**Part 1.MCQ** [**https://www.englishaula.com/en/cambridge-english-test-exam-preparation/cambridge-english-proficiency-c2-proficiency/listening/exam-parts/exercise-practice-test/0-3-5-5317875497697280/**](https://www.englishaula.com/en/cambridge-english-test-exam-preparation/cambridge-english-proficiency-c2-proficiency/listening/exam-parts/exercise-practice-test/0-3-5-5317875497697280/)

Pema is an artist and Louise has a business styling and photographing flowers as they've now known each other for 35 years you might think that they’d settle there is to be said but that didn't prove to be the case. Pema is married with two children. Louise is married with three kids and they both agree that having a close friendship one where they can rely on each other with no expectations has helped them through the toughest of times. I think your choice of friends on your teenager is probably really really important, probably more indicative of who you really want to be precisely because when you're young you know you just want to play with someone who wants a you know like is you doing or yeah always got the great sweeties or whatever. But you know when you're a teenager and you’re stepping out if you like into the wide world for the first time you want someone who really resonates with you. I recalled having one and a half arguments with you in our 35 years you could only remember half so you had the other one on your own period imagination. I think that 50 there's this sense of you know now what it feels like I'm trying to reinvent myself again. So it kind of feels this is like the next change so what are you preparing to do next after this one that you can tick off list there's the singing in the choir oh cool. Yeah I've emailed somebody about that brilliant well I really want to do actually the one I'm keen to do next is with hammer building today building a fort and I'm trying to find it now or building a fort in your other ground yeah maybe IKEA build a blanket for with Hannah and either play games under it or watch a film under it yeah it's the simple one I mean yeah there's a go on a pilgrimage or road trip somewhere you know and I've been thinking about that and do I get an India or do it you know but it's the real simple ones. I'm really looking forward to all run an art based workshop for others on a subject of your choice. I was going to make a quilt you know like when women are getting older they make up Smiggle that compulsory okay that tell us that Cup just before surgical stocking and the blue-rinse. So yeah I wanted to make a quilt but not stitched in the kind of traditional way and I was going to draw pictures and stitch them together in this big quilt you know I'm amending yeah. I think I might do that sounds like a video now for that see you wrap yourself up in it and yet all okay cuz just in your hair yeah career fair now. I think something about stitching together all the bits of yourself that maybe that feel fragmented like what am I going to be when I grow up oh yeah still don't know kind of stitching all those bits together when you get to 50 maybe there should be 50 P pictures hmm. Then I'll exhibit it and that will be number whatever 45 done or something hmm do you think isn't a higher a gallery or higher a space a hole or I can't remember what the exact word to the challenge were I thought maybe the tape would be drifted all right it'll be right now listen again pema is an artist and wheeze the business styling and photographing flowers. As they've now known each other for 35 years you might think that they’d settle there is to be said but that didn't prove to be the case Pema is married with two children. Louise is married with three kids and they both agree that having a close friendship one where they can rely on each other with no expectations has helped them through the toughest of times. I think your choice of friends when you're a teenager is probably really really important probably more indicative of who you really want to be precisely because when you're young you know you just want to play with someone who wants to you know like is you being all yeah we've always got the great sweet peas or whatever but you know when you're a teenager and you're stepping out if you like into the wide world for the first time you want someone who really resonates with you. I recalled having one and a half arguments with you in our 35 years you could only remember half - yeah the other one on your own the other really the origination I think at 50 there's this sense of you know now what it feels like I'm trying to reinvent myself again. So it kind of feels this is like the next challenge so what are you preparing to do next after this one that you can tick off list there's the singing in the choir oh cool yeah I've emailed somebody about that brilliant what I really want to do actually the one I'm keen to do next is with hammer building to say building a fort and I'm trying to find it now or building a fort in your order ground yeah maybe okay build a blanket for with Hannah and either play games under it or watch a film under it yeah it's the simple one. I mean yeah there's a go on a pilgrimage or road trip somewhere you know and I've been thinking about that and do I go to India or do it you know but it's the real simple ones I'm really looking forward to all run an art based workshop for others on a subject of your choice I was going to make a quilt you know like when women are getting older they make up the exact exact compulsory okay that tell us back just before Surgical stockings and a blue-rinse. So yeah I wanted to make a quilt but not stitched in the kind of traditional way and I was going to draw pictures and stitch them together like in this big quilt yes nothing mending yeah I think I might do that sounds like a video now Philadelphia to wrap yourself up in it and yet all okay it’s just in your head yeah career fair now I think something about stitching together all the bits of yourself that maybe that feel fragmented like what am I going to be when I grow up oh yeah still don't know kind of stitching all those bits together when you get to 50 maybe there should be 50 P pictures hmm then I'll exhibit it and that will be number Y as a 45 done or something hmm do you think you're gonna hire a gallery or hire a space a hole or I can't remember what the exact words the challenge were I thought maybe the tape was putrid all right we'll be right there

**Part 2. True or False** [**https://www.youtube.com/watch?v=pI19xAquCdM**](https://www.youtube.com/watch?v=pI19xAquCdM)

Royal weddings like Prince Harry and Meghan Markle’s here in Windsor are expensive affairs. The last royal wediing, for Prince William and Kate Middleton, cost an estimated $34 million dollars. And that’s low compared to the price tag for Prince Charles and Princess Diana’s wedding, which is predicted to have totaled a hefty $150 million in today’s dollars.

You’ve got to be pretty rich to foot bills this big, so just how rich is the royal family?

The personal finances of Britain’s royal family are kept very private, but let’s try to break it down.

What we do know is that Queen Elizabeth II is the wealthiest member of the royal family. Forbes estimates the queen’s personal net worth is around $530 million. That’s a lot - but for context, not enough to put her on the list of the world’s richest people. So where does the queen’s money come from? It’s a little complicated, but it can all be traced back to three main sources: her personal wealth and income, the Sovereign Grant and the Privy Purse.

ok, let’s start with personal wealth and income. This include assets from the queen’s investment portfolio and private estates.

The queen’s personal investment portfolio includes things like her private jewelry and art. Then there’s her property - like the Balmoral Estate in Scotland and the Sandringham Estate in the English countryside. The queen inherited both from her father and their combined value is estimated to be around $175 million. When it comes to her personal income, the queen also has a lucrative hobby: horse racing. It’s reported she’s raked in $9 million over the past three decades from the sport.

Now let’s look at the second source of the queen’s money: the Sovereign Grant.

This is a lump sum the queen received from the government to pay for official duties, things like receptions, travel and maintenance of the royal palaces. The Sovereign Grant for 2017 and 2017 is around $100 million. The Duke of Edinburgh, Queen Elizabeth’s husband, received an additional annual allowance from parliament fo nearly $500,000 to carry out his public duties.

So where does the money in the Sovereign Grant come from? The short answer is UK taxpayers. In 2016 and 2017, the queen collected around 90cents per person in the country. That’s the cost of one single first-class stamp.

Let’s go back to the queen’s third source of income: the Privy Purse.

This is a fancy way of referring to the money generated by a very large plot of land, property and assets called the Duchy of Lancaster. The Duchy’s main purpose is to provide income for the Duke of Lancaster. That’s a title that has represented the reigning sovereign since 1399. The queen is sometimes referred to as the “Duke” of Lancaster. It’s estimated the value of the Duchy of Lancaster is around $700 million. The queen received an annual income of around $25 million from that.

The queen’s son, Charles Prince of Wales, received a similar income from the Duchy of Cornwall. That’s because he’s heir to the crown. His estimated net worth is around $400 million. In total, the queen’s immediate family is value at more than $1 billion. Wealth estimated for the younger generation of royals are around $30 million for Prince William, $7 million for the Duchess of Cambridge and 25 million for Prince Harry.

This all adds up to a lot of money. But sometimes people think the royal family is worth even more. Well it turns out a lot of the most valuable assets aren’t actually owned by the royal family. They’re a part of two separate funds.

One is an organization called the Crown Estate, valued at a whooping 17 billion. It’s a real estate business that includes major chunks of property around the UK. The Crown Estate is managed by an independent board of directors and its profits go to the TK Treasury. The second fund is the Royal Collection Trust. This includes a lot fo the things you would typically associate with Britain’s royal family. We’re talking palaces, famous art collections and of course, the crown jewels. The Toal value of the Royal Collection is estimated to be around 15 billion. But since it’s part of a trust that’s passed down from generation to generation, the queen doesn’t personally own these valuable assets.

There’s not question the royal family is rich. But simply measuring up their assets might not actually give us a full picture of their wealth. It’s estimated the monarchy’s brand brings in more than 1 billion to the TK economy every year. Now that’s a number fit for a queen.

**Part 3. Fill in the blank** [**https://www.youtube.com/watch?v=iMtXqTmfta0&t=5s**](https://www.youtube.com/watch?v=iMtXqTmfta0&t=5s)

In 1989, Japan’s Shinkansen Bullet Train had a problem. It was last - really fast - like pushing 170 miles per hour fast. But every time it exited a tunnel - it was loud. The noise was coming from a variety of sources, but whenever a train sped into a tunnel, it pushed waves of atmospheric pressure through the other end. The air exits tunnels with a sonic boom that could be heard 400 meters away. In dense residential areas, that was a huge problem.

So, an engineering team was brought in to design a quieter, faster, and more efficient train. And they had one secret weapon: Eiji Nakatsu - the general manager of the technical development department - was a birdwatcher.

Different components of the redesigned bullet train were based on different birds. Owls inspired the pantograph - that’s the rig that connects the train to the electric wires above.

Nakatsu modeled the redesign after their feathers, reducing noise by using the same serrations and curvature that allow them to silently swoop down to catch prey. The Adelie penguin - whose smooth body allows it to swim and slide effortlessly - inspired the pantograph’s supporting shaft, redesigned for lower wind resistance.

And perhaps most notable of all was the Kingfisher. The Kingfisher is a bird that dives into water to catch its prey. The unique shape of its beak allows it to do that while barely making a splash. Nakatsu took that shoe to the design table. The team shot bullets shaped like different train nose models down a pipe to measure pressure waves, and dropped them in water to measure the splash size. The quietest nose design was the one modeled most closely after the Kingfisher’s beak.

When the redesign debuted in 1997, it was 10% faster, used 15% less electricity, and stayed under the 70 dB noise limit in residential areas. And it did all that with the wings of an owl, the belly of penguin, and the nose of a Kingfisher.

There’s a name for design like this. It’s called biomimicry.

“The people who design our world usually never take a biology class, believe it or not. So they’re novices in how the world works.”

That’s … Back in 1997, she wrote the book that coined the term “Biomimicry”. It told the story of the innovations in computing, energy, and health that were inspired by structures in the natural world.

“Stick like a gecko. Computer like a cell. Even run a business like a redwood forest.”

Benyus has since worked as a consultant for various companies, trying to get them to understand how to take design ideas from nature. That might mean studying prairie dog burrows to build better air ventilation systems, mimicking shark skin to create bacteria-resistant plastic surfaces for hospitals, or arranging wind turbines in the same drag-reducing pattern that schools of fish swim in.

Designers get inspiration from a lot of different places, but Benyus thinks many of them could benefit from looking more at the natural world.

“So there’s a lot of looking at what other people have done. And what they do is, they look at all the others, and they get ideas. They literally do a lot of designers have lots of magazines that they look through, they tear those out and they put them up on inspiration boards. But they are looking at other human technologies.”

Her idea was simple: designers should get in the habit of bringing a biologist to the table, and let them help solve problems by mimicking nature. And there are three main ways they can do that.

“You can mimic its form, or its shape. You might create a paint for a building that, when it dries, it’s got the same structure as self-cleaning leaves, lotus leaves are notoriously great, they let rainwater clean the leaf. Because they have these bumps and the rain water balls up on the bumps, and then it pearls away the dirt. So that lotus effect is physical, and you can create a physical structure on the outside of any product. Imagine that on the outside your car, rainwater would clean your car. So that’s mimicking form.

But there’s also mimicking process, the processes of the natural world. It might even be how you mimic, how ants communicate in order to efficiently find sources of food or new places to live. An those processes, that self-organization, has been mimicked in software. In things like autonomous cars and how they’re gonna move in flocks through the city by talking to one another. That’s mimicking nature’s process.

An then you jump up to the level of mimicking whole ecosystems. There’s a thing that’s a buzzword right now, that’s really hot, called the circular economy, which is essentially industries saying there should be no such thing as a byproduct in a manufacturing facility that goes to landfill. It should be used by something else, and at the end of product’s life, that product should be up cycled into something else. It’s being called the circular economy. Ecosystems do that really really really well. You’ve got a log on the forest floor, and those materials move up into the body of the fungus that eats it. Those materials move up into a mouse. And that mouse material moves up into a hawk …

And if you think about that as what we’d like t odd with local materials being upcycled constantly. In our city, for instance, those ecosystem lessons are really big for us.”

And that’s the end goal for biomimetic design - making products, systems, and cities functionally indistinguishable from the natural world. Life has been around on Earth for 3.8 billion years - and what designers are starting to realize is that’s a lot of research and development time. The people who design our world have a lot to learn from the natural world. All they have to do is take a look.

**Part 4: Simulation IELTS Test 8 part 4**

