programme.

[Now listen to the interview.]

Part 2: Reading comprehension

THE WOMAN WHO SAVED MILLIONS OF LIVES WITHOUT KNOWING

One young black woman made one of the greatest contributions of all time to modern medicine, even though she never knew the important role she has played.

Henrietta Lacks was diagnosed with cervical cancer in 1951 at the age of 31, shortly after giving birth to her fifth child. At the time, segregation was widespread in the US, so she turned to Johns Hopkins Hospital in Baltimore, Maryland, as it was one of the few which provided medical care to black people.

The **ward** where she ended up was down the hall from George Gey, a researcher who had been trying to grow human cells in his lab for decades. During the treatment to remove her tumour, her doctor sent a small sample of **tissue** without her knowing to Gey. Up to this point, attempts to grow human cells outside the body had failed. But something about Lacks's cells was about to change that.

In most people a natural process called *senescence* puts a limit on the lifespan of cells. Senescence is linked to aging: as cells divide and multiply over time, the accuracy of each accompanying replication of DNA decreases. The protective caps on the end of each **strand** of DNA, which are called *telomeres*, shorten. Eventually the DNA strands become unprotected and mutations associated with cancers and other age-related diseases arise.

Typically human cells are able to divide around 50 times before they reach senescence. But Lacks's cells were different. In the laboratory, her cells were able to divide and replicate indefinitely. They were, in essence, immortal. It made them perfect for medical research as a **culture** of identical cells could be grown quickly. Gey shared them widely with other scientists, and they became a workhorse of biological research.

Her cell line, which came to be known as "HeLa" in honour of Lacks, is the first and most commonly used immortalised cell line in medicine. Today, work done with HeLa cells **underpins** much of modern medicine. Millions of people owe their lives to the tissue taken from her—the cell line it generated was used to create the first polio vaccine, cancer medicines and *in vitro* fertilisation. Her cells even made it into space before any living human. One of the most recent applications has been in research for vaccines against COVID-19.

But the story of Henrietta Lacks also illustrates the racial inequities that are embedded in American medical research and health-care systems. Lacks was a black woman. Doctors and scientists revealed Lacks's name publicly, gave her medical records to the media and even published her cells' genome online, repeatedly failing to ask her family for consent. None of the biotechnology or other companies that profited from her cells passed any money back to her family, either.

Now, the extraordinary events of 2020—the #BlackLivesMatter movement for racial justice, and the unequal **death toll** of COVID-19 on communities of colour—are forcing scientists to reconsider past injustices. Some have called for a reduction, or even an end, in the use of HeLa cells in research. The argument is that, because the cells were obtained without Lacks's knowledge or consent (even though this was legal at the time), any use of them is unethical and perpetuates an injustice.

But that is not what many Lacks family members want. Henrietta Lacks has dozens of descendants, several of whom are calling for people to celebrate her life and legacy in her centennial year, #HELA100. To her grandson Alfred Lacks Carter, the most important thing about HeLa cells is how they have advanced cancer research—an adequate tribute, given that Lacks died of the disease at the young age of 31. "The cells were taken in a bad way but they are doing good for the world," he says. And they do so for people of all ethnicities.

Text adapted from an article on
BBC.com (November 20, 2020)

ward: sala d'hospital / sala de hospital

tissue: teixit / tejido

strand: cadena

culture: cultiu / cultivo

underpins: forma la base de

death toll: nombre de víctimes / número de víctimas

QUESTIONS

Choose the best answer according to the text. Only ONE answer is correct.

[3 points: 0.375 points for each correct answer. Wrong answers will be penalized by deducting 0.125 points. There is no penalty for unanswered questions.]

| | | Espai per al corrector/a | | |
|----|--|--------------------------|--------------------------|--------------------------|
| | | Correcta | Incorrecta | No contestada |
| 1. | Which one of the following sentences about Henrietta Lacks is NOT true? <input type="checkbox"/> She is responsible for a great advance in medicine. <input type="checkbox"/> She died while giving birth to her fifth son. <input type="checkbox"/> She never knew of her contribution to medicine. <input type="checkbox"/> She was segregated for being black. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. | When Henrietta Lacks was in hospital, George Gey <input type="checkbox"/> operated to remove her tumour. <input type="checkbox"/> received some of her tissue. <input type="checkbox"/> informed her of his experiments. <input type="checkbox"/> was growing human cells in his lab. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. | Because of senescence, <input type="checkbox"/> cells continue dividing and multiplying. <input type="checkbox"/> the DNA replicates perfectly throughout one's lifetime. <input type="checkbox"/> cancers are avoided. <input type="checkbox"/> cells eventually die. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. | Lacks's cells "became a workhorse of biological research." This means that <input type="checkbox"/> they were used over and over again. <input type="checkbox"/> they divided endlessly. <input type="checkbox"/> they could be shared easily. <input type="checkbox"/> they were preserved in a lab. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. | The HeLa cell line <input type="checkbox"/> has been the basis for medical research for years. <input type="checkbox"/> was immortalised in a laboratory. <input type="checkbox"/> is only used in studies on the health of black people. <input type="checkbox"/> cannot be used in present-day research anymore. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. | According to the text, <input type="checkbox"/> neither Henrietta nor her family were ever asked permission to conduct experiments with her cells. <input type="checkbox"/> the companies that used her cells in their products have paid her family compensation. <input type="checkbox"/> Lacks's medical records have been very useful to scientists and doctors, and that's why they were published. <input type="checkbox"/> Black people at that time had their lives exposed by doctors and the health-care system. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. | The #BlackLivesMatter movement <input type="checkbox"/> has made researchers consider stopping the use of HeLa cells completely. <input type="checkbox"/> has increased the number of COVID-19 deaths among black people. <input type="checkbox"/> considers the research done with HeLa cells illegal. <input type="checkbox"/> expects scientists to continue the experiments with HeLa cells. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. | Some of Henrietta's descendants <input type="checkbox"/> want to pay tribute to all the people who have died of cancer. <input type="checkbox"/> do not mind what was done wrong, because the result was worth it. <input type="checkbox"/> are organising a party to celebrate the anniversary of her death. <input type="checkbox"/> are encouraging people of all races to contribute to cancer research. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | Correctes | Incorrectes | No contestades |
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| Recompte de les respostes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Nota de comprensió escrita | <input style="width: 100px; height: 20px;" type="text"/> | | |

Part 3: Writing

Choose ONE topic. Your answer should be 125-150 words in length. There is no specific penalty for exceeding 150 words in length. Extra points are not given for exceeding 150 words. [4 points]

1. “Medical research is subject to ethical standards that promote and ensure respect for all human subjects and protect their health and rights. While the primary purpose of medical research is to generate new knowledge, this goal can never take precedence over the rights and interests of individual research subjects.” Write a **for-and-against essay** about the rights and interests of individuals vs. the goal of advancing medical knowledge.
2. The #BlackLivesMatter movement is dedicated to fighting racism and anti-black violence, especially in the form of police brutality, and demands that society value the lives and humanity of black people as much as it values the lives and humanity of white people. Do you think such a movement is necessary today? Write an **opinion essay**.
3. Imagine that you have a friend who doesn’t know if they want to study at university after high school or if they want to enroll in a program of vocational or professional training for 1 or 2 years. Write an **email** to them giving advice on their future studies.

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Etiqueta de l'alumne/a



Institut
d'Estudis
Catalans

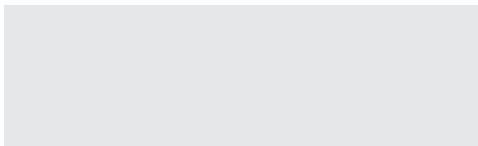
Proves d'accés a la universitat

Llengua estrangera Anglès

Sèrie 5 - A

| Qualificació | | TR |
|------------------------|--|----|
| Comprensió oral | | |
| Comprensió escrita | | |
| Redacció | | |
| Suma de notes parcials | | |
| Qualificació final | | |

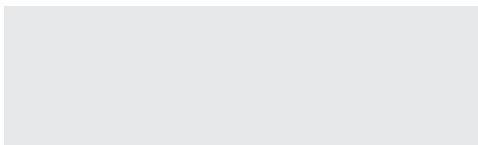
Etiqueta de l'alumne/a



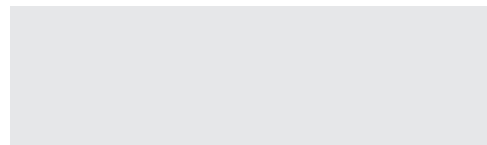
Ubicació del tribunal

Número del tribunal

Etiqueta de qualificació



Etiqueta del corrector/a



Part 1: Listening comprehension

THE MYSTERY OF JIM THOMPSON

In the following conversation you are going to hear some new words. Read and listen to them. Make sure you know what they mean.

silk: seda

guild: gremi / gremio

spinner: filador / hilandero

fabrics: roba, tela / ropa, tela

legacy: llegat / legado

teakwood: teca (tipus de fusta / tipo de madera)

Ready?

Now read the questions on the following page. Read them carefully before listening to the conversation.

[Now listen to the interview.]

Part 2: Reading comprehension

IS PLASTIC A DEADLY THREAT TO WILDLIFE?

On a boat off Costa Rica, a biologist uses a Swiss army knife to try to extract a plastic straw from a sea turtle. The turtle seems to be dying, bleeding profusely. For eight painful minutes a video on YouTube—which has registered more than 20 million views—shows horrifying images that are hard to watch. In the end, the desperate biologists manage to remove a four-inch-long straw from the creature's nose.

These shocking scenes show the dangers of plastic on wildlife: images of a dead bird covered in oil or a flatback turtle stuck in a fishing net have spread widely in the media. But most of the time, the harm is not so noticeable. **Seagulls** that nest on islands off the coast of Australia and New Zealand eat more plastic as a proportion of their body mass than any other marine animal. Researchers say that in one large population, 90 % of the baby birds had already ingested some. A plastic piece **piercing** an intestine can kill any bird quickly. And what's worse, the consumption of plastic usually leads marine birds to suffer from chronic, permanent hunger.

Matthew Savoca, a marine biologist with the National Oceanic and Atmospheric Administration in the U.S., complains, "the really sad thing about this is that birds are eating plastic thinking that it is food." He goes on to add, "imagine you ate lunch and then just felt weak and lethargic and hungry all day, which would be very confusing." Seabirds use energy that their malnourished bodies cannot provide. That is why they **roam** farther in search of real food, but only to take back plastic waste to feed their young. Savoca has also come to the conclusion that fish such as anchovies eat plastic because it smells like food once it is covered with algae.

What makes plastic useful for people—it's durable, light, and easy to throw out—increases the threat to animals. Plastic lasts a very long time, perhaps for more than 400 years and besides, most of it floats. Scientists suggest that single-use plastic is the worst offender: straws, water bottles, and plastic bags have been proved to be the most serious danger to marine species. For instance, 700 marine species have been reported—so far—to have eaten or become entangled in plastic.

Society does not fully understand the long-term impact of plastic on wildlife, nor its impact on us. In an historical perspective, humans are not used to the massive use of this material. The first documented cases of seabirds ingesting plastic referred to 74 albatrosses found on a Pacific **atoll** in 1966, when plastic production was roughly 5 % of what it is today.

The widespread use of plastic in millions of products and the very nature of plastic waste mean that science is unlikely to be able to solve this huge problem any time soon. It is preferable to take policy action now before waiting for the situation to become even worse. The first step would be identifying places where plastic has been shown to be harmful for birds and then take forceful measures there. Passing a law banning the sale of plastic products in those places would be a significant step forward, for instance. In the end, people currently use plastics because they are easy to use and cheap, but increasingly we are realizing that in the long term, plastics are expensive and a serious threat to the environment.

Text adapted from an article in *National Geographic Magazine* (June 2018)

seagull: gavina / gaviota
to pierce: perforar
to roam: vagar
atoll: atol / atolón

QUESTIONS

Choose the best answer according to the text. Only ONE answer is correct.

[3 points: 0.375 points for each correct answer. Wrong answers will be penalized by deducting 0.125 points. There is no penalty for unanswered questions.]

1. Which of the following statements is NOT true?
 - A plastic straw was removed from the sea turtle.
 - The images seen on YouTube are tough to watch.
 - The biologists extracted the straw right away.
 - A plastic straw made the turtle bleed.

2. The harm that plastic causes on marine birds
 - results in a constant feeling of hunger.
 - has resulted in fewer anchovies in the sea.
 - is minor in 90 % of cases.
 - prevents them from migrating.

3. We can deduce from Matthew Savoca's research that
 - anchovies cannot smell algae.
 - anchovies feed on algae.
 - seagulls migrate to avoid eating plastics.
 - seagulls feed on anchovies.

4. Plastic is a threat to animals because
 - it is poisonous.
 - most of it does not remain on the sea surface.
 - it can be thrown away easily.
 - it does not last very long.

5. Straws, water bottles and plastic bags
 - sink down to the ocean floor.
 - float for a short time.
 - are eaten by only a few marine species.
 - last much longer than expected.

6. The massive use of plastic
 - started on a Pacific island in 1966.
 - has been documented since 1966.
 - has not changed in the last 50 years.
 - is a relatively recent phenomenon.

7. The impact of plastic waste on wildlife
 - was predicted by scientists 30 years ago.
 - can be easily solved by science.
 - requires government intervention.
 - has remained the same over the years.

8. According to the text, which of the following is an effective solution to the threat of plastic waste on wildlife?
 - Delaying taking measures now and waiting for science to solve the problem.
 - Financing scientific research to change the nature of plastic.
 - Locating crucial areas and then forbidding plastics there.
 - Taking voluntary measures to reduce people's use of plastic.

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| Nota de comprensió escrita | <input style="width: 100%;" type="text"/> | | |

Part 3: Writing

Choose ONE topic. Your answer should be 125-150 words in length. There is no specific penalty for exceeding 150 words in length. Extra points are not given for exceeding 150 words. [4 points]

1. Last summer you went rock climbing in the Pyrenees and realized that all the surroundings were full of plastic waste. Write an **informal letter** to a friend of yours describing your feelings.

2. Imagine that you are the chief editor of an important newspaper and you decide to write an editorial about the environment and global warming. Write a **formal essay** arguing for strong, efficient measures to protect the environment.

3. You have recently finished high school. A few years from now, when you look back on your time in high school, what part will you remember fondly? And which part will you wish you could forget? Write an **essay** describing how you think you will view your high school experience.

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Etiqueta de l'alumne/a



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