PRACTICE TEST 01

I. LISTENING (5 points)

Part 1. Listen to the recording featuring three speakers discussing their views on animal welfare. Match the viewpoints in column A with the Speakers in column B.

Column A

- 1. Belief that the development of certain everyday products at the cost of animal suffering is particularly reprehensible.
- 2. A feeling that it is a moral imperative to intervene against commercial activities harming natural environments, even with economic downsides
- 3. The suggestion that personal lifestyle choices make adopting an absolutist stance on animal rights difficult
- 4. Highlighting specific, disturbing imagery related to laboratory practices as a key reason for strong opinions.
- 5. The view that failing to protect species from human-induced ecological pressures is a serious lapse in responsibility.

Column B

A. Speaker	1
B. Speaker	2
C. Speaker	3

Your answers:

1.	2.	3.	4.	5.

Part 2. Listen carefully to the audio report about the earthquake in Myanmar. Then, match the items in Column A with the corresponding descriptions or details in Column B.

Column A

6. Main Earthquake Magnitude
7. Dark Orange on Shake Map
8. Sagaing Fault Line
9. Earthquake Depth
10. Major Aftershock Magnitude

Column B

- A. Magnitude 6.4, occurred minutes after the main event
- B. Indicates violent shaking, likely high casualties and extensive damage
- C. Low-frequency shockwaves travelling further
- D. A 1200km long geological feature running near Mandalay and other cities
- E. 7.7 on the magnitude scale, one of the largest in living memory
- F. Shallow, only 10 kilometers (6 miles) below the surface

Your answers:

(7			10	
6.	7.	8.	9.	10.	
Part 3. Listen caref	fully to the recording	g and choose the co	orrect answer.		
11 is causing	the traffic delays.				
A. Road constru	ction	B. A s	mall accident		
C. Inclement we	eather conditions	D. A d	runk driver		
12. These delays cle	ear up				
A. right after 33	00 South	B. nea	r 9600 South		
C. around 7200	South	D. abo	out 3800 South		
13 caused t	the accident on Nort	h.			
A. A stalled veh	icle	B. Lin	nited visibility		
C. Slick ice		D. Ag	D. Aggressive driving		
14. What weather co	onditions are predict	ted during the night	and morning hours?		
A. heavy fog	B. strong	winds C. torr	C. torrential downpours D. periodic sleet		
15 becaus	e of the extreme col	d temperatures.			
A. Road closure	s are taking place				
B. Sudden avala	nches are expected				
C. A group of a	nimals has come into	the valley			
D. The sub-surfa	ace of the road is con	nstantly shifting			
Your answers:					
11.	12.	13.	14.	15.	
		·			
Part 4. Listen to th	ne recording and fi	ll in the blanks in	the summary below	v. Use no more than	
three words for eac	· ·		•		
•					

When animals leave the forest and move into farmland, the relationship with humans becomes (16)___. Macaques from the (17)___ are bold and often venture out seeking new opportunities. They find the (18)__ grown by farmers irresistible, although cultivating it is a (19)__ for the locals who don't want marauding monkeys. When the farmers (20)__ as the day heats up, the monkeys seize their chance. They must be cautious, as getting spotted means (21)__. Every day, they brave (22)__, knowing the weak spots where they can stage raids and gorge themselves. Though hard to stop, the farmers employ a (23)__ specially trained (24)__ like the Japanese Shiba Inu, bred to protect crops. Despite this, the macaques believe the (25)__ outweigh the risks and plan to return.

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 quesitons 26-35, read the passage below and deci	ide which answer (A, B, C or D) best
fits each space. Write the letter A , B , C , or A in the numbered	l boxes provided.
For many months doing physical average may (26)	a mainful tarturing of the hadr

For many people doing p	physical e	xercise ma	ay (26) _	a pa	ainful tort	turing of t	he body.
Therefore, there's usually so							
one's muscles through their p	aces. Unle	ess we are	forced to	(27)	a physi	cal trainin	g course,
we are inclined to treat it as	something	(28)	than s	taying in f	ront of th	e TV set,	spending
time in a pub (29)	alcoholic	beverages	or consu	ming exce	essive qua	ntities of	fattening
confectionery in a café. We n	eed to be	considerab	ly motiva	ted to take	up a body	workout a	and build
our physical fitness. What	usually (3	30)	_ individ	uals from	(31)	them:	selves to
strenuous exercise in the fear	of fatigu	e, discomf	ort or eve	n the (32)	o	f being ou	tdone by
true fitness zealots.							
However, getting fit is ful	lly a matte	er of comn	non sense	. Different	forms of	exercise n	nay be of
great benefit to the human be	ody, incre	asing its s	trength, fl	exibility an	nd endura	nce. (33) _	a
nutritious diet, much better	performan	ce of the	heart and	I the lungs	simprove	s blood ci	rculation
making an individual more re	sistant to s	stressful sit	tuations as	s well as m	ore immu	ne to infec	tions and
diseases.							
In the first place, self-dis-	cipline tha	it is requis	site for pro	oceeding w	vith such j	physical et	ffort (34)
to ensure that the inte	ention of b	pecoming 1	healthier a	and more v	igorous is	n't (35) _	by
any trivial impediments.							
26. A. incorporate	B.	entail	(C. administ	ter	D. corres	pond
27. A. play down on	B.	get on for	(C. fall back	on	D. go in t	for
28. A. in a less superiority]	B. for lowe	r utter adv	antage	
C. with less inferior privile	edge]	D. of a low	er priority	•	
29. A. smacking	B.	sipping	(C. seething		D. sniffing	5
30. A. repels	B.	denies	(C. opposes		D. rejects	
31. A. commiting	B.	absorbing	(C. involvin	g	D. engross	ing
32. A. hindrances	B.	impairmen	nts	C. preventi	ons	D. inhibiti	ons
33. A. Supporting]	B. What su	pports it is	5	
C. When supported by]	D. By supp	orting its		
34. A. ought to be attained	[]	B. can be a	ttained		
C. is attained]	D. is likely	to be attai	ined	
35. A. persecuted	B.	tormented		C. harassed	1	D. suppres	ssed
Your answers:							
26. 27. 28.	29.	30.	31.	32.	33.	34.	35.

Part 2. For question 36-40, read the passage, then fill in each of the numbered 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.

OXYGEN	NEGLECT	INDICATE	SUPPLY	PROOF			
NATAL	DIGEST	COUNTER	CONDENSE	MOUNT			
Mineral, vitamin, and (0) health supplements make up a multi-billion-dollar industry in the							
United States alone, but do they really work? Evidence suggests supplementation is clearly indicated							
in special circum	nstances but can	actually be harmful i	n others. For the gene	ral population, however,			
supplements hav	re (36)	or no impact on the	prevention of common	cancers, cardiovascular			
diseases, cogniti	ve decline, mort	ality, or any other ma	ijor indicators of healt	h. In pursuit of a longer,			
happier and heal	Ithier, there are	certainly better invest	tments for most people	e than a tube of vitamin			
supplements.							
Particular sub-gr	oups of the pop	ulation can gain a (37	7) benefit fron	n supplementation. Folic			
acid has long be	en indicated as a	(38) suppler	nent due to its assistan	ce in foetal cell division			
and correspondi	ng ability to pre	event neural tube birt	th defects. The elderly	may also benefit from			
extra vitamin D	; calcium can l	help prevent bone fr	actures, and zinc car	maintain vision while			
deflecting macul	ar degeneration	in people who would	otherwise be likely to	develop affliction.			
There is (39)	evidence, h	nowever, for many pe	ople to steer clear or n	nultivitamins. The prime			
example is excessive vitamin A has been proven to increase women's risk of a hip fracture and							
vitamin E was (40) in a study that demonstrated higher rates of congestive heart failure							
among such vitamin users.							
Your answers:							
0. antioxidant		36.	37.				
38.		39.	40.				

Part 3. The passage 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.

It is hard for <u>most</u> everyone, but especially the young, to imagine a world without television. We have come to expect that all the important news of the day, worldwide will be there by the touch of a button. In times going by, only the literate knew what was going on in the world, and then only after a long delay. But now it is possible for any of us to watch world events as they occur. Nothing has shortened the distance that divides our private lives from the outside world to such an extent as television.

Time and again, television transports us to the habitats of rare animals, and we may identify with them. Concern for damage to the environment extends far and away. We worry about the influence of technology not just in our cities but on us as people. Increasingly, we see ourselves as part of the planet rather than in isolation.

There was once the prerogative of scholars is now accessible to countable people through the medium of television. Although this form of popular education can be regarded as superficial, it represents a broadening of knowledge.

Your answers:

E.g. almost	41.	42.	43.	44.	45.

II.2. READING COMPREHENSION (5 points)

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

Print on demand is transforming academic publishing with its modern approach. Publishers can set
(46) efficient printing systems to produce books only when needed, a process that helps cut
down (47) waste by avoiding overproduction. This technology has (48) off in
popularity, becoming a favored choice for many. Authors benefit as they can keep (49) of
their sales through digital platforms, monitoring their success easily. Unlike traditional publishing,
which can run out of (50) due to fixed print runs, print-on-demand ensures books are always
available. It also allows publishers to turn (51) production time quickly, meeting urgent
demands.
Authors using print-on-demand retain most profits instead of receiving the traditional (52)
typically paid in conventional publishing. Some readers still opt for physical copies over (53)
ones, valuing their tactile quality. However, journals often rely on print (54) to fund
operations, which can (55) about significant cost savings for smaller publishers like the
American Society of Neuroradiology.

(Adapted from https://pmc.ncbi.nlm.nih.gov/articles/PMC7051726/)

Your answers:

46.	47.	48.	49.	50.
51.	52.	53.	54.	55.

Part 2. Read the following passage and do the task that follows.

The pervasive impact of cyberbullying

Cyberbullying presents a significant challenge in the modern educational landscape. Unlike traditional bullying, its often anonymous nature and ability to transcend physical locations pose unique problems for schools and individuals. The negative consequences are profound and farreaching. Relationship problems often arise, and victims experience powerfully negative effects, particularly on their social well-being. Studies, such as those by Patchin and Hinduja, indicate a link between experiencing cyberbullying (as both victim and offender) and significantly lower self-esteem. This form of aggression impacts students' overall wellbeing, their schooling, and peer relationships, often with long-term implications.

The adverse impacts are not fleeting; they can extend into early adulthood. Victims may suffer from withdrawal from school activities, absenteeism, academic failure, eating disorders, substance abuse, depression, and in tragic cases, even suicide. For perpetrators, the long-term implications can include higher levels of antisocial, violent, or criminal behaviour in adulthood. These outcomes

generate ongoing social and economic costs for the community. As communication technologies become increasingly integrated into young people's lives, concerns grow about the potential for cyberbullying to escalate both the frequency and severity of victimisation.

The National Crime Prevention Council highlights several key themes regarding the cyberbullying phenomenon. Firstly, the sheer percentage of students affected and the often graphic, threatening nature of online interactions point to cyberspace as an unsettling environment with few established norms for behaviour. Typical adolescent tensions surrounding relationships are amplified in this largely unsupervised digital space. Adults, often lacking the necessary technological expertise or understanding of this environment, can feel sidelined and unable to provide adequate support or supervision. This lack of governance structure can lead to a 'Wild West' scenario where individuals retaliate due to a perceived absence of protection.

Secondly, cyberbullying evokes intense negative emotions in victims, including anger, powerlessness, fear, and sadness – similar to the outcomes of face-to-face bullying but potentially exacerbated by the anonymity and pervasiveness of online attacks. Targets often feel helpless, unsure how to make the harassment stop. Thirdly, students themselves are often ill-equipped to handle these situations. Many do not report incidents due to fear of reprisal, embarrassment, or a belief that adults will not or cannot intervene effectively. Avoidance might stop a single incident but offers little long-term protection. Some victims withdraw significantly, impacting their academic and social lives, while others might eventually retaliate, perpetuating a harmful cycle.

Adolescence is a critical period for identity development, heavily influenced by social interactions. Cyberbullying can severely disrupt this process. Research suggests that the experience of cyberbullying can have a more detrimental effect on adolescent development than traditional bullying, potentially leading to long-lasting psychological harm, including depression, anxiety, low self-esteem, and behavioural problems.

(Adapted from: Notar, C. E., Padgett, S., & Roden, J. (2013). Cyberbullying: Resources for Intervention and Prevention. Universal Journal of Educational Research, 1(3), 133–145.)

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

- 56. The anonymity of cyberbullying is the sole factor distinguishing it from traditional bullying.
- 57. Patchin and Hinduja's research indicated that only victims of cyberbullying suffer from reduced self-esteem.
- 58. The negative consequences of cyberbullying can persist into a person's adult life.
- 59. According to the National Crime Prevention Council, adults generally possess the necessary skills to supervise teens effectively in cyberspace.
- 60. Fear of negative consequences is a primary reason why students hesitate to report cyberbullying incidents.
- 61. The passage states that cyberbullying has a more severe impact on identity development compared to traditional bullying.

Your answers:

56.	57.	58.	59.	60.	61.

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

	The impact	t and nature of cyberbu	llying	
Cyberbullying poses uni	que (62)	compared to traditi	onal bullying due	to its anonymity
and ability to occur anyv	vhere. It negativ	ely affects victims' socia	l (63)	and self-esteem,
with research showing la	inks between inv	volvement and lower con	ifidence. The cons	sequences can be
long-term, impacting sc	hooling, relation	nships, and mental health	n well into (64) _	For
perpetrators, future antis	ocial behaviour	is a risk. The National C	rime Prevention C	ouncil notes that
		l (65), ampl		
Adults may struggle to p	rovide (66)	due to lack of tec	hnological unders	standing. Victims
		to report incidents		
lack of intervention car	lead to victim	s withdrawing or engag	ing in (68)	behaviour
themselves. Ultimately,	cyberbullying c	an severely disrupt the c	rucial process of	(69)
development during adol	lescence.			
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 (70–75). There is one extra paragraph which you do not need to use. Write the letters A – G in the corresponding numbered boxes provided.

URBANIZATION AND CHILD HEALTH: A STUDY IN BURKINA FASO

Anemia, a condition marked by a deficiency of red blood cells or hemoglobin, poses a significant threat to young children, particularly in low- and middle-income countries where access to healthcare and nutrition is often limited. In Burkina Faso, a nation grappling with both malaria and rapid urban growth, researchers have sought to understand how the shift from rural to urban environments might influence the prevalence of anemia among children aged 6 to 59 months. Their findings reveal a complex interplay of factors that challenge conventional assumptions about urban advantages.

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The study, conducted in Bobo-Dioulasso, Burkina Faso's second-largest city, involved 875 children across both older, established neighborhoods and newer, rapidly developing areas. Researchers collected comprehensive data, including socio-economic status, dietary habits, and anthropometric measurements, alongside blood samples to assess hemoglobin levels and malaria infection. This meticulous approach aimed to uncover whether urban living—often associated with better access to resources—truly benefits children's health in the context of anemia.

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The results were striking: 61.3% of the children were found to be anemic, with a statistically significant difference between the older and newer areas (p=0.003). Children in the newer, more recently urbanized areas exhibited higher rates of anemia, challenging the notion that urban environments inherently provide better health outcomes. This disparity suggests that the rapid, often unplanned nature of urbanization may exacerbate rather than alleviate health challenges.

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Several factors contribute to this unexpected trend. In newer urban areas, access to clean water and sanitation is often inadequate, increasing the risk of infections that can worsen anemia. Additionally, dietary shifts in urban settings—where families may rely more on processed foods rather than nutrient-rich traditional diets—can lead to deficiencies in iron and other essential nutrients. These environmental and lifestyle changes highlight the nuanced impact of urbanization on child health.

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Malaria, a persistent issue in Burkina Faso, further complicates the picture. The study found a significant association between malaria infection and anemia, with children in newer areas showing higher malaria prevalence. This correlation underscores how urban growth, if not accompanied by robust public health measures, can create conditions that perpetuate disease and hinder children's development.

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The findings carry profound implications for public health policy in Burkina Faso and similar contexts. Addressing anemia in urban settings requires targeted interventions that account for the unique challenges of rapid urbanization, such as improving sanitation, ensuring access to nutritious foods, and strengthening malaria prevention programs. Only through such measures can the potential benefits of urban living be realized for vulnerable populations.

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Ultimately, this study challenges the assumption that urbanization automatically equates to improved health outcomes. It calls for a more critical examination of how urban growth is managed, particularly in resource-constrained settings. For children in Burkina Faso, the path to better health lies not in the mere fact of urban living, but in the deliberate and equitable development of urban spaces to support their well-being.

(Adapted from https://academicjournals.org/journal/IJNAM/article-full-text-pdf/5A5A51672354)

Missing paragraph

- A. For instance, the researchers noted that socio-economic status played a pivotal role in shaping health outcomes. Families in older areas, often more established, had greater access to healthcare facilities and markets with fresh produce, potentially mitigating the risk of anemia. This disparity underscores how economic inequalities within urban settings can perpetuate health challenges for the most vulnerable.
- B. One approach to addressing these issues involves community-based nutrition programs. By educating families about the importance of iron-rich diets and providing supplements where needed, such initiatives could counteract the dietary shifts associated with urbanization. These

- programs, however, require sustained funding and coordination to be effective in rapidly changing urban environments.
- C. In contrast, older urban areas, with more established infrastructure, often provide better access to healthcare and education. However, even in these areas, anemia rates remain high, suggesting that systemic issues—such as widespread poverty and limited health literacy—may overshadow the benefits of urban living. This complexity calls for a deeper understanding of urban health dynamics.
- D. A notable example is the role of environmental conditions in newer areas, where stagnant water and poor drainage systems create breeding grounds for mosquitoes. This increases the incidence of malaria, which depletes hemoglobin levels and exacerbates anemia. Such conditions highlight the urgent need for improved urban planning to address health risks.
- E. Another consideration is the role of cultural practices in shaping dietary habits. In rural areas, traditional diets often include nutrient-dense foods like millet and leafy greens, whereas urban families may adopt less healthy eating patterns due to convenience and cost. This shift can have lasting impacts on children's nutritional status and overall health.
- F. Some experts argue that urbanization itself is not the root cause of these health issues, but rather the lack of equitable development. In wealthier nations, urban growth is often accompanied by investments in infrastructure and healthcare, which mitigate risks like anemia. This contrast raises questions about how global health policies can be adapted to support countries like Burkina Faso.
 - **G.** Additionally, the study explored the impact of maternal education on anemia rates. Mothers with higher education levels were more likely to seek medical care and provide balanced diets for their children, reducing the risk of anemia. This finding suggests that empowering women through education could be a key strategy in combating child health challenges.

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.

CLIMATE CHANGE AND THE EVOLUTION OF ANCIENT HUMANS

1. For centuries, scientists have sought to unravel the forces that shaped the evolution of ancient humans, particularly how they adapted to their environments over millions of years. A groundbreaking study has recently illuminated the profound influence of climate variability on this process, using advanced technology to explore the past two million years. Researchers employed the ICCP/IBS Supercomputer Aleph to simulate global climate conditions, integrating these models with an extensive archaeological database of over 3,200 fossils and artifacts. This study mapped the habitats of five major hominin species—Homo sapiens, Homo neanderthalensis, Homo erectus, Homo heidelbergensis, and Early African Homo (including Homo ergaster and Homo habilis)—revealing that dramatic environmental changes, such as

- severe droughts and temperature fluctuations, often coincided with <u>pivotal evolutionary</u> <u>milestones</u>. These findings suggest that climate was a driving force in human evolution.
- 2. The methodology behind this study marks a significant advancement in paleoanthropology, blending paleoclimate modeling with tangible archaeological evidence. The supercomputer model, developed by Axel Timmermann at the IBS Center for Climate Physics in South Korea, reconstructed climate variables like rainfall, temperature, and vegetation across the globe over two million years. To ensure accuracy, the model was cross-referenced with paleoclimate records from ice cores, ocean sediments, and cave stalagmites. Simultaneously, Pasquale Raia from the University of Naples compiled a comprehensive database of human fossils and stone tools from Africa, Europe, and Asia. By aligning the climate model's predictions with the locations and timelines of these artifacts, researchers identified the environmental conditions that supported each hominin species, providing a clearer picture of how climate variability influenced their survival and adaptation strategies.
- 3. The study's findings highlight the intricate relationship between climate and human evolution, showing how different hominin species responded to environmental pressures. [A] For example, Homo erectus thrived in stable, warm climates, while Homo neanderthalensis adapted to colder, more variable conditions in Europe. However, severe climate events, such as prolonged droughts, often led to population declines, particularly among less adaptable species. [B] The temperature is rising and the temperature are rising, a pair of sentences used in climate studies to illustrate variability, underscores fluctuating temperatures could disrupt resource availability, forcing hominins to either adapt or migrate. [C] These climate-induced stresses likely reduced genetic diversity by shrinking populations, but they also favored the survival of individuals with advantageous traits, potentially driving the emergence of new species like Homo sapiens. [D]
- 4. Climate variability did not merely challenge survival—it also spurred evolutionary innovation. The study reveals that dramatic environmental shifts often coincided with significant developments, such as the origin of Homo sapiens around 300,000 years ago. Paleoanthropologist Rick Potts from the Smithsonian's Human Origins Program argues that these shifts fostered adaptability, a defining trait of our species. For instance, during periods of climate instability, early humans likely developed **new tools and social behaviors** to manage scarce resources. **Can you trace the path? And it's hard to map here**, two phrases often used in paleoanthropological research, reflect the difficulty of reconstructing ancient migration patterns in landscapes altered by climate change, emphasizing how environmental shifts reshaped the habitats where early humans evolved and thrived.
- 5. The implications of this research extend far beyond understanding our ancestral past, offering critical lessons for modern societies facing rapid climate change. The study emphasizes that adaptability was key to ancient humans' survival, a trait that allowed species like Homo sapiens to endure while others faced extinction. However, modern climate change occurs at an unprecedented pace, far faster than the gradual shifts experienced by our ancestors. This rapid rate raises concerns about our ability to adapt, especially as today's environmental changes are driven by human activity rather than natural cycles like the Milankovitch cycles, which

- influenced past climates through variations in Earth's orbit. Understanding how ancient humans responded to climate variability can thus inform strategies to mitigate current global warming.
- 6. Ultimately, this study challenges the traditional narrative that human evolution was driven solely by competition or genetic mutations, proposing instead that climate variability acted as a **catalyst** for change. Despite the insights gained, gaps remain due to the sparse fossil record and the difficulty of reconstructing ancient climates. The integration of climate modeling with archaeological data, however, provides a powerful tool for exploring the forces that shaped our species. By examining the resilience of ancient humans, we can better prepare for the environmental challenges ahead. The study calls for continued research to deepen our understanding of past climates, ensuring that we can draw meaningful parallels between the adaptability of our ancestors and the strategies needed to navigate our planet's uncertain future.

(Based on https://www.smithsonianmag.com/science-nature/how-did-climate-change-affect-ancient-humans-180979908/)

- 76. As used in the passage, the phrase **pivotal evolutionary milestones** in paragraph 1 most nearly refers to:
 - A. The complete extinction of less adaptable hominin species due to climate change.
 - B. Significant turning points in the development of hominin species that coincided with major environmental shifts.
 - C. The discovery of new fossil sites containing artifacts that confirm theories about hominin migration patterns.
 - D. The consistent improvement of hominin cognitive abilities, independent of external environmental factors.
- 77. Based on the study described in the text, what can be inferred about the relationship between the supercomputer simulations and the archaeological database?
 - A. The supercomputer simulations served primarily to validate the accuracy of the archaeological database's findings.
 - B. The archaeological database provided the raw climate data that was then refined by the supercomputer simulations.
 - C. The supercomputer simulations and the archaeological database were integrated to identify correlations between climate and hominin evolution.
 - D. The archaeological database was used to correct errors identified in the climate models generated by the supercomputer simulations.
- 78. In paragraph 2, why does the author mention the <u>ice cores, ocean sediments, and cave stalagmites</u> used in the study's methodology?
 - A. To emphasize the study's reliance on cutting-edge technology rather than traditional archaeological methods.
 - B. To illustrate the breadth and reliability of the data used to validate the climate model's reconstructions.
 - C. To highlight the challenges faced by researchers in obtaining accurate paleoclimate records from diverse geographical locations.

- D. To suggest that the study's conclusions are primarily based on geological evidence rather than archaeological findings.
- 79. In the context of the passage, the phrase <u>The temperature is rising and the temperature are rising</u> in paragraph 3 most nearly suggests:
 - A. A scientifically precise measurement of increasing average global temperature.
 - B. An intentional repetition used to emphasize the consistent upward trend in temperature.
 - C. A variable and potentially disruptive pattern of temperature change.
 - D. A predictable cycle of warming and cooling with minor fluctuations.
- 80. What can be inferred about the primary difference between the climate challenges faced by ancient humans and those faced by modern societies?
 - A. Ancient humans were more adaptable to climate change because they possessed superior genetic traits compared to modern humans.
 - B. Modern societies are less capable of adapting to climate change because they lack the technological resources available to ancient humans.
 - C. The speed at which climate change is occurring today presents a significantly greater challenge to adaptation compared to the slower pace of past climate shifts.
 - D. Ancient humans primarily dealt with climate changes driven by human activity, whereas modern societies face challenges from natural climate cycles.
- 81. Why does the author include the phrases <u>Can you trace the path? And it's hard to map here</u> in paragraph 4?
 - A. To highlight the limitations of current mapping technology in accurately representing ancient landscapes.
 - B. To emphasize the collaborative nature of paleoanthropological research by showcasing common challenges.
 - C. To illustrate the difficulties paleoanthropologists face in reconstructing early human migration patterns due to climate change.
 - D. To question the validity of using migration patterns as evidence in paleoanthropological arguments concerning human evolution.
- 82. Based on the text, what can be inferred about the long-term impact of significant climate events on hominin populations?
 - A. They invariably led to the extinction of all hominin species unable to migrate to more favorable environments.
 - B. They consistently resulted in a decrease in the overall adaptability of surviving hominin populations.
 - C. They acted as a selective pressure, potentially accelerating the evolutionary divergence of hominin species.
 - D. They primarily affected hominin species already experiencing declining genetic diversity due to other environmental factors.
- 83. As used in the context of the passage, the word <u>catalyst</u> in paragraph 6 most nearly means:
 - A. A primary cause directly responsible for an outcome.
 - B. An agent that accelerates or enables a process or change.

- C. A predictable pattern that guarantees a specific result.
- D. A delayed reaction that slowly influences long-term trends.

B. [B]

- 84. Based on the text, what is the most likely relationship between climate instability and the development of "**new tools and social behaviors**" in early humans?
 - A. Climate instability directly caused genetic mutations, leading to enhanced cognitive abilities and tool-making skills.
 - B. Climate instability presented challenges that incentivized the development of new tools and social behaviors as adaptive strategies.
 - C. The development of new tools and social behaviors inadvertently exacerbated climate instability, creating a feedback loop.
 - D. Climate instability and the development of new tools and social behaviors were unrelated events that happened to occur simultaneously.
- 85. Which of the following square brackets [A], [B], [C], or [D] best indicates where would the following sentence best fit within paragraph 3 of the passage? "This adaptability allowed them to exploit different food sources and colonize new environments."

	[]		2. [2]		J. [J	1	٦٠١	~]		
Your	answers:									
76.	77.	78.	79.	80.	81.	82.	83.	84.	85.	

C. [C]

D. **[D]**

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

The Ethics and Future of Artificial Intelligence

Section A

A. [A]

Artificial Intelligence (AI), once a concept confined to speculative fiction, has rapidly transitioned into an integral part of modern life. From personalized recommendations to autonomous vehicles, AI algorithms now influence decision-making processes across industries. However, as machines become more autonomous, questions of accountability and transparency grow more urgent. Can a machine be held responsible for a flawed decision? Or does the fault rest with its human creators? These inquiries underscore the complexity of attributing moral agency in a machine-human hybrid landscape.

Section B

A growing concern among ethicists and technologists is the potential for bias within AI systems. Because algorithms are trained on historical data, they risk replicating or amplifying existing societal inequalities. For example, AI used in hiring has, in some cases, favored applicants of certain genders or ethnicities. Addressing this issue requires not only technical solutions like improved datasets and fairness algorithms, but also a philosophical reckoning with the values embedded in the code. Transparency in training data and auditability of algorithmic decisions are key principles being debated.

Section C

The geopolitical ramifications of AI development are profound. Nations are in a race to achieve technological supremacy, viewing AI capabilities as not only economic assets but also strategic weapons. This has prompted discussions about regulation, cyber-ethics, and digital sovereignty. Global institutions are struggling to keep pace, and there is growing concern that unequal access to AI technologies may deepen global inequalities. Some scholars call for an international AI governance framework akin to nuclear non-proliferation treaties.

Section D

The trajectory of AI research continues to raise philosophical questions about the essence of consciousness and the uniqueness of human cognition. As machines begin to emulate creative behaviors—writing poetry, composing music, and generating artworks—debates intensify over what constitutes intelligence and whether machines can ever possess "understanding" in the human sense. Some argue that mimicking output does not equate to internal comprehension, reviving debates from the era of Alan Turing and the Chinese Room thought experiment.

Section E

Despite the ethical dilemmas, AI holds the promise of unprecedented innovation in sectors like healthcare, education, and environmental science. Predictive diagnostics can identify diseases before symptoms appear; personalized learning platforms can adapt to individual student needs; and AI-powered climate models offer more accurate forecasts. Yet these advances come with risks—overreliance on algorithms, surveillance concerns, and potential deskilling of the workforce. The challenge lies in balancing innovation with caution, ensuring technological progress aligns with the broader public good.

In which section are the following mentioned?

- 86. An example of how AI may reinforce inequality in professional recruitment.
- 87. A comparison between machines mimicking art and philosophical notions of intelligence.
- 88. The idea that AI advancement could destabilize international relations.
- 89. The difficulty of determining who is morally responsible when an AI system causes harm.
- 90. A discussion on how machine output does not necessarily reflect internal understanding.
- 91. How global power dynamics are influenced by AI capabilities.
- 92. Ways AI can improve public services while presenting social risks.
- 93. Calls for international regulation to manage the spread and use of AI.
- 94. Ethical concerns arising from the biases in the data used to train AI systems.
- 95. The impact of AI-generated decisions on individual autonomy and societal trust.

Your answers:

86.	87.	88.	89.	90.	91.	92.	93.	94.	95.

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

Over the past one and a half centuries, photography has been used to record all aspects of human life and activity. During this relatively short history, the medium has expanded its capabilities in the recording of time and space, thus allowing human vision to be able to view the fleeting moment or to visualise both the vast and the minuscule. It has brought us images from remote areas of the world, distant parts of the solar system, as well as the social complexities and crises of modern life. Indeed, the photographic medium has provided one of the most important and influential means of capturing the essence of our being alive.

Throughout the history of visual representation, questions have been raised concerning the supposed accuracy (or otherwise) of visual images, as well as their status in society. The popular notion that seeing is believing had always afforded special status to the visual image. So when the technology was invented, in the form of photography, the social and cultural impact was immense. Not only did it hold out the promise of providing a record of vision, but it had the capacity to make such representation enduring.

In the mid-nineteenth century, the invention of photography appeared to offer the promise of automatically' providing an accurate visual record. Because of the camera's perceived realism in its ability to replicate visual perception, it was assumed that all peoples would _naturally' be able to understand photographs. This gave rise to the question of whether photography constituted a universal language'. For example, a photograph of the heavens, whether it showed the sun and moon or the constellations, would immediately be understood in any part of the world.

There are other questions that arise concerning the role of photography in society that have aimed to determine whether the camera operates as a mute, passive recorder of what is happening or whether it possesses the voice and power to instigate social change. We may further speculate whether the camera provides images that have a truly educational function or if it operates primarily as a source of amusement. In provoking such issues, the photographic debate reflects polarised arguments that traditionally have characterised much intellectual thought.

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Part 2. Write an essay of at least 350 words on the following topic. Many people believe that a self-educated approach must be developed at school in the age of technology, while many people believe that teachers' pedagogical skills still hold importance. Discuss both views and give your opinion

Answer	key
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I. LISTENING (5 điểm)

Part 1.

1. A	2. B	3. C	4. A	5. B
Part 2.				
6. E	7. B	8. D	9. F	10. A
Part 3.				
11. A	12. B	13. B	14. D	15. C

Part 4.

16. less benevolent	17. lower forests
18. perfect produce	19. Japanese obsession
20. take a break	21. trouble
22. electric fences	23. secret weapon
24. monkey dogs	25. rewards

II. READING (8,0 điểm)

II.1. LANGUAGE IN USE (3,0 điểm)

Part 1. (0,1 điểm cho 1 câu trả lời đúng)

26. B 27. D 28. D 29. B 30. A 31. A 32. D 33. C 34. A 35. D	D
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Part 2. (0,2 điểm cho 1 câu trả lời đúng: Xác định đúng từ: 0,1 điểm; viết đúng dạng thức của từ: 0,1 điểm)

36. negligible	3/. proven	38. prenatal	39. mounting	40.contraindicated
Part 3. (0,2 điểm c	cho 1 câu trả lời đ	túng: Gạch chân đún	g lỗi: 0,1 điểm; sửa	chính xác lỗi: 0,1
điẩm)				

utem)						
41. by 🛚 at	42. going [] gone	43. away 🛮 wide	44. There What	45.	countable	
				cou	ntless	

II.2. READING COMPREHENSION (5,0 điểm)

Part 1. (0.1 điểm cho 1 câu trả lời đúng)

46. up	47. on	48. taken	49. track		50. stock
51. around	52. royalties	53. digital	54.	circulation/	55. bring
			subscriptions		

Part 2. (0.1 điểm cho 1 câu trả lời đúng)

`		O/			
56. F	57. F	58. T	59. F	60. T	61. T

62. challenges	63. well-being	64. adulthood	65. norms
66. support	67. helpless	68. harmful	69. identity

Part 3. (0.1 điểm cho 1 câu trả lời đúng)

\							
70. C 71. E	72. D	73. A	74. B	75. G			

Part 4. (0.1 điểm cho 1 câu trả lời đúng)

76. B	77. C	78. B	79. C	80. C	81. C	82. C	83. B	84. B	85. D
Part 5. (0.1 điểm cho 1 câu trả lời đúng)									
86. B	87. D	88. C	89. A	90. D	91. C	92. E	93. C	94. B	95. A

III. WRITING (5.0 điểm)

Part 1. (2.0 điểm)

Contents (1.5 điểm)

The summary should:

- introduce the topic of the passage,
- present the main ideas of the passage.

Language use (0.5 điểm)

The summary should:

- demonstrate a wide variety of vocabulary and grammatical structures,
- have correct use of words and mechanics,
- maintain coherence, cohesion, and unity throughout.

Part 2. (3.0 điểm)

Task achievement (1.0 điểm)

The essay should:

- sufficiently address all requirements of the task,
- develop relevant supporting ideas with explanations, examples, evidence, etc.

Organization (1.0 điểm)

The essay should have:

- an introduction presenting a clear thesis statement introducing the points to be developed,
- body paragraphs developing the points mentioned in the introduction,
- a conclusion summarising the main points discussed in the essay.

Language use (1.0 điểm)

The essay should:

- demonstrate a wide variety of vocabulary and grammatical structures,
- have correct use of words and mechanics,
- maintain coherence, cohesion, and unity throughout.

----- HÉT -----

PRACTICE TEST 02

I. LISTENING (5.0 points)

Part 1. For questions 1-5, listen to a discussion about cars of the future and cyclists, and decide whether the following are mentioned by only one of the speakers, or by both of them. In the corresponding numbered boxes provided, write M for the Male speaker; F for the Female speaker;

B for **Both** of the speakers.

- 1. Driverless cars will ensure that cyclists remain unharmed.
- 2. Non-drivers, not driverless vehicles, might be the biggest problem.
- 3. The jobs of those in charge will become more difficult.
- 4. Various organisations are involved in research on driverless car technology.
- 5. It is uncertain how driverless technology will affect cyclists.

Your answers:

1	_	2	4	_
	17	4	l 4	5
1.	4 .	5.	''	٥.

Part 2. For questions 6-10, listen to a news report on national parks and match each number (6-10) in Column I with one letter (A - J) 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.

boxes provided.	
Column I	Column II
6. The Grand Canyon	A. is full of activities, catering to various skill levels.
7. Crater Lake	B. is famous for its stunning glaciers, dramatic fjords, and abundant
8. Grand Teton	wildlife.
9. Yosemite	C. is highly popular because it is relatively adjacent to a metropolitan
10. Zion	area.
	D. is the only national park with an active volcano where visitors can see
	the red lava.
	E. is fairly crowded due to its small size and short peak season.
	F. is famous for its extreme heat, holding the record for the highest
	temperature ever recorded on Earth.
	G. is remotely located, offering stunning night skies, free from city lights.
	H. is home to some of the most pristine and unspoiled beaches free from
	commercial development.
	I. is an incredibly scenic area whose scenery changes dramatically
	between seasons.
	J. is difficult for visitors to fully connect with due to its vastness.

Your answers:

6.	7.	8.	9.	10.	
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Part 3. For questions 11-15, listen to a talk about two trendspotters' work and write the letter A, B, C or D in the number boxes provided to indicate the correct answer to each of the following questions according to what you hear.

- 11. What does Liz say about her career change?
- A. She had always been fascinated by youth-led trends.
- B. She moved as a result of something she had read.
- C. She wanted to improve her knowledge of design.
- D. She had no idea it was so complex a field.
- 12. What contrast is highlighted between macro and micro trends?
- A. Micro trends are influenced by current issues.
- B. Macro trends are of greater interest to high street retailers.
- C. Micro trends can occasionally outlast macro trends.
- D. Macro trends are harder to identify.
- 13. When Liz initially started trendspotting, she
- A. wasted too much time browsing the Internet.
- B. photographed anything that triggered an idea.
- C. found street fashion less creative than today.
- D. made errors about what to photograph.
- 14. When asked about his work, Josh reveals that
- A. his image on social media is one of his top priorities
- B. he prefers being freelance to agency work.
- C. only a small part of his day involves looking for ideas
- D. trendspotting online requires different skills.
- 15. Liz and Josh both say that their work
- A. requires knowledge of a specific subject.
- B. needs to be constantly updated.
- C. is instinctive by nature.
- D. demands a good sense of timing.

Your answers:

11. 12.	13.	14.	15.
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Part 4. For questions 16-25, listen to part of a talk about MARCo Health, and complete the following summary. Write NO MORE THAN THREE WORDS taken from the recording for each blank. Write your answers in the corresponding numbered boxes provided.

MARCo Health, based in Jersey City, New	Jersey, focuses on creating (16)
Founded by Jacob Boyle, the company stems from l	nis lifelong connection to support mental health
in (17) With a background in (18)	and physics, he worked at a military
robotics startup. After realizing that his engineering	skills could be used to harm rather than help, he
redirected his efforts towards putting the (19)	and skills to good use, leading to the
creation of MARCo in 2018. The (20)	of MARCo is tablet-controlled and can speak
104 languages, aiming for accessibility and user-frien	ndliness. The development of MARCo involved

extensive collaboration with	(21), th	erapists and individua	ls facing challenges. This
was when he and his team	n learned about a w	ride range of (22)	Through (23)
, MARCo refine	d the program to prov	ride conversations, targ	eting a wide demographic
from ages 5 to over 70. The			
children and elderly people.			
allowing it to pivot to focus of			
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. Read the passage	below and decide wh	ich answer (A, B, C o	r D) best fits each space.
Write letter A, B, C, or D in	the numbered boxes p	rovided.	
Although the act of wri	iting a book is by n	ecessity a (26)	process, it's often after
publication that the sense of	f isolation is strongest	t. Many writers (27) _	critical feedback, but
have little (28) to the	average reader's opin	ion. While it may be	true that good reviews in
newspapers and magazines	can be gratifying, the	y're of little help in e	stablishing what ordinary
people think of your work.	So, well done to thos	e websites (29)	anyone with access to the
Internet can post an opinion	about any book. (30)	this, these custom	er reviews are not without
risk.			
Most writers can (31)	some glowing pra	ise from family or frie	ends but these reviews are
easy to recognize since they	tend to be sent in a	nonymously. On the o	other hand, visits to these
websites can also result in gr	reat anxiety. It might v	well be the (32) t	hat you receive an unkind
review and there is no kind e	ditor to shield you. Yo	ou can expect most revi	ewers to be brief but there
are (33) write long,	strangely formal ess	ays, usually containing	g references to classical
literature, presumably in (34			
(35) author, I suggest	you think twice befor	e you go off searching	for reviews on-line rather
than in the safer, traditional p			
26. A. lonely	B. solitary	C. alone	D. own
27. A. long for	B. wait on	C. hope for	D. expect for
28. A. approach	B. reaching	C. access	D. interaction
29. A. where	B. which	C. who	D. that
30. A. Said			
	B. Having said	C. To have said	D. Had said
31. A. hope	B. Having said B. expect	C. To have saidC. look forward	D. Had said D. believe
31. A. hope32. A. situation	<u>-</u>		

34. A. an attempt		B. a try		C. effort		D. an order					
35. A. sensible		B. reasona	onable C. offensive		sive	D. sensitive					
Your answers:											
26.		27.	28.	29.	30.	31.	32.	33.	34.	35.	

PART 2. Fill each of the numbered 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.

Brazil's habitats under threat

expand	cultivate	irrigate	produce	
grow extend	plant	destroy	vegetable	danger

The ongoing (0) expansion of agriculture in Brazil is seriously threatening rare and vulnerable
habitats such as the Amazon. The major threat to some of these vast natural areas is the destructive
power of the soya bean. Soya beans are one of Brazil's main crops, with more than 21 million
hectares under (36) Mother crop which is causing concern is cocoa, which has been blamed
for the widespread (37) of Brazilian forests. During the economic boom of the 1970s, the
growth in importance of this crop was a leading cause of the decline of Brazil's (38) Atlantic
forest ecosystem, of which only about 10% remains. The Cerrado, an (39)woodland
savanna ecosystem in Brazil, is threatened by cattle farming. The development of this business is
closely linked to the increase in soya production, which poses serious concerns about the impact of
this industry on sensitive ecosystems. In the forests of Brazil, some of the world's most diverse
ecosystems have been converted to fast-growing (40) mainly of eucalyptus, a non-native
species.
V

Your answers:

	36.	37.	38.	39.	40.
1					

PART 3. The passage below contains FIVE grammatical mistakes. UNDERLINED the mistakes and WRITE THEIR CORRECT FORMS in the numbered boxes provided. The first one has been done as an example.

Scientists have for the first time used gene editing techniques to make pigs resistant to one of the world's costly livestock diseases, says The Times. Bred at the University of Edinburgh's Roslin Institute, the animals had a short section of their DNA excised to stop them being infected from PRRS, a deadly virus who costs the industry about £1.75bn a year in Europe and the US alone. The virus enters pig cells through a surface protein called CD163; by "editing" the genetic instructions for making the protein, the scientists were able to shut the virus out— with no sign of harm to the animals.

However, it remains unclear when, if ever, farmers will be able to take use of the technology. Scientists need first to make sure that there are no long-term effects on the animals, and then to open

a public debate about the acceptability of meat from gene-edited animals going on the market. The researchers expect some public resistance, but stress that it is very different to genetic modification, which introduces DNA from other species. "This animal is not what we call 'transgenic'," said Dr Christine Tait-Burkard, the study's lead author. "It's 100% pig DNA in there still."

Your answers:

41. 42. 43. 44.	45.
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II.2. READING COMPREHENSION (5 points)

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

ECOTOURISM You may be asking yourself, what on earth is ecotourism? Ecotourism was first defined in 1990 as "responsible travel (46) natural areas that conserves the environment in its natural states and improves the well-being of the local people". This is a far (47) away from the old slogans of the 1960s that only focused on financial gain. It can also be known as green travel, responsible (48) or sustainable travel. The main idea behind ecotourism or the ethos if you prefer is, "travelling more sustainably makes the world (49)____better place". The idea behind this type of travel is simple to everyone, but the confusion comes in when we look at practical ways of achieving it, we can refer to the best methods as "(50) only pictures, leave only footprints" approach, in (51) the general idea is to leave places without a trace of us ever having been there in the first place. Travel experts stress (52) over time you will realise that you don't need to spend an arm and a leg to achieve this type of travel, you can become an eco-friendly traveler on a shoestring as long as you follow a few simple rules, such as: save water, save energy (53) _____respect others including the natural wildlife. Better than that, ecotourism looks to inject much needed funds into the local areas to stimulate financial growth and sustainable development of facilities. Individually we can hardly make a difference, but collectively we can make great leaps towards changing attitudes and (54) a real impact that will be both long lasting and feasible. This said, we need to start off at an individual level for any of this to be achieved. This is why we need to start the education process at a grass roots level and make (55) we build for a better and brighter future. Your answers: 47. 46. 48. 49 50. 51. 52. 53. 54. 55.

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

THE REAL RISKS OF ARTIFICIAL INTELLIGENCE

If you believe some AI-watchers, we are racing towards the Singularity – a point at which artificial intelligence outstrips our own and machines go on to improve themselves at an exponential rate. If that happens – and it's a big if – what will become of us?

In the last few years, several high-profile voices, from Stephen Hawking to Elon Musk and Bill Gates have warned that we should be more concerned about possible dangerous

outcomes of supersmart AI. And they've put their money where their mouth is: Musk is among several billionaire backers of Open AI, an organisation dedicated to developing AI that will benefit humanity.

But for many, such fears are overblown. As Andrew Ng at Stanford University, who is also a chief scientist at Chinese internet giant Baidu, puts it: fearing a rise of killer robots is like worrying about overpopulation on Mars.

That's not to say our increasing reliance on AI does not carry real risks, however. In fact, those risks are already here. As smart systems become involved in ever more decisions in areas ranging from healthcare to finance to criminal justice, there is a danger that important parts of our lives are being made without sufficient scrutiny. What's more, AIs could have knock-on effects that we have not prepared for, such as changing our relationship with doctors to the way our neighbourhoods are policed.

What exactly is AI? Very simply, it's machines doing things that are considered to require intelligence when humans do them: understanding natural language, recognising faces in photos, driving a car, or guessing what other books we might like based on what we have previously enjoyed reading. It's the difference between a mechanical arm on a factory production line programmed to repeat the same basic task over and over again, and an arm that learns through trial and error how to handle different tasks by itself.

How is AI helping us? The leading approach to AI right now is machine learning, in which programs are trained to pick out and respond to patterns in large amounts of data, such as identifying a face in an image or choosing a winning move in the board game Go. This technique can be applied to all sorts of problems, such as getting computers to spot patterns in medical images, for example. Google's artificial intelligence company DeepMind are collaborating with the UK's National Health Service in a handful of projects, including ones in which their software is being taught to diagnose cancer and eye disease from patient scans. Others are using machine learning to catch early signs of conditions such as heart disease and Alzheimers.

AI is also being used to analyse vast amounts of molecular information looking for potential new drug candidates – a process that would take humans too long to be worth doing. Indeed, machine learning could soon be indispensable to healthcare.

AI can also help us manage highly complex systems such as global shipping networks. For example, the system at the heart of the Port Botany container terminal in Sydney manages the movement of thousands of shipping containers in and out of the port, controlling a fleet of automated, driverless straddle-carriers in a completely human-free zone. Similarly, in the mining industry, optimisation engines are increasingly being used to plan and coordinate the movement of a resource, such as iron ore, from initial transport on huge driverless mine trucks to the freight trains that take the ore to port.

Als are at work wherever you look, in industries from finance to transportation, monitoring the share market for suspicious trading activity or assisting with ground and air traffic control. They even help to keep spam out of your inbox. And this is just the beginning for AI. As the technology advances, so does the number of applications.

So, what's the problem? Rather than worrying about a future AI takeover, the real risk is that we can put too much trust in the smart systems we are building. Recall that machine learning works by training software to spot patterns in data. Once trained, it is then put to work analysing fresh, unseen data. But when the computer spits out an answer, we are typically unable to see how it got there.

There are obvious problems here. A system is only as good as the data it learns from. Take a system trained to learn which patients with pneumonia had a higher risk of death, so that they might be admitted to hospital. It inadvertently classified patients with asthma as being at lower risk. This was because in normal situations, people with pneumonia and a history of asthma go straight to intensive care and therefore get the kind of treatment that significantly reduces their risk of dying. The machine learning took this to mean that asthma + pneumonia = lower risk of death.

As AIs are rolled out to assess everything from your credit rating to suitability for a job you are applying for to criminals' chance of reoffending, the risks that they will sometimes get it wrong – without us necessarily knowing – get worse.

Since so much of the data that we feed AIs is imperfect, we should not expect perfect answers all the time. Recognising that is the first step in managing the risk. Decision-making processes built on top of AIs need to be made more open to scrutiny. Since we are building AI in our own image, it is likely to be both as brilliant and flawed as we are.

For questions 56-64, complete the sentences below. Write NO MORE THAN TWO WORDS from the passage for each answer. Write your answers in the corresponding numbered boxes provided.

-	
56.	Singularity is the point, where AIour own machines.
57.	Many people, including Stephen Hawking, Elon Musk and Bill Gates warned
	us about possibleof supersmart AI.
58.	According to Andrew Ng, fearing a rise ofis similar to worrying about
	overpopulation on Mars.
59.	There is a danger that many important parts of our lives, like healthcare, finance and
	will be without sufficient scrutiny.
60.	Simply put, AI is machines doing things that are considered to require when
	humans do them.
61.	Nowadays, the main approach to AI is
62.	DeepMind in collaboration with the UK's National Health Service works on many
	projects, including the one where software learns how to and eye disease.
63.	In the nearest future machine learning could beto healthcare.
64.	AI might also help in managingnetworks.

Your answers:

56.	57.	58.
59.	60.	61.
62.	63.	64.

For questions 65-69, decide whether the following statements are True (T), False (F) or Not Given (NG). Write your answers in the corresponding numbered boxes provided.

- 65. AI works in many different industries nowadays.
- 66. We shouldn't put too much trust in AI in the future.
- 67. The quality of the data doesn't affect the ability of AI to learn information correctly.
- 68. We can get perfect answers from AI all the time.
- 69. Some experts think that fears about killer robots are not realistic.

Your answers:

65.	66.	67.	68.	69.	
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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 (70–75). There is one extra paragraph which you do not need to use. Write the letters A – G in the corresponding numbered boxes provided.

Jonah Lehrer: the prodigy who lights up your brain

There is a moment familiar to anyone who has ever frittered away innocent hours watching old cartoons. It occurs when Wile E Coyote, Elmer Fudd, Popeye or any of dozens of animated characters gets a sudden moment of insight. With a flash, a light bulb appears above their heads, shining brightly to illuminate the darkness of whatever dilemma they faced. Aha!

70

That little nugget of information – blending culture and science – is the essence of the remarkable rise of Jonah Lehrer. He is a contributing editor at Wired, has published three books, is a prolific blogger and counts publications from the Wall Street Journal to the Washington Post as home. The New York Times has called him a 'popular science prodigy' and the Los Angeles Times once hailed him 'an important new thinker'.

71

Lehrer's own 'aha moment' came while he worked in the laboratory of acclaimed neuropsychiatrist Eric Kandel. As Lehrer helped in Kandel's lab on a project to study the molecular links between smell and memory, he was well on his way to one important discovery. 'What I discovered was that I was a terrible scientist,' he later told one interviewer.

72

That was the end of Lehrer's prospects as a scientist but the beginning of a writing career acting as an interpreter between two worlds: the sciences and the humanities. After he graduated from Columbia in 2003, he became a Rhodes scholar, travelling to Oxford. He arrived with a plan to study science but rapidly changed it to literature and theology.

73

There is no doubt Lehrer is very smart. He was born on 25 June 1981 in the Los Angeles neighbourhood of Los Feliz. His father, David, is a civil rights lawyer and his mother, Ariella,

developed educational software. It was a happy, middle-class home under sunny Californian skies with parents that encouraged their son's manic curiosity.

74

Prompted by a baffling moment trying to pick out a box of Cheerios on an aisle crowded with scores of different cereal brands, Lehrer looked at human decision-making. He took dramatic individual decisions – a pilot landing a stricken plane, a Superbowl pass, a poker playing physicist – and looked at the neurology behind them. He examined how different parts of the brain took on different decisions and how that made an impact on the world.

75

Art and human emotions — all our failures, foibles and triumphs – may just be chemicals and firing neurons but Lehrer's words make them sing all the same.

Missing paragraphs

A

That tome was followed up by a third offering in the shape of Imagine, which looks at how neurology and creativity interact. Far from showing how innovations come to one-off geniuses, he reveals how solid science lies behind the creative process, which can be understood neurologically and thus nurtured.

В

But no matter. For Lehrer had started reading Marcel Proust on his way to work; in particular, he became engrossed with Proust's explorations of how smell could trigger memory. Lehrer once described the moment thus: "I realised that Proust and modern neuroscience shared a vision of how our memory works."

 \mathbf{C}

"I remember Mom patiently listening as I prattled on about my latest interests" Lehrer told me. An interest in science was always there. He recalled stepping into a lab for the first time. "It seemed like a magician's lair" he said. He followed up on Proust by diving further into the borderland between neurology and human experience in 2009's *How We Decide*.

D

After shining at school, Lehrer went to Columbia, where he met his wife-to-be, Sarah Liebowitz, in a Shakespeare class. She went with him to Britain, where she worked for the Boston Globe's London bureau. They have an eleven-month daughter called Rose and the family lives in the Hollywood Hills.

E

All of which is not bad for someone who is only thirty. Lehrer's stock-in-trade is the boundary between science and the humanities. He strives to link art and neurology: how chemical reactions within three pounds of squidgy grey matter inside our skulls actually make us love, laugh and lead our lives.

 \mathbf{F}

He also ended up living in London. It was here he began to work on his first book, *Proust was a neuroscientist*, which was published in 2007, and began a successful journalism career. Lehrer took

a look at numerous cultural figures and studied how their work foreshadowed the research of neuroscience.

G

It is harmless fun. But, according to popular science *wunderkind* Jonah Lehrer, also literally true. There is indeed a part of the brain associated with a sudden 'aha moment' of the type linked to key breakthroughs of luminaries such as Isaac Newton and Archimedes. When you get a sudden insight, it registers a huge spike in activity, just like that light bulb.

Your answers:

70. 71. 72. 73. 74. 75.	
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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.

GALAXIES

Astronomers classify galaxies into three major categories.

Spiral Galaxies

Like the Milky Way, other spiral galaxies also have a thin disk extending outward from a central bulge. The bulge itself merges smoothly into a halo that can extend to a radius of over 100,000 light-years. Together, the bulge and halo of a spiral galaxy make up its spheroidal component, so named because of its rounded shape. Although no clear boundary divides the pieces of the spheroidal component, astronomers usually consider stars within 10,000 light-years of the center to be members of the bulge and those outside this radius to be members of the halo.

The disk component of a spiral galaxy slices directly through the halo and bulge. The disk of a large spiral galaxy like the Milky Way can extend 50,000 light-years or more from the center. The disks of all spiral galaxies contain an interstellar medium of gas and dust, but the amounts and proportions of the interstellar medium in molecular, atomic, and ionized forms differ from one spiral galaxy to the next. Spiral galaxies with large bulges generally have less interstella gas and dust than those with small bulges.

Not all galaxies with disks are standard spiral galaxies. Some spiral galaxies appear to have a straight bar of stars cutting across the center, with spiral arms curling away from the ends of the bar. Such galaxies are known as *barred spiral galaxies*.

Other galaxies have disks but do not appear to have spiral arms. These are called lenticular galaxies because they look lens-shaped when seen edge-on (lenticular means "lens-shaped"). Although they look like spiral galaxies without arms, lenticular galaxies might more appropriately be considered an intermediate class between spirals and ellipticals because they tend to have less cool gas than normal spirals, but more than ellipticals.

Among large galaxies in the universe, most (75% to 85%) are spiral or lenticular. (Spiral and lenticular galaxies are much rarer among small galaxies.) Spiral galaxies are often found in loose collections of several galaxies, called groups, that extend over a few million light-years. Our Local Group is one example, with two large spirals: the Milky Way and the Great Galaxy in Andromeda,

Lenticular galaxies are particularly common in clusters of galaxies, which can contain hundreds and sometimes thousands of galaxies, extending over more than 10 million light-years.

Elliptical Galaxies

The major difference between elliptical and spiral galaxies is that ellipticals lack a significant disk component. Thus, an elliptical galaxy has only a spheroidal component and looks much like the bulge and halo of a spiral galaxy. (In fact, elliptical galaxies are sometimes called *spheroidal galaxies*). Most of the interstellar medium in large elliptical galaxies consists of low-density, hot x-ray, emitting gas like the gas in bubbles and superbubbles in the Milky Way. Elliptical galaxies usually contain very little dust or cool gas, although they are not completely **devoid** of either. Some have relatively small and cold gaseous disks rotating at their centers; these disks might be the remnants of a collision with a spiral galaxy.

Elliptical galaxies appear to be more social than spiral galaxies: They are much more common in clusters of galaxies than outside clusters. [A] Elliptical galaxies make up about half the large galaxies in the central regions of clusters, while they represent only a small minority (about 15%) of the large galaxies found outside clusters. [B] However, ellipticals are more common among small galaxies. [C] Particularly small elliptical galaxies with less than a billion stars, called dwarf elliptical galaxies, are often found near larger spiral galaxies. At least 10 dwarf elliptical galaxies belong to the Local Group. [D]

Irregular Galaxies

A small percentage of the large galaxies we see nearby fall into neither of the two major categories. This *irregular* class of galaxies is a miscellaneous class, encompassing small galaxies such as the Magellanic Clouds and "peculiar" galaxies that appear to be in disarray. These blobby star systems are usually white and dusty, like the disks of spirals. Telescopic observations probing deep into the universe show that distant galaxies are more likely to be irregular in shape than those nearby. Because the light of more distant galaxies was emitted longer ago in the past, these observations tell us that irregular galaxies were more common when the universe was younger.

- 76. Which of the following best captures the *primary purpose* of this passage?
- A. To explain how interstellar media behave in different galactic environments
- B. To analyze the evolutionary history of spiral galaxies
- C. To outline a systematic classification of galaxies with physical descriptions
- D. To contrast observational methods for different types of galaxies
- 77. Which of the following most clearly explains why lenticular galaxies are considered intermediate between spirals and ellipticals?
- A. Their structural appearance aligns them with spiral galaxies when viewed edge-on
- B. They typically possess cold, rotating gas disks characteristic of early-stage galaxies
- C. They have disks like spirals but relatively little cool gas, resembling ellipticals
- D. They contain a high number of dwarf elliptical galaxies in nearby clusters
- 78. The phrase "...merges smoothly into a halo..." most likely implies which of the following about the structure of spiral galaxies?
- A. The halo is distinct and sharply bounded compared to the bulge
- B. There is no precise division between the bulge and the halo

D. Spiral 79. Acco A. look li B. consis C. appear D. are in 80. Whice spiral gal	galaxies s rding to pa ike spiral g t of a bulg to have a the shape h of the fo axies?	show asymparagraph 5 galaxies where and a had bar of start of a white ollowing ca	upts the oth metry in the lenticular ithout arms lo ina spiral as across the spiral disk an be reaso	galaxies _galaxies _galaxies _galaxy le center labely infe	formation	1	f interstella	nr medium	(ISM) in
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=		_	lite dwarf	_					
2			oast merge	_	•				
-	-	_	in hot X-ra	_	Č				
-	-	-		-	galaxies v	were more	common v	vhen the u	niverse
83. Why does the author emphasize that "irregular galaxies were more common when the universe was younger"?									
A. To indicate that galaxy shapes change over time									
B. To argue that spiral galaxies evolved directly from irregular ones									
C. To suggest irregular galaxies are inherently unstable									
D. To pro	pose that	irregular g	alaxies wi	ll disappea	r entirely				
84. The s	tatement:	"Spiral gal	laxies are c	ften found	d in loose o	collections	of several	galaxies,	called
groups	" primaril	y serves to	:						
A. Demo	nstrate ho	w galaxy s	hapes dete	rmine mov	vement				
B. Distin	guish envi	ronmental	tendencies	s of spirals	vs. ellipti	cals			
C. Emph	asize the c	ompact siz	ze of spiral	galaxies					
D. Introd	D. Introduce differences between spiral arms and disks								
85. Whic	h of the op	otions ([A]	– [D]) ind	icates whe	ere the foll	owing sen	tence can b	oe added to	the
passage?									
"A go	od examp	le of a dwa	arf elliptica	al galaxy is	s Leo I in t	the Local (Group."		
	. [A]		B. [B]		C. [C]		D. [D]		
Your ans	wers:								
76.	77.	78.	79.	80.	81.	82.	83.	84.	85.

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

THE EVER-PRESENT THREAT OF NATURAL DISASTERS IN LOS ANGELES

- A. Humans have long displayed a peculiar inclination to establish settlements in regions fraught with peril, fully aware that their communities might face sudden annihilation. History abounds with tales of civilizations that succumbed to natural catastrophes—Atlantis, Minos, and Pompeii serve as poignant examples of cities erased from existence. In a similar vein, Los Angeles, a sprawling metropolis in southern California, may one day find itself etched into this somber chronicle, its fate sealed by the relentless forces of nature.
- B. Nestled along the volatile San Andreas Fault—one of the planet's most seismically active fault lines—Los Angeles, often dubbed the "City of Angels," might more aptly be called the "City of Dangers." Periodic earthquakes rattle the city, causing buildings to shudder, inflicting millions of dollars in damages, and occasionally claiming lives. Yet, the impact on the city's residents, known as Angelenos, remains fleeting. Most inhabitants exhibit a stoic resilience, choosing to remain rather than flee, swiftly resuming their daily pursuits—be it amassing wealth, savoring life's pleasures, or nurturing their families—undeterred by the looming threat.
- C. Seismologists, however, issue a stark warning: a catastrophic event, ominously termed the "Big One," is inevitable. While its precise timing and intensity remain uncertain, experts concur that within the next half-century, a mega-quake will likely strike somewhere in California. Apocalyptic scenarios paint a grim picture: entire sections of Los Angeles' affluent suburbs, such as Palos Verdes and Malibu, could plummet into the Pacific Ocean, a fate already foreshadowed by minor landslides. A major quake in the heart of the city during the arid summer months might ignite fires that rage uncontrollably for weeks, a possibility that Hollywood, ever attuned to disaster, has vividly depicted in numerous films.
- D. Beyond the specter of a mega-quake, Los Angeles faces a myriad of other potential calamities. The city's survival hinges on an intricate network of aqueducts that transport vast quantities of water daily from distant sources, as the surrounding coastal plain endures prolonged dry spells. Should an earthquake or another disaster sever this lifeline for more than a day, the city would teeter on the brink of collapse. Similarly, a prolonged power outage or disruption of gasoline supplies could wreak havoc. Moreover, the parched landscape encircling Los Angeles renders it vulnerable to devastating wildfires, as evidenced by recent conflagrations that razed luxury homes on the city's periphery.
- E. While Los Angeles bears the unenviable distinction of being the U.S. city most susceptible to natural disasters—spared only from volcanoes and tornadoes—its northern counterpart, San Francisco, shares a comparable seismic risk. Devastated by a cataclysmic earthquake in 1906 and significantly shaken in 1989, San Francisco is equally imperiled by the San Andreas Fault, though it faces fewer threats from other natural phenomena. In both cities, stringent regulations mandate earthquake-resistant construction for modern buildings, and schools and workplaces are equipped with emergency protocols to mitigate loss of life. Yet, the question that haunts every

resident remains unanswered: when will the "Big One" strike, and what devastation will it unleash?

(Adapted from https://linguapress.com/advanced/los-angeles-brink.htm)

In which section are the following mentioned?

- 86. Historical examples of cities destroyed by natural disasters.
- 87. The resilience of Los Angeles residents despite recurring earthquakes.
- 88. Predictions of a massive earthquake striking California in the coming decades.
- 89. The potential for wildfires to cause significant damage in Los Angeles.
- 90. The dependence of Los Angeles on external water supplies for survival.
- 91. Earthquake preparedness measures implemented in California cities.
- 92. The risk of affluent suburbs sliding into the ocean.
- 93. A comparison of disaster risks between Los Angeles and San Francisco.
- 94. The absence of certain natural disasters in Los Angeles.
- 95. The economic and human toll of earthquakes in Los Angeles.

Your answers:

86. 87. 88. 89. 90. 91. 92. 93.	94. 95.
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III. WRITING (5.0 points)

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

For many retired people, the greatest threats to their health and well-being are loneliness, isolation and lack of purpose. Studies have shown that when they have a strong sense of purpose, they live longer, healthier lives. At the other end of the spectrum, teenagers and young adults face daunting challenges of their own. In some cases, young people may experience peer pressure to join gangs, commit crimes or simply drift away from education and employment. They may face the challenge of finding a job without prior work experience or practical skills. Or they may wish to live independently but be unable to pay the exorbitant rents in their area.

Intergenerational volunteering can provide a solution to these problems. It involves bringing older and younger people together for mutual support. After all, 'the aged' represent a huge untapped resource: they include retired engineers, doctors, teachers and businesspeople with years of accumulated experience and expertise. Young people, too, have valuable skills to share, most obviously their up-to-date knowledge of technology.

In some schemes, retired people help out in primary schools, to hear the children read and offer them individual support. Similar schemes are run in secondary schools and even universities. Other projects involve sending children and teenagers into old people's homes on a regular basis to teach them 'twenty-first century skills', to entertain them or simply to befriend them and listen to their stories and advice. Elsewhere, there are schemes that match university students with more affluent elderly people who have spare rooms. The student can either live rent-free in exchange for

household chores and support for the homeowner, or they can pay a reduced rent in exchange for chatting with the older person regularly and keeping an eye on their health and well-being.

Intergenerational volunteering projects have had a truly profound impact on both demographics. By bringing together people of different generations and socioeconomic backgrounds, they have fostered trust, respect and friendship, which are essential for the fabric of society. Part 2. Write an essay of at least 350 words on the following topic. Some people say that academic success should be the primary focus for students, while others believe that schools should shift more attention towards students' mental health. Discuss both these views and give your opinion. Provide specific reasons and examples to support your answers.

ANSWER KEYS:

I. LISTENING (5.0 points)

Part 1.

1. M 2. F	3. B	4. B	5. M	
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Part 2.

6. G	7. J	8. A	9. I	10. C

Part 3.

11. B	12. D	13. D	14. A	15. C

Part 4.

16. therapeutic social robots	17. an accessible manner
18. mechanical engineering	19. technical know-how
20. current version	21. counselors
22. clinical sciences	23. trial and error
24. AI-powered	25. particular patterns

II. READING (8.0 points)

II.1. LANGUAGE IN USE (3.0 points)

Part 1.

26.	B 27	. A 28.	. C 29. A	A 30. B	31. B	32. C	33. D	34. A	35. A
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Part 2.

36. cultivation	37. destruction	38. endangered	39. extensive	40. plantations

Part 3.

41. costliest 42. with 43. which 44. make 45. another	r
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II.2. READING: (5.0 points)

Part 1.

46. to	47. cry	48. travel	49. a	50. take
51. which	52. that	53. and	54. make	55. sure

Part 2.

56. outstrips	57. dangerous outcomes	58. killer robots
59. criminal justice	60. intelligence	61. machine learning
62. diagnose cancer	63. indispensable	64. global shipping

65. T	66. NG	67. F	68. F	69. T

Part 3.

70. G	71. E	72. B	73. F	74. C	75. A
' ' ' '	' - ' -	'-'-		' '' "	

Part 4.

76. C 77. C 78. B 79. A 80. B 81. A 82. C 83. A 84. B 85. D		76. C	77. C	78. B	79. A	80. B	81. A	82. C	83. A	84. B	85. D
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Part 5.

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

III. WRITING (5.0 points)

Part 1. (2.0 points)

Contents (1.5 point)

The summary should:

- introduce the topic of the passage,
- present the main ideas of the passage.

Language use (0.5 point)

The summary should:

- demonstrate a wide variety of vocabulary and grammatical structures,
- have correct use of words and mechanics,
- maintain coherence, cohesion, and unity throughout.

Part 2. (3.0 points)

Task achievement (1.0 point)

The essay should:

- sufficiently address all requirements of the task,
- develop relevant supporting ideas with explanations, examples, evidence, etc.

Organization (1.0 point)

The essay should have:

- an introduction presenting a clear thesis statement introducing the points to be developed,
- body paragraphs developing the points mentioned in the introduction,
- a conclusion summarising the main points discussed in the essay.

Language use (1.0 point)

The essay should:

- demonstrate a wide variety of vocabulary and grammatical structures,
- have correct use of words and mechanics,
- maintain coherence, cohesion, and unity throughout.

TAPESCRIPTS

Part 1.

Int: It's my pleasure to welcome to our studio this morning two of my favourite environmentalists, Ken Forbes and Maggie Dimas, who are here to talk about cars of the future and what they might mean for cyclists. Are we headed for an age where drivers will be given a quick scolding 'jolt' every time they yell at a cyclist, Ken?

Ken: If predictions are anything to go by, that sort of corporal punishment might not be necessary, Joan. And that's because cars will no longer require a driver. Driverless cars will all have special built-in features like Lidar - light detecting and ranging - and all-seeing cameras, so the old excuse of 'Sorry, Cyclist, I didn't see you' will no longer hold water. These vehicles will be able to tell when it's unsafe for a passenger to get out of them as well, so the chances of a passing cyclist being knocked to the ground by a quickly opened car door will be nil. And when all the vehicles on our roads are controlled by infallible computers instead of all-too-human humans, there will be far less need for hard infrastructure. At least that's what people are predicting. What do you say, Maggie?

Maggie: Well, Ken, that's one vision of the future, although to my mind, one that's just a little bit too optimistic, I'm afraid. Perhaps I'm being a pessimist, but the vision I see involves convoys of countless high-speed robo-vehicles tearing up our motorways making our highways and byways even nastier than they are now. And those out for a pleasant walk or cycle might have to contend with even more 'rules of the road' for their own safety. It makes sense if you think about it. If, as a pedestrian or cyclist, you knew that the vehicle that was heading towards you was programmed in such a way that it couldn't possibly hit you, wouldn't you choose to walk or cycle on the spacious main road as opposed to sticking to your narrow little walking or cycling lane?

Ken: Possibly. But whatever the case, I certainly think the authorities would have a harder time of it.

Maggie: Exactly. Lanes meant for cars and lorries would be chock-a-block with pedestrians and cyclists happily making their way along, content in the knowledge that if they should meander into the path of a vehicle, it would automatically brake to avoid hitting them. The police, or whatever authority it might be at that point in the future, would be at their wits' end trying to clear the lanes of jaywalkers and, well, 'jaycyclists' if you will. And think about this: if cars were built in such a way that they could whizz through junctions and intersections without the aid of traditional traffic lights, where would that leave the hapless pedestrian or cyclist who simply wanted to cross the road? And for those of you out there in the listening audience who think that this is merely the stuff of science-fiction...

Ken:... think again. A recent report out of America has stated, although somewhat ambiguously, that driverless cars will be here sooner rather than later. And Google has been hard at work on the cutting-edge technology that will be needed to get these cars up and running for quite some time now and they say that their prototypes have covered over 800,000 kilometres on Californian roads. The people at Google sound far more definite when they say that you only need one hand to add up the number of years until driverless vehicles become a reality.

Maggie: Yes, but it's not only tech companies that are beavering away. According to very reliable sources, a research team at Oxford University is currently working on driverless car technology, too.

Ken: Right, and word has it that their technology will be more economically viable and simpler to manufacture than the Lidar-based system. And, not too long ago, at an international motor show in Germany, the top brass of a major car manufacturer was overheard boasting that within a decade his people would have got rid of any remaining glitches that they had in their autonomous driving technology.

Int: Amazing, isn't it? But when all is said and done, what will all this actually mean for the cyclist?

Ken: Hmm, hard to say, Joan. In one scenario, I see more, not less, congestion on the roads because of the advent of driverless cars. I say this because it doesn't take a rocket scientist to figure out that once no special skills, or permits, are required to drive, more people will be on the roads being 'chauffeured' about in robo-cars. This means roads will be more congested and in an attempt to alleviate this problem, cars will be made to go faster. Faster cars, hi-tech or not, mean that the freedom of cyclists will need to be curtailed in one form or another.

Int: And in your other scenario?

Ken: Ah, that one is a much brighter one. Because robo-vehicles will have the ability to stay on a very narrow path, more space will be freed up for cyclists. Thereby...

Part 3.

Interviewer: Today, we're looking at careers related to marketing. My guests, Liz Bryant and Josh Ramsey, are both trendspotters, who identify new trends in fashion and culture. They help companies produce new products that will be both innovative and popular. Liz, you used to work as a designer, right?

Liz: Yes, I worked in fashion design for five years, and I was always being told I had a good eye for trends. Then one day, I came across a report on trends in youth culture published by a global forecasting agency. It was fascinating, and since a grasp of up-and-coming styles is paramount in trendspotting. I just knew it would suit me down to the ground as a career. Trendspotting in fashion isn't just a question of "turquoise is in" this season and "grey is out". You've got to tap into consumer tastes to learn why people think certain products are cool-why some trends take off and others don't. It means being observant about micro and macro trends.

Interviewer: Josh, can you tell us more about these trends?

Josh: Well, we make two types of predictions, the first is short-term and relates to micro trends that may last only a year or two. In fashion, it's based on today's style on the runway, what's being worn on the streets of London or New York, the hottest Instagram images... meaning trends that people follow.

The ideas are sold to high street stores, and they quickly appear in shop windows. The second type of prediction has to do with macro trends-you know-long term, more lasting changes in tastes. This is what trendspotters usually find most challenging it requires in-depth investigation and discussions with experts from a variety of fields We spot trends in architecture, communications, food, technology and lifestyle. Look at the growth of the home espresso machine. Technology made them kitchen-friendly and it's revolutionized how we drink our coffee. So our job is to second-guess how these changes will affect our taste in consumer goods because these macro trends may be with us for years to come.

Interviewer: Now, Liz, where do you find your ideas?

Liz: I check hundreds of sites online, but it's easy to lose track of time and get bogged down, so I go to shows and exhibits too. I always take a camera to record people, objects, colours... anything that triggers a new idea. I find my inspiration on the street, but it took me a while to get a handle on the kind of style to target. Eventually, I learned to ignore "looks" already there and avoid anything too off the wall or too quirky.

Interviewer: OK. So Josh, do you observe the public too?

Josh: Less so than Liz and less than I used to at the agency. I'm operating freelance from home now and my work is mainly online. New clients find me through networking sites, so I dedicate the first few hours of the day to maintaining my online presence. The rest is spent answering emails, texting, chatting to clients and scanning blogs and images for inspiration. But whether you're on the street or in front of a screen, identifying trends requires constant observation.

Interviewer: Here's a question for both of you. What qualifications does a trendspotter need?

Josh: A degree in marketing isn't essential but some background is undeniably useful, and a knowledge of psychology can help with predicting consumer behaviour

Liz: Some trendspotters are qualified only in design, but training in advertising can be invaluable and really give you an edge when talking with companies. I think.

Interviewer: And finally, what makes a good trendspotter? Which skills are most important?

Liz: Broad interests in art, design, science, technology..... Actual forecasting is a kind of sixth sense, though You can instinctively feel a trend developing on the street, and later, you see it on the runway. Of course, you then need to bring it all together into a clear idea and get it to your client and the market asap.

Josh: Yes, I think, at the root of it is intuition and that can't necessarily be taught. A knowledge of design history goes a long way too - every trend is rooted somewhere in the past. So while you're looking forward, you can't dismiss the past. I'm often surprised to see how past styles influence current design In time, fashion comes full circle, reinventing itself, but with a modern twist.

Interviewer: Thank you both for coming today.

Part 4.

"A robot that helps support mental health for people of all ages and communities.

All that and more in today's 'Common Good,'

Today, we went to Jersey City, New Jersey, to visit MARCo Health, a company that makes therapeutic social robots.

Founded by Jacob Boyle, he wanted to create something that would support mental health care in an accessible manner. I like to say that I've had 2 things follow me my entire life, whether I liked it or not - mental health and robotics. So, one, very personal, which is the mental health side. The professional side of things - while in college, I was studying mechanical engineering and physics. I got picked up by a military robotics startup to be their lead engineer while I was a freshman in college. After 2 years of putting all of my life and effort into building this, I found out I was gonna create something that was gonna hurt people instead of helping.

I decided to take the technical know-how and all these skills, and put it to something that was actually gonna help people. I went through serious challenges of my own.

And when you've lived through it, you don't want to see anyone else go through what you've been through.

And that's where the idea of MARCo, the Mental-Health Assisting Robot Companion, came from. Jacob formed MARCo Health in 2018. This current version is controlled through a tablet and can speak 104 different languages in order to be as user-friendly as possible. We went to counselors, we went to therapists, we went to the people who were struggling and said, 'What would help you if you had this thing?' And that's when we started learning about all the different kinds of clinical sciences that could go into it, all the different activities that a counselor would do with someone. And then it

was just trial and error of finding out, can we use this program to power it? We've worked with as young as 5, as old as 70+, so anyone who's struggling with their mental health.

I'm feeling really stressed today.

I'm sorry you feel stressed.

We're going to find something to get you feeling better.

Hey, I want to talk.

Sure.

Being here to talk is what I'm here for.

Were you thinking, like, talk as friends and then we go and have fun after we're done chatting?

Or did you want to talk more as if it was a counselor setting?

And so those are going to be very different experiences.

They're AI-powered, so you can talk about anything you want, but the friend talk is, like, great if you're either, like, a young kid or maybe, like, a senior citizen, where you're just looking for companionship. You can talk about anything, but it's clinically structured so if MARCo starts noticing particular patterns of things you're talking about that are challenges, he'll stop the conversation and switch over to 'we're gonna focus on this one topic and really work to improve that over time."