**ĐỀ THAM KHẢO THPN (Đề 2)**

**I. LISTENING (5.0 points)**

* *The listening section is in* ***FOUR*** *parts. You will hear each part* ***TWICE****. At the beginning of each part, you will hear a sound.*
* *There will be a piece of music at the beginning and at the end of the listening section. You will have* ***TWO*** *minutes to check your answers at the end of the listening section.*
* *All the other instructions are included in the recording.*

***---------------------------------------------------------------------------------------------------------------***

**Part 1*. For questions 1-5, listen to part of a discussion between two experts, Nick and Allison, on the performance of the company Facebook since it floated on the stock exchange, hosted by Emily. Decide whether the following are mentioned by only one of the speakers, or by both of them. In the corresponding numbered boxes provided, write:***

 **N** for **Nick**

**A** for **Allison**

 **B** for **Both** of the speakers

**1.** A rival company that can potentially pose a problem

**2.** A measure that may worsen problems if taken

**3.** An estimate not based on extensive analysis

**4.** An existing problem that can be solved in the future

**5.** A development to the disadvantage of a business model

***Your answers:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1.**  | **2.**  | **3.**  | **4.**  | **5.**  |

**Part 2*. For questions 6-10, listen to a short talk on spicy food and match each number in Column I with one letter in column II to make a correct statement according to what is stated or implied by the speaker. Write your answers in the corresponding numbered boxes provided.***

|  |  |
| --- | --- |
| **Column I** | **Column II** |
| **6.** Chili peppers **7.** Jalapenos**8.** Ginger and black pepper**9.** Wasabi**10.** Szechuan pepper | **A.** creates a “spicy” sensation that only milk can have any effect on**B.** is used as the raw material in the creation of tear gas**C.** are considered as the archetypal “spicy” food**D.** contains a compound that binds with sensory receptors in the nose**E.** make people feel as if their mouth is being burned by fire**F.** contain compounds that can trigger a range of heat receptors**G.** triggers the same receptors in our body that bind with capsaicin**H.** alerts your body even if only a small amount touches the mouth**I.** need to be consumed in large amounts to create any heat**J.** have compounds that work like capsaicin, but to a lesser degree |

***Your answers:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **6.**  | **7.**  | **8.**  | **9.**  | **10.**  |

**Part 3*. For questions 11-15, listen to an expert talking about detecting scam supplements and write the letter A, B, C, or D in the numbered boxes provided to indicate the correct answer to each of the following questions according to what you hear.***

**11.** Which of the following is true about prenatal vitamins?

A. They are one of the few medicines for pregnancy that is evidence-based.

B. They provide pregnant women with nutrients that are lacking in diets.

C. They are meant to be a dietary supplement, but many people ignore this.

D. They contain folate and other micronutrients necessary for our body.

**12.** According to the speaker, “medical benefit” supplements \_\_\_\_\_.

A. cannot include information about benefits unless approved by the FDA

B. were mostly not developed based on a strong scientific foundation

C. present potential risks due to them being unsupported by any evidence

D. vary in terms of how science- and evidence-based they actually are

**13.** The speaker suggests questioning all of the following about a supplement **EXCEPT** \_\_\_\_\_.

A. whether trusted authorities recommend it B. what tests have been conducted on it

C. who is advertising or endorsing it D. if it is vital to consume it

**14.** What is the major concern with supplements, according to the speaker?

A. You do not have a clear understanding of how they work.

B. You have no access to essential data for verification purposes.

C. You do not really know if the ingredients are approved or not.

D. You cannot be absolutely sure about the truth of claims.

**15.** Which of the following can be inferred from the talk?

A. Critical thinking is very important when purchasing supplements.

B. You should only buy supplements that fall into dietary supplement category.

C. The FDA is not doing enough to stop fake supplements from entering the market.

D. The stronger the claims about a supplement, the more suspicious it is.

***Your answers:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **11.**  | **12.**  | **13.**  | **14.**  | **15.**  |

**Part 4. *For questions 16-25, listen to a short news report and complete the following summary. Write NO MORE THAN THREE WORDS taken from the recording. Write your answers in the corresponding numbered boxes provided.***

 Though fictional, the Robin Hood story is actually (**16**) \_\_\_\_\_ with a historical document named the Magna Carta, which marked the establishment of many rights such as tax limitation, due process, and (**17**) \_\_\_\_\_. Originally signed in order to prevent an uprising by (**18**) \_\_\_\_\_, the document is considered the (**19**) \_\_\_\_\_ to the US Declaration of Independence. Given its importance, it is quite (**20**) \_\_\_\_\_ that Harvard Law School possesses one of the few original copies, a fact (**21**) \_\_\_\_\_ to them until recently. This newly discovered copy can be traced back to a British abolitionist, who subsequently passed it on to a (**22**) \_\_\_\_\_ during World War I, after which it came into the possession of an (**23**) \_\_\_\_\_ named Sweden Maxwell before finally being purchased by Harvard. Discussing its significance, the speaker asserts that the Magna Carta’s purpose is to prevent a (**24**) \_\_\_\_\_ (e.g. state authority) to impose its own power and compromise the autonomy of an individual or a (**25**) \_\_\_\_\_ like Harvard.

***Your answers:***

|  |  |
| --- | --- |
| **16.**  | **17.**  |
| **18.**  | **19.**  |
| **20.**  | **21.**  |
| **22.**  | **23.**  |
| **24.**  | **25.**  |

**II. READING (8.0 points)**

**II.1. LANGUAGE IN USE (3.0 points)**

**Part 1*. For questions 26-35, read the passage below and decide which answer (A, B, C or D) best fits each space. Write the letter A, B, C, or D in the numbered boxes provided.***

 Could extraterrestrial technology be (**26**)\_\_\_\_\_ in our backyard – on the Moon, Mars or in the asteroid belt? The idea that a planet like Mars might host cities and technology (**27**)\_\_\_\_\_ traction in scientific circles when Percival Lowell popularised his theory of ‘canals’ on Mars between 1894 and 1908. He claimed that these were artificial irrigation channels built by Martians to transport water from the poles to equatorial cities. Not (**28**)\_\_\_\_\_ astronomers agreed with Lowell, but the possibility of an inhabited Mars couldn’t be immediately dismissed. The excitement generated by his hypothesis eventually went on to (**29**) \_\_\_\_\_ works of science fiction like *War of the Worlds* in the year 1989, (**30**)\_\_\_\_\_ Martian invaders come to colonise Earth and exploit its resources.

 What would it mean to find alien technology close to Earth? The implications would be transformative. Such a discovery would instantly (**31**)\_\_\_\_\_ humanity’s sense of itself in the hierarchy of the cosmos, suggesting that we are not alone after all, but that visitors have, (**32**)\_\_\_\_\_, been here before. In a universe where distances render most forms of contact nearly impossible, proximity changes everything. Lowell’s hypothesis about canals on Mars did not last, of course. By the 1930s, improved instruments revealed that the ‘canals’ were (**33**)\_\_\_\_\_ illusions. By the 1960s, scientific evidence had (**34**) \_\_\_\_\_ disproved the idea of alien civilisations in the solar system. Venus was too hot, while Mars was simply too barren. Science fiction (**35**)\_\_\_\_\_ faraway stars and, with the discovery of exoplanets, Earth-like worlds that could be habitable, so did science.

**26.** A. sneaking B. creeping C. lurking D. edging

**27.** A. gathered B. won C. gained D. obtained

**28.** A. every B. all C. any D. some

**29.** A. inspire B. endorse C. promote D. foster

**30.** A. of that B. in which C. when D. where

**31.** A. upend B. upside C. upturn D. upswing

**32.** A. henceforth B. consequently C. in fact D. nevertheless

**33.** A. perception B. sight C. visual D. optical

**34.** A. efficiently B. productively C. effectively D. impressively

**35.** A. turned over B. turned in C. turned to D. turned away

***Your answers:***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **26.**  | **27.**  | **28.**  | **29.**  | **30.**  | **31.** | **32.** | **33.** | **34.** | **35.** |

**Part 2. *For questions 36-40, read the passage, and then fill in each of the spaces with the correct form of the words given in the box. Write your answers in the numbered boxes provided. There are FOUR words that you do not need to use. The first one, (0), has been done as an example.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LANGUAGE | SYSTEM | CONTROL | EMERGE | ~~AIR~~ |
| ORDER | ACTION | RISE | NUMBER | COLLECT |

 When thousands of starlings swoop and swirl in the evening sky, no single bird is choreographing this (***0***)\_\_\_\_\_ ballet. Each bird follows simple rules of interaction with its closest neighbours, yet out of these local interactions emerges a complex, highly (**36**)\_\_\_\_\_ dance between individual birds that can respond swiftly to predators and environmental changes. This same principle – where sophisticated behaviours (**37**)\_\_\_\_\_ not from central control but from the interactions themselves – appears across nature and human society.

 Consider how market prices emerge from (**38**)\_\_\_\_\_ individual trading decisions, none of which alone contains the ‘right’ price. Each trader acts on partial information and personal strategies, yet their interaction produces a dynamic system that integrates information from across the globe. Human language evolves through a similar process of (**39**)\_\_\_\_\_. No individual or committee decides that ‘LOL’ should enter common usage or that the meaning of ‘cool’ should expand anywhere beyond temperature. Instead, these changes result from millions of daily linguistic interactions, with new patterns of speech bubbling up from the (**40**) \_\_\_\_\_ behaviour of speakers.

***Your answers:***

|  |  |  |
| --- | --- | --- |
| ***0. aerial*** | **36.**  | **37.**  |
| **38.** | **39.** | **40.** |

**Part 3*. The extract below contains FIVE grammatical mistakes. For questions 41-45, UNDERLINE the mistakes and WRITE THEIR CORRECT FORMS in the numbered boxes provided. The first one has been done as an example.***

 There are currently 43.7 million **refugee** worldwide. These are people who have been forced to flee their home countries due to severe threats to their lives, human rights and basic needs. Yet, having fled in search of safety, they have not always found it. Instead, the vast majority live in squalid and dangerous camps or facing destitution in urban areas, in regions neighbouring their own states in the Global South. In these conditions, refugees continue to face severe human rights violations. A small minority undertake perilous journeys to find safety in the Global North. Thousands lose their lives on the way.

 How should states in the Global North respond to this situation? This question polarises debate. Some philosopher, including Peter Singer, argue that states must admit refugees until the point of societal collapse; the others argue that states are not necessarily obligated to admit a single refugee. Some politicians advocate for expansive resettlement, others seek to prevent refugees from seeking asylum at the border, or even deport it. Some citizens march the streets proclaiming ‘refugees welcome here’, others attempt to burn down a hotel with refugees inside. In the face of such volatile disagreement, there is an urgent need for an understanding of what an ethical response to refugees would it be.

***Your answers:***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***0. refugees*** | **41.**  | **42.**  | **43.**  | **44.**  | **45.**  |

**II.2. READING COMPREHENSION**

**Part 1*. For questions 46-55, read the passage below and fill in each of the numbered spaces with ONE suitable word. Write your answers in the corresponding numbered boxes provided.***

 Life is immensely complex. At (**46**) \_\_\_\_\_ level, from molecules and cells to entire organisms and the intricate ecological balance between species, biologists are invariably amazed by the staggering complexity and interconnectedness of life.

 Peering into the tapestry of complexity, one way to approach the complexity of life is to search for general threads of order that weave (**47**) \_\_\_\_\_ seemingly disparate facts. For example, while life is incredibly diverse, all living things are well fit to their environment. Charles Darwin, the father of evolution, discovered that one (**48**) \_\_\_\_\_ process explained how this happened – he called it natural selection. All species have variation in their traits – (**49**) \_\_\_\_\_ have thicker fur or longer beaks – and if any of those differences help the organism survive and reproduce, it will pass on that (**50**) \_\_\_\_\_ to future generations.

 Over (**51**) \_\_\_\_\_, this moulds organisms to become well-adapted to their environment. In this view, evolutionary theory becomes a unifying idea in biology. All organisms, from microbes to jellyfish, ferns to elephants, are connected by the (**52**) \_\_\_\_\_ thread of evolution. If there are truly universal laws governing how organisms evolve, then we should be able to represent these rules mathematically in the same way a physicist expresses (**53**)\_\_\_\_\_ universal concepts as Newton’s laws of motion. This (**54**) \_\_\_\_\_ has been taken by population genetics – since its beginnings in the 1910s, population geneticists have derived hundreds of mathematical equations to describe how evolution occurs (**55**) \_\_\_\_\_ a myriad of conditions.

***Your answers:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **46.**  | **47.**  | **48.**  | **49.**  | **50.**  |
| **51.**  | **52.**  | **53.**  | **54.**  | **55.**  |

**Part 2*. Read the following passage and do the tasks that follow.***

 The first stories were probably narrated to people crouching around a bonfire. These included tales of mighty adventures, like near-death encounters, hunting excursions, or an escape from mortal peril, or perhaps a mystery or divine anecdotes. However, irrespective of the subject, there was one principal objective behind all these tales: to keep the listener intrigued and engaged, to make them overlook their worries or fatigue, and only one query must prevail in their mind – what happens next?

 Finding the initial stories ever told in human history is like herding cats, as these were preserved in the minds of the storytellers. This kind of storage or memorisation, however, shall not be deemed as ineffective. Several documented oral traditions of Australia, Balkans, and other parts of the world apprise us of master storytellers and poets of the time that could recite thousands of verses and proses from their memory, word to word. However, while such memorisation seems like art or sorcery, the essential idea of creating symbols is to have a system of reminders or mnemonics that helps one recall specific information in one's mind. In a few Polynesian societies, the storytellers used a notched memory stick for assistance in successive stages of recitation. However, among many other global communities, the art of storytelling led to the invention or development of writing systems. For instance, the onset of literacy in ancient Greece is attributed to the fact that the epic tales of the Trojan War and the Voyage of Odysseus were so captivating that there was a need to preserve them. Thus, the Greeks, in 750 B.C. – 700 B.C. borrowed the alphabet system from their east Mediterranean neighbours, the Phoenicians.

 The pristine practice of documenting stories on parchment and other materials can be traced to many ancient civilisations. The priestly papyrus archives of ancient Egypt and the birch-bark scrolls used by North American Ojibway Indians are excellent examples. It has emerged as a tried and tested practice, thanks to which stories are today synonymous with words on paper. Even the practice of oral storytelling is believed to have been taken over by journals, novels, comic strips, etc. However, written texts are not the primary source for humans to access stories. But then, what is it?

 The chief storyteller of the day is none other than the cinema. Each year, over seven billion people head towards the silver screens to watch the latest offerings of national and international cinema. Movies encompass storytelling in the form of motion pictures, which is a contemporary phenomenon in comparison to reading information on paper or still photography. It is more so an illusion that was originally accepted by the method of sequencing images in a particular order. Even so, it is imperative to acknowledge that the art of visual storytelling must hold a profoundly atavistic vibe to it. In spite of the advantage, the conventional patterns of storyline and characterisation that have been instilled in storytelling for ages are indispensable for a good story.

 While thousands of scripts land dust on the desks of major film studios, all an aspiring screenwriter needs to look up to is the fourth-century Greek philosopher, Aristotle. In his incomplete work, *The Poetics*, he left several lecture notes describing the art of storytelling in multiple literary and dramatic mediums. Though it is highly unlikely that he envisaged the popcorn-fuelled atmosphere of today's multiplexes, he had ample perception of how to gather and retain large crowds to such creative centres. He states that when a story fascinates us, we lose the sense of where we are, our fears, and accept fiction. This is one of Aristotle's principles of theatre, which he calls ‘the suspension of disbelief’. The audience know the feeling. They might have experienced episodes of horror, grief, astonishment or ecstasy, sitting on the theatre seats or even days after the show, knowing that it is all fiction yet letting it impact their state of mind. They seldom think through why they are caught in the web of the storyteller.

 Aristotle taught at Athens, the city where theatre emerged as a prime mode of public's leisure and entertainment. So it is evident that he might have observed suspended disbelief in action. Two theatrical storytelling types, tragedy and comedy, made Athenians immerse themselves in gloom and glee, respectively. Of which, Aristotle explicitly acknowledged tragedy as a potent weapon to trigger the most heartfelt emotions of the spectators, so he explored over the factors in the storyteller's art that brought about such a subconscious commotion. For this, he studied the masterpieces of classical Greek tragedies by Euripides, Aeschylus, Sophocles, and even that of Homer.

 Even at that time, Homer's stories commanded the same awe as today. His *Iliad and the Odyssey* were considered literary landmarks and used as a scale to measure all other stories. So what is the mystery behind Homer's captivating narratives? Homer conceived credible heroes that were powerful and majestic but did not turn into fantasy figures in the end. He made them sulk, quarrel, cheat, and whine. They were the characteristics that an audience could relate to, or wish to follow. This naturally intrigued them to know what happens next. As Aristotle observed, the heroes with a human side, a mix of flaws and vulnerability to which humans are inclined, are aptly dramatic.

***For questions 56-61, decide whether each of the following statements is True (T), False (F) or Not Given (NG). Write T, F, or NG in the corresponding numbered boxes provided.***

**56.** Early stories focused primarily on near-death experiences to ensure that storytellers can constantly hold the attention of the listener.

**57.** Tracking down the first stories is extremely hard since these exist solely in storytellers’ memories.

**58.** Many writing systems of ancient communities emerged out of necessity, as people were trying to find a way to preserve stories that captivated them.

**59.** With the development of writing systems and documentation practices, written stories quickly replaced oral storytelling traditions.

**60.** The art of visual storytelling, which resulted from the advent of motion pictures, completely changed how a good story is told.

**61.** In *The Poetics,* readers will find descriptions of the art of storytelling in the form of fully written lectures by the Greek philosopher Aristotle.

***Your answers:***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **56.**  | **57.**  | **58.**  | **59.**  | **60.**  | **61.** |

***For questions 62-69, read the summary and fill in each space with NO MORE THAN THREE WORDS taken from the passage. Write your answers in the corresponding numbered boxes provided.***

 Although he may not have been able to imagine cinemas, where billions of people today enjoy the (**62**) \_\_\_\_\_ of the film industry, Aristotle still possessed an (**63**) \_\_\_\_\_ of ways in which storytelling captivates humans. In his work, the Greek philosopher explained how a story can be engaging to such an extent that (**64**) \_\_\_\_\_ is embraced, similar to how movie-goers may go through emotional (**65**) \_\_\_\_\_ long after a movie has ended. Such a strong state of immersion, referred to as (**66**) \_\_\_\_\_, can be triggered in many ways. Theatrical performances in ancient Athens, for instance, made use of tragedy as a (**67**) \_\_\_\_\_ to stir the emotions of the audience. Meanwhile, Homer, well-known today for his (**68**) \_\_\_\_\_ (*Iliad and the Odyssey*), infused drama into his classical tragedies by developing heroic characters with a human angle that the audience could easily connect with. Thanks to such attachment, readers become (**69**)\_\_\_\_\_ in the fates of these characters.

***Your answers:***

|  |  |
| --- | --- |
| **62.**  | **63.** |
| **64.**  | **65.** |
| **66.**  | **67.** |
| **68.**  | **69.** |

**Part 3*. In the passage below, six paragraphs have been removed. For questions 70-75, read the passage and choose from paragraphs A-G the one which fits each gap. There is ONE extra paragraph which you do not need to use. Write the letters A - G in the corresponding numbered boxes provided.***

**ATTITUDES TOWARDS ARTIFICIAL INTELLIGENCE**

 Artificial intelligence (AI) can already predict the future. Police forces are using it to map when and where crime is likely to occur. Doctors can use it to predict when a patient is most likely to have a heart attack or stroke. Researchers are even trying to give AI imagination so it can plan for unexpected consequences.

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| **70.** |

 If we want AI to really benefit people, we need to find a way to get people to trust it. To do that, we need to understand why people are so reluctant to trust AI in the first place.

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| --- |
| **71.** |

 Trust in other people is often based on our understanding of how others think and having experience of their reliability. This helps create a psychological feeling of safety. AI, on the other hand, is still fairly new and unfamiliar to most people.

|  |
| --- |
| **72.** |

 Many people are also simply not familiar with many instances of AI actually working, because it often happens in the background. Instead, they are acutely aware of instances where AI goes wrong. Embarrassing AI failures receive a disproportionate amount of media attention, emphasising the message that we cannot rely on technology.

|  |
| --- |
| **73.** |

 This suggests people use relevant evidence about AI in a biased manner to support their existing attitudes, a deep-rooted human tendency known as “confirmation bias”. As AI is represented more and more in media and entertainment, it could lead to a society split between those who benefit from AI and those who reject it.

|  |
| --- |
| **74.** |

 Simply having previous experience with AI can significantly improve people’s opinions about the technology, as ??? was found in the study mentioned above. Evidence also suggests the more you use other technologies such as the Internet, the more you trust them.

|  |
| --- |
| **75.** |

 We don’t need to understand the intricate inner workings of AI systems, but if people are given a degree of responsibility for how they are implemented, they will be more willing to accept AI into their lives.

**Missing paragraphs:**

**A.** Take the case of Watson for Oncology, one of technology giant IBM’s supercomputer programs. Their attempt to promote this program to cancer doctors was a PR disaster. The AI promised to deliver top-quality recommendations on the treatment of 12 cancers that accounted for 80% of the world’s cases. But when doctors first interacted with Watson, they found themselves in a rather difficult situation. On the one hand, if Watson provided guidance about a treatment that coincided with their own opinions, physicians did not see much point in Watson’s recommendations. On the other hand, if Watson generated a recommendation that contradicted the experts’ opinion, doctors would typically conclude that Watson wasn’t competent.

**B.** If so, there’s little reason to think it will stop there. Machines will be free of many of the physical constraints on human intelligence. Our brains run at slow biochemical processing speeds on the power of a light bulb, so they are far from the physical limits of thought. Once machines are better than us at designing even smarter machines, progress towards these limits could accelerate.

**C.** Feelings about AI run deep. In a recent experiment, people from a range of backgrounds were given various sci-fi films about AI to watch and then asked questions about automation in everyday life. It was found that, regardless of whether the film they watched depicted AI in a positive or negative light, simply watching a cinematic vision of our technological future polarized the participants’ attitudes. Optimists became more extreme in their enthusiasm for AI and skeptics became even more guarded

**D.** Many decisions in our lives require a good forecast, and AI is almost always better at forecasting than we are. Yet for all these technological advances, we still seem to deeply lack confidence in AI predictions. Recent cases show that people prefer to trust human experts, even if these experts are wrong.

**E.** It may also be a good idea to reveal more about the algorithms which AI uses and the purposes they serve. Several high-profile social media companies and online marketplaces already release transparency reports about government requests and surveillance disclosures. A similar practice for AI could help people have a better understanding of the way algorithmic decisions are made.

**F.** Even if it can be technically explained, and that’s not always the case, AI’s decision-making process is usually too difficult for most people to comprehend. And interacting with something we don’t understand can cause anxiety and give us a sense that we’re losing control.

**G.** More pertinently, refusing to accept the advantages offered by AI could place a large group of people at a serious disadvantage. Fortunately, we already have some ideas about how to improve trust in AI.

***Your answers:***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **70.**  | **71.**  | **72.**  | **73.**  | **74.**  | **75.** |

**Part 4*. For questions 76-85, read the following passage and write A, B, C, or D in the corresponding numbered boxes provided to indicate the correct answer which fits best according to what is stated or implied in the text.***

**(1)** We see with our eyes and taste with our tongues. Ears are for hearing, skin is for feeling and noses are for smelling. Would anyone claim that ears can smell, or that tongues can see? As a matter of fact, yes. Paul Bach-y-Rita, a neuroscientist at the University of Wisconsin at Madison, believes that the senses are interconnected; for instance, a tongue can be used for seeing. This ‘revolutionary’ study actually stems from a relatively popular concept among scientists; that the brain is an accommodating organ. It will attempt to carry out the same function, even when part of it is damaged, by redirecting the function to another area of the brain. As opposed to the previously mainstream **compartmentalized view** of the human brain, it is now more acceptable to scientists that the individual parts of the brain could be somewhat interchangeable.

**(2)** Paul Bach-y-Rita’s experiments suggest that “we experience the five senses, but where the data comes from may not be so important”. In the article *‘Can You See With Your Tongue?’,* a journalist was blindfolded with a small video camera strapped to his forehead, connected to a long plastic strip which was inserted into his mouth. A laptop computer would convert the video’s image into a fewer number of pixels, and those pixels would travel through the plastic strip as electric current, reaching the grid of electrodes that was placed inside the man’s mouth. The scientist told the man that she would soon be rolling a ball towards his right side, left side, or center, and he would have to catch it. And as the journalist stated, “my eyes and ears have no way to tell where it’s going. That leaves my tongue… has more tactile nerve endings than any part of the body other than the lips”. The scientist rolled the ball and a ‘tingling’ passed over the man’s tongue, and he reached out with his left hand and caught the ball. **[A]**

**(3)** If the brain can see a ball through a camera and a wet tongue, many new questions arise. What does this concept imply in terms of blindness and deafness? Rather than attempting to reserve these sensory disabilities through **surgeries** and **hearing aids**, should we be trying to circumvent them by using different receptors? Can we still trust in the idea of the five senses, or was it wrong to categorize our perception of the outside world so strictly?

**(4)** **[B]** Aside from the emerging possibility of interchanging a tongue and an eye, there is the highly accepted possibility that our original list of senses is incomplete. Many scientists would add at least these two senses to the list: the kinesthetic sense and the vestibular sense. The first is a sense of self, mostly in terms of limbs and their placement. For instance, I know where my right foot is without looking or feeling for it. It is something that my brain ‘knows’. This is said to be because of information sent to the brain by the muscles. If more observations were to be collected on this subject, a more accommodating explanation could potentially be reached. Secondly, the vestibular sense is what most would consider a sense of balance.

**(5)** Why were these two senses not included in our limited list? It might be the result of a lack of external symbolism. A nose or an eye is an obvious curiosity because of the question it generates: “What does this thing do?” But we have no limb or facial organ dedicated to balance or to kinesthetic awareness. On the other hand, if the vestibular sense and the kinesthetic senses occur solely in the brain, are they truly senses? Should experiences be labeled as senses without representation by an external organ? If one believes that the brain is the true sensory organ and the rest are simply interchangeable receptors, then yes, we should remain open to labeling many new ‘experiences’ as ‘senses’. But, is there perhaps an overlying truth that directly relates the five senses to the human experience of life? **[C]**

**(6)** One way of gaining new insight is to explore the animal world of senses. Migrating animals, for example, are said to have a ‘sixth sense’, a term which alludes to all unexplainable phenomenon. In reality, what we call the sixth sense includes any number of unrelated senses that everyday humans do not possess and therefore know little about. Perhaps there is a sense of placement on the earth, similar to the kinesthetic sense of bodily placement, which helps animals return home. Perhaps it is simply a ‘sense of direction” that is more developed or more substantial than what human possess. Scientists have even conjectured that traces of magnetite, found in pigeons and monarch butterflies, could be used as a compass, enabling the animal to sense the magnetic fields of the earth. Those who use the term ‘sixth sense’ rarely give details about which of these strange abilities they are referring to? The term relating to “past our understanding” is used in such a sweeping, general way that there is no one solid, falsifiable hypothesis. This term does not bring us closer to our understanding of the senses.

**(7)** In addition to internal mysteries, many animals also possess external sensory organs which we do not. Fish, for instance, have an organ that runs along the sides of their bodies called the lateral-line system. It is made of tiny hair-like sensors that receive information about movements in the water. There is even the ability to distinguish between ordinary, background movement and strange movement that could signify a predator or another creature. This sense also helps the fish to orient themselves within the current and the stream flow. Interestingly, land vertebrates lost their lateral-line systems somewhere along the evolutionary path. Of course, we no longer consider this sense to be a human perception of life because we no longer possess the organ. But has the sense remained? Perhaps the feeling of being watched, of being followed on a dark sidewalk, is **a dull shadow** of the sense we used to possess. It is particularly noteworthy that this ‘feeling’ of being followed is often referred to as ‘intuition’. How is intuition related to senses? In the same sense, how are emotions and senses the same?

**(8)** New stories that could expand our categorical concepts of the senses are emerging constantly, but we seem to prefer holding onto the old concept of five senses. We would urge towards expanding that category numerically and conceptually. There is much to be explored in terms of the relation of sense and emotion, the utilizations and disabilities of the senses, and a vertebrate’s need for senses compared to other types of animals, in terms of participating in life. The interconnectedness of our senses within the brain and among the external organs is a concept worthy of more exploration, and it will be explored more easily when the old, rather arbitrary myth of the five senses is replaced with insights from new data. **[D]**

**76.** It can be inferred that the **compartmentalized view** considers brain regions to \_\_\_\_\_.

A. function independently from one another

B. have different mechanisms but share the same goal

C. work together as a single unit

D. not be able to communicate information

**77.** The experiment described in paragraph 2 was most likely meant to prove that \_\_\_\_\_.

A. Technology may help us explore our process of sensing input more effectively.

B. Different senses can actually interpret the same type of external input.

C. Visual input is not the only type of input that can be quickly perceived by humans.

D. The same information can be conveyed with different types of sensory input.

**78.** Why did the author mention **surgeries** and **hearing aids** in paragraph 3?

A. to question the effectiveness of conventional methods for hearing interventions

B. to raise the possibility of a new approach towards addressing sensory impairments

C. to exemplify how science has tried to counter the effects of sensory disabilities over time

D. to show that a fresh perspective is needed to develop better sensory interventions

**79.** Which of the following can most likely be inferred from paragraph 4?

A. There is now overwhelming evidence to completely disprove the ‘five senses’ view.

B. Muscles may be considered a sensory organ if the kinesthetic sense is recognised.

C. Scientists have not made enough observations to verify the existence of new senses.

D. The vestibular sense can be simply defined, but its mechanisms remain a mystery.

**80.** The list of ‘five senses’ can be described as all of the following **EXCEPT** \_\_\_\_\_.

A. inadequate B. orthodox C. unexplained D. questionable

**81.** In paragraph 5, the author suggests the possibility that \_\_\_\_\_.

A. limbs or facial organs are poor representations of senses

B. we should rethink the way we define what a sense truly is

C. the brain should be the unified symbol for the sensory system

D. the indicators of senses should be internal instead of external

**82.** The author suggests that the term ‘sixth sense’ \_\_\_\_\_.

A. is only useful when we examine the animal world

B. actually refers to one sense that has yet to be found

C. prevents us from exploring senses in a meaningful way

D. leads to a false and unproductive interpretation of senses

**83.** The phrase **a dull shadow** was used to convey the point that \_\_\_\_\_.

A. human perception of life may have vague similarities with that of animals

B. the subconscious feeling of being watched might once be conscious

C. our sensory system lost critical functions such as helping us stay alert

D. human senses are deeply but subconsciously connected to our emotions

**84.** With which of the following conclusions would the author most likely agree?

A. The interconnection between senses might become the starting point of future sensory studies.

B. It will take much more research to put the traditional scientific view of senses into question.

C. Future research on sensory systems should prioritise animals as research subjects.

D. Our current categorization of senses is hindering further progress into understanding them.

**85.** Which of the following square brackets [**A**], [**B**], [**C**], or [**D**] best indicates where in the passage the sentence ***“In fact, the ‘five senses’ may well be another story that should be discarded in light of new scientific observations.”*** can be inserted?

A. [**A**] B. [**B**] C. [**C**] D. [**D**]

***Your answers:***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **76.**  | **77.**  | **78.**  | **79.**  | **80.**  | **81.** | **82.** | **83.** | **84.** | **85.** |

**Part 5*. For questions 86-95, read the following passage and choose form the sections (A-E). The sections may be selected more than once. Write the letter A, B, C, D, or E in the corresponding numbered boxes provided.***

**A.** The recent blockbuster film *Inception*, written and directed by Christopher Nolan, concludes with a 45-minute setpiece in which Leonardo DiCaprio’s team of brain-hopping idea thieves descends through nested dreams, in each of which time runs more slowly than in any previous layer. Any graphic novel fans in the audience would have watched this complex sequence with nods of recognition. But perhaps with sighs of exasperation too: the film’s showpiece effect – creating the illusion of relative time, of events happening simultaneously but being experienced at different paces – is much easier to achieve in the world of graphic novels. Years of experimentation, combined with certain defining features of the form, have resulted in a complex medium that excels at portraying multiple time schemes and shifting conceptions of reality. Three new works bear testimony to this.

**B.** *Air* by G Willow Wilson is a love story in a breathless narrative of industrial espionage. Its protagonist, Blythe, is plunged into a world of dizzy reversals, in which the only constant is the philosophical notion that by redrawing our impressions of the world we can remake it for ourselves. Character and motivation are almost absent as Wilson’s hapless heroine is dragged from pillar to post by an arbitrary narrative fuelled by fitful quips. More seriously, the layout and structure show a distinct lack of invention. Just as hope is flagging, however, Wilson pulls out of the dive, and *Air* becomes both stranger and more interesting in concept and execution. One extended chapter consists of a sequence of flashbacks in a plane diving towards the ground, as Blythe finds herself simultaneously inhabiting the memories of her lover. Drawings of a falling, entwined couple are interleaved with the panels, a kind of metaphor for the movements of the plane.

**C.** Matt Kidnt’s graphic novel *Revolver* is an interesting addition to the genre in that it works around a single, but effective, manipulation of narrative time. Each morning its protagonist Sam finds himself waking up either in his everyday life, in which he edits pictures for a newspaper, or in an America under siege, where he is forced to fight for his life. Drawn by its author in a scrappy, offhand style that belies a deft grasp of form and scenic arrangement, Kindt’s novel still ultimately feels like less than the sum of its parts. Although attractively realised, the basic set-up, in which the audience is encouraged to wonder whether a troubled man is hallucinating or not, is becoming something of a familiar trope after *Fight Club*, *Memento* and others. Where *Revolver* succeeds is in the quiet suggestiveness with which his arrangement of panels blurs our perspective on the action.

**D.** Last, and strangest, is Charles Burns’s *X’ed Out*, the first of a projected series of graphic novels by this idiosyncratic writer-illustrator. Burns is revered in comic circles for Black Hole, a surrealist saga. Grotesque but compelling, Burns’s drawings told the story of a group of teens who contract a disease that turns them into mutants and social outcasts. The author’s subsequent contention that the book was a metaphor for adolescence came nowhere near to explaining the work’s dark and haunting depths. *X’ed Out* is designed in full colour but its seamless and troubling transitions between its teenage protagonist’s dreams and waking moments show that Burns has lost none of his touch. He withholds many of the traditional devices used within the genre to shape a reader’s idea of time and causality, such as sound effects, motion blurs, panel comments and the like. The effect is highly unsettling.

**E.** Graphic novels are good at representing complicated sequences in time, and contemporary creators seem particularly interested in constructing stories that place this at the centre. We can posit reasons pandering to popular clichés of ‘comic-book’ entertainment, generalised discontent with Hollywood five-act stories, or simple celebration of a medium so suited to non-straightforward entertainment. Whatever its origin, a complex interest in time extends throughout the medium. Even the latest addition to the new *Batman* series, written by Grant Morrison, skips wildly across the epochs of human history, following a Caped Crusader who has come adrift in time. As the medium continues to evolve, this abiding formal interest in a largely unconscious process of perception may come to seem its most defining feature.

***In which section are the following mentioned?***

**86.** individual bits of a work being better than the overall effect

**87.** an author improving on an earlier weakness

**88.** the quality of an author’s work staying consistent

**89.** a protagonist’s confusion in an unstable and impermanent world

**90.** graphic novel authors are possibly influenced by expectations

**91.** a hurried, imperfect art style being a deliberate choice

**92.** a work being more complex than its author claims

**93.** mixed reactions of those familiar with a certain genre

**94.** the unoriginal nature of a central theme being a potential issue

**95.** images from a character’s past symbolizing present events

***Your answers:***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **86.**  | **87.**  | **88.**  | **89.**  | **90.**  | **91.** | **92.** | **93.** | **94.** | **95.** |

**III. WRITING (5.0 points)**

**Part 1. *Read the following extract and use your own words to summarise it. Your summary should be between 120 and 150 words.***

 Tamsen Fadal remembers the exact moment that she thought she was losing her mind: 10:30 p.m. on November 19, 2019. The longtime prime-time news anchor couldn’t remember how to pronounce the word ‘subpoena’. But she had been experiencing word loss as well as anxiety, mood shifts, and insomnia for months prior. She chalked it up to a few life-rattling events – a nasty divorce, an aging parent, a new relationship at midlife.

 Fadal is not alone in her experience. Every woman who is blessed to live to middle age and older will undergo menopause – some 1.3 million women each year in the United States alone. And while every woman won’t necessarily have the same symptoms as Fadal, most experience mood swings, anger, irritability, and anxiety due to large fluctuations in the hormones estrogen and progesterone.

 Women in perimenopause – the months to years leading up to menopause – which typically starts in their mid-40s, tend to suffer the most. “Because hormonal control is dysregulated, the highs are higher and the lows are lower,” says Dr. Karen Adams, a clinical professor of obstetrics and gynecology. Not only do many women feel out of control, but a 2024 study found that women are 40% more likely to experience depressive symptoms and be diagnosed with depression during perimenopause than women who are not yet perimenopausal. Other research indicates that perimenopausal women without a previous history of bipolar disorder are more than twice as likely to develop mania for the first time.

 All too often, however, women are not getting the support and screening they need because many have little to no knowledge of this phase of their life, according to a new study by AARP of 4,436 women aged 18 and older. Worse, only half of the women in perimenopause, menopause, or post-menopause said they spoke to a health care provider about their issues and what help might be available – and a mere 41% actually used medical treatments such as menopausal hormone therapy (MHT) to manage their symptoms.

 Part of the problem is that there’s still a lot of shame and stigma around menopause – typically couched as a period of decline and decay – and aging in general, experts say. After all, societal narratives about women who can no longer reproduce are unfortunately ageist and sexist. Midlife is when women are seen as being irrelevant, asexual, invisible, and undesirable. At the same time, there is a lot of shame and stigma around mental health issues, as well.

**Part 2*. Write an essay of at least 300 words on the following topic.***

***AI should be banned in universities to encourage critical thinking and deter academic dishonesty.***

 To what extent do you agree or disagree with this statement? Provide specific reasons and examples to support your answer.

(You may write overleaf if you need more space.)

*Great appreciation to authors of published works whose adaptations have been included in this test!*

*May the odds be ever in your favour.*

**THE END**

**ANSWER KEYS**

**I. LISTENING**

**Part 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1.** N | **2.** A | **3.** B | **4.** A | **5.** N |

**Part 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **6.** C | **7.** E | **8.** J | **9.** D | **10.** H |

**Part 3**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **11.** B | **12.** D | **13.** B | **14.** D | **15.** A |

**Part 4**

|  |  |
| --- | --- |
| **16.** intertwined | **17.** trial by jury |
| **18.** English barons  | **19.** forebearer |
| **20.** consequential | **21.** unbeknownst |
| **22.** flying ace | **23.** auctioneer |
| **24.** tyrannical sovereign power | **25.** private institution  |

**II. READING**

**II.1. LANGUAGE IN USE**

**Part 1**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **26.** C | **27.** C | **28.** B | **29.** A | **30.** B | **31.** A | **32.** C | **33.** D | **34.** C | **35.** C |

**Part 2**

|  |  |  |
| --- | --- | --- |
| ***0.*** *aerial* | **36.** coordinated | **37.** arise |
| **38.** numerous | **39.** emergence | **40.** collective |

**Part 3**

 There are currently 43.7 million **refugee** worldwide. These are people who have been forced to flee their home countries due to severe threats to their lives, human rights and basic needs. Yet, having fled in search of safety, they have not always found it. Instead, the vast majority live in squalid and dangerous camps or **facing** 🡪 **face** destitution in urban areas in regions neighbouring their own states in the Global South. In these conditions, refugees continue to face severe human rights violations. A small minority undertake perilous journeys to find safety in the Global North. Thousands lose their lives on the way.

 How should states in the Global North respond to this situation? This question polarises debate. Some **philosopher** 🡪 **philosophers**, including Peter Singer, argue that states must admit refugees until the point of societal collapse; **the others** 🡪 **others** argue that states are not necessarily obligated to admit a single refugee. Some politicians advocate for expansive resettlement, others seek to prevent refugees from seeking asylum at the border, or even deport **it** 🡪 **them**. Some citizens march the streets proclaiming ‘refugees welcome here’, others attempt to burn down a hotel with refugees inside. Some states have welcomed more than a million refugees, others build concrete walls and barbed wire fences. In the face of such volatile disagreement, there is an urgent need for an understanding of what an ethical response to refugees would **it be** 🡪 **be**.

**II.2. READING COMPREHENSION**

**Part 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **46.** every | **47.** together | **48.** single | **49.** some | **50.** trait |
| **51.** time | **52.** common | **53.** such | **54.** approach | **55.** under |

**Part 2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **56.** NG | **57.** T | **58.** T | **59.** NG | **60.** F | **61.** F |
| **62.** latest offerings | **63.** ample perception |
| **64.** fiction | **65.** episodes |
| **66.** suspension of disbelief/suspended disbelief | **67.** potent weapon |
| **68.** literary landmarks | **69.** (naturally) intrigued |

**Part 3**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **70.** D | **71.** A | **72.** F | **73.** C | **74.** G | **75.** E |

**Part 4**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **76.** A | **77.** D | **78.** B | **79.** B | **80.** C | **81.** B | **82.** C | **83.** B | **84.** D | **85.** B |

**Part 5**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **86.** C | **87.** B | **88.** D | **89.** B | **90.** E | **91.** C | **92.** D | **93.** A | **94.** C | **95.** B |

**TRANSCRIPTS**

**Part 1**

**Source:** [**https://youtu.be/MNsUEuLH9ls?si=XXB5Qi4sSzsPCz-W&t=1357**](https://youtu.be/MNsUEuLH9ls?si=XXB5Qi4sSzsPCz-W&t=1357)

**Emily**: So, Nick, Allison, what about Facebook’s flotation? Is it too early to call it a disaster?

**Nick**: I think probably so, Emily, though certainly there have been major mistakes made in the handling of the company in the lead-up to, during, and since the flotation took place. And there doesn't seem to be any good news on the horizon either, what with the company announcing a narrower profit margin this quarter-news which comes as a surprise to analysts and which highlights the unpredictability of the Facebook business environment and the fact that the potential of Internet advertising as a means of generating revenue is, as yet, largely unknown and untested, **[Q3] so values we put on companies like Facebook and so on are little more than guesstimates.**

**Allison**: **[Q3]** **Right, Nick. And high-end guesstimates at that.** **There's been none of the usual conservatism in valuing Facebook.** Its flotation-day share price was top-end and left little room for investors to cash in on potential future gains, since none are likely in the short to medium term. But it's not all bad news. After all, the company’s making money and increasing its revenues, albeit at a slightly slower pace than anticipated. And the revenue results for the last quarter were not bad - I mean, $1.18 billion is not an inconsiderable sum. Sure, of that, everything and more was consumed by rising costs and by efforts to keep shareholders happy with a sweet dividend payout, hence the net loss of $157 million generated, but Facebook is proving that there is money to be made from internet advertising, which suggests there is still perhaps much untapped potential.

**Nick**: But there's a caveat, surely, Emily. **[Q5] Users are moving away from traditional platforms like laptops and PCs to small smartphone and tablet devices. This poses a very big problem for any company looking to increase its revenue from online advertising sources**, especially one like Facebook, whose entire business model revolves around the assumption of an ability to make money from such sources.

**Allison**: To be fair, the company has admitted that this is a problem for them, and they are working on ways to overcome it. I think they will come up with a solution, but the difficulty lies in finding the right balance. For example, **[Q2] if they come up with a way of forcing smartphone users to watch ads before they can use certain applications or access certain sites, this could well turn them off the Facebook model**, and they may very quickly switch their loyalty over to one of the many other free social network sites that are available on the web.

**Nick:** I'm not even optimistic that they can find a way of exploiting the advertising potential of smartphone interfaces, mainly because I don't think there is any. And I am very pessimistic about the company’s prospects, truth be told. In fact, I think it has the potential to become the biggest stock market flop in history.

**Allison:** The markets are nervous generally at the moment, though, and it's not just Facebook that is suffering. I don't deny the problems you’ve highlighted exist, **[Q4] but my gut feeling is that a way will be found to overcome them.** Facebook is a visionary company, and it has led rather than reacted to trends for the best part of a decade now. I feel that so long as it continues to do this, it will stay one step ahead of the game.

**Nick**: I can't agree with you on that. I think you're in denial. Both Google and Twitter are nipping at Facebook's heels, and it is having to look over its shoulder far too much, I would say, for its own liking. **[Q1] Google is a profit-making firm with proven revenue potential. It is only a matter of time before it either exposes the frailty of its rivals or comes up with new technology that makes what it offers users redundant**. There is only one winner of this rivalry between the tech giants, and victory will go to the one which didn’t dump all its eggs in one basket.

**Part 2**

**Source:** [**https://www.youtube.com/watch?v=tqWgJgA3cxU**](https://www.youtube.com/watch?v=tqWgJgA3cxU)

There are lots of different foods you might call spicy and they don’t all give you that I’m-actually-on-fire feeling. So what does it mean for something to be “spicy”?

“Spicy” turns out to be a pretty loosely-related group of sensations created when food you eat activates certain nervous system cells. These cells, called “sensory receptors,” gather information about you and your surroundings, things like temperature, movement, and stuff around you, and they deliver that info to other parts of your nervous system. Foods we call “spicy” all trigger these info-gathering receptors in ways that leave us kind of uncomfortable, **[Q6] like chili peppers - the classic “spicy” food.**

Chillies contain capsaicin, a compound that binds to receptors that specialize in sensing heat. Normally, these receptors…well, fire…when they come into contact with anything over 43 degrees or so Celsius, about 109 Farenheit, sparking a cascade of physiological responses, like sweating and an increased blood flow, all designed to cool you off. But when capsaicin binds to these receptors, it changes their shape, activating them at a measly body temperature. **[Q7] A jalapeno feels fiery because it triggers the exact same physiological response as something that’s actually on fire. [Q8]** **Compounds in ginger and black pepper also bind to these heat-sensing receptors, although not as well as capsaicin, so you’ll have to eat way more of them to feel the same fire.**

**[Q9] Then, there’s the family that contains mustard, radishes, horseradish, and wasabi. These foods contain a compound abbreviated AITC, which binds to a different kind of sensory receptor. These receptors - which are concentrated in your nose** - are particularly responsive to volatile, noxious chemicals: think smoke, or car exhaust, or tear gas. When these receptors fire, your eyes water, you cough, your sinuses hurt. Sound familiar? The super-volatile AITC that goes airborne from, say, your bite of wasabi-laden sushi, triggers these very same receptors - and the same discomfort.

Szechuan pepper is packed with a compound called sanshool. Sanshool triggers sensory receptors that are specially tuned to detect movement and vibration. **[Q10] Even a tiny dash of sanshool will send the same signals to your nervous system as if your mouth were being touched - that’s where the tingly, buzzing sensation of Szechuan comes from**. These sensations can all be pretty uncomfortable, especially if you overdo it.

But since “spicy” isn’t just one thing, there’s no single trick to un-overdo it. The solution depends on the kind of spicy you’re dealing with. The AITC of wasabi and its relatives is water soluble, so a drink of water will wash away whatever’s left in your mouth; plus, since AITC is super-volatile, what’s already airborne will dissipate pretty quickly, along with the pain. Capsaicin doesn’t dissolve well in water, so that drink you’re craving won’t do much to fight the fire you’re experiencing…unless it’s milk; the combination of protein, fat, and sugar seems to be a triple-whammy that binds to capsaicin, blocks capsaicin receptors and suppresses the painful sensation. And Szechuan pepper? You might just have to wait it out until those receptors are done firing…sorry.

**Part 3**

**Source:** [**https://www.youtube.com/watch?v=oFumGVRhHvU**](https://www.youtube.com/watch?v=oFumGVRhHvU)

I get asked a lot about supplements, and it's a really big, and sometimes even confusing, topic. The truth is, there are very few supplements that have good evidence-based medicine to support them. And the term supplement is really meant to be a dietary supplement, meaning something that is supplementing a dietary shortfall. The greatest example is probably prenatal vitamins. **[Q11] There is good evidence-based medicine to support using prenatal vitamins because the average person doesn’t get enough folate and other micronutrients in their diet to support a healthy pregnancy**.

Then there’s this other class of supplements meaning a reported medical benefit, although in the United States, supplement companies can’t actually say their product does anything, they all have these little FDA disclaimers. But some things might be grounded in pretty good science, or even good science, like magnesium to treat constipation. But there are also things that aren’t grounded in good science, like black cohosh for hot flashes. Another common one we see all the time is biotin for hair growth, but there’s no data to support that. **[Q12] So there's a wide range of things that potentially have good science behind them and things that have no science behind them, and things that are kind of in between.**

Then there’s another category of supplements where there are a whole bunch of vitamins, minerals, herbals, and botanicals all lumped together in a product where there’s an insinuation that there’s some kind of benefit for your organ or for your health, like “ovary support,” “adrenal support,” “thyroid support,” “metabolism booster,” or “fat burner.” None of these are studied in any meaningful way, and many of them are actually adulterated. **[Q14] That’s a big concern with supplements: you do not know what you are getting.**

So how do you decide? Three ways to think about supplements:

1. **[Q13] Is this something you really need to take?** Is there good evidence to support it? **[Q13] Well, you want to ask your doctor if the supplement you want to take falls into a good recommendation. Places to look would be the CDC (Centers for Disease Control). If it’s for a reproductive health issue, it might be the American College of Obstetricians and Gynecologists. And also, in the U.S., the government has the Office of Dietary Supplements.**

2. Who is recommending this to you? Is it someone who’s selling a product, or is it someone saying, “These are the recommendations of multiple medical societies”? **[Q13] Look at the source of the recommendation.**

3. You want to take a product that has been tested by a third party. For example, a USP Verified label means that there’s been third-party checking. That’s really the best we can do, because in the U.S., we don’t have the ability for the government to require testing for purity. Be very wary about Ayurvedic products because they are actually very likely to be contaminated with lead. About 20% of them are, especially products for libido, metabolism, or sports enhancement. Those products have a much higher risk of contamination. This is a huge problem, and it’s important because, one, you want to make sure the product you're taking isn't contaminated with heavy metals, mold, fungi, or things like that. But you also want to make sure it contains what it claims.

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***[Q15]*** *🡪 The speaker encourages listeners to question need, recommendation source, and quality assurance—this highlights the importance of critical thinking.*

**Part 4**

**Source:** [**https://www.youtube.com/watch?v=zGd2pgJBHA8**](https://www.youtube.com/watch?v=zGd2pgJBHA8)

The tale of Robin Hood is the stuff of fiction, but the legend has roots in real history. The story is often **[Q16] intertwined** with the signing of the Magna Carta, a document limiting the power of the monarchy, signed by King John under threat of rebellion by **[Q18] English barons**. It established rights like due process and **[Q17] trial by jury**, while limiting excessive taxes.

*"Double the taxes. Triple the taxes. Squeeze every last drop."*

Today, it's viewed as the **[Q19] forebearer** to the Declaration of Independence, the Constitution, and is still cited in Supreme Court cases. which makes a discovery this week seem quite **[Q20]** **consequential**. British researchers have determined that what was believed to be a copy of the 1300 Magna Carta in Harvard Law School's collection isn't a copy at all, but one of just seven originals known to exist.

*"Its text matches up exactly with the text in the other six originals, and so it was that which convinced me absolutely that Harvard Law School had indeed,* ***[Q21] unbeknownst*** *to them, got an original of the 1300 Magna Carta."*

Harvard purchased the document about 80 years ago from a London book dealer for $27.50.

*"They bought it for peanuts in 1946 from an* ***[Q23] auctioneer****, Sweden Maxwell, who equally seemed to have no idea what it was."*

It had previously been in the possession of a World War I **[Q22] flying ace**, who inherited it from famed British abolitionist Thomas Clarkson, but no one seemed to know just how valuable it was.

*"Whoever cataloged it got their kings mixed up, and they thought that it was something to do with Edward II rather than Edward I, and as a result, they assumed it was a copy."*

The discovery comes as Harvard is facing pressure from the Trump administration to make changes to its admissions and academic practices.

"This is a document that defends the liberties of the individual against what's seen as a **tyrannical [Q24] sovereign power**. It turns up at Harvard at precisely the moment where Harvard is under attack as a **[Q25] private institution** by a state authority that seems to want to tell Harvard what to do."

There’s hope that the discovery will spark new interest in the Magna Carta and what it represents.

"To see this thing is to see a bit of history. But history not, as it were, just of 1300. Not just of some dusty old time in the past, but a history that is still relevant to us today."