### SỞ GD&ĐT HẢI DƯƠNG TRƯỜNG THPT CHUYÊN NGUYỄN TRÃI

### KỲ THI NĂNG KHIẾU LẦN 4 NĂM HỌC 2022-2023 MÔN: TIẾNG ANH KHỐI 10 CHUYÊN

ĐỀ CHÍNH THỰC

Họ và tên học sinh: .....

Thời gian làm bài: 180 phút (không kể thời gian giao đề) Ngày thi: 13 tháng 02 năm 2023

LISTEN	ING: (50	POINTS)					
<b>Question I:</b>	Listen to an i	nterview abo	out a box-offic	ce movie and	follow the in	structions	
A. Decide if	the following	statements a	are True (T)	or False (F). V	Write your a	nswers in the	following
boxes. (16 p	oints)						
1. "Endgame	e" has taken ov	ver "Avatar" a	as the most pro	ofitable cinem	atic project.		
2. It was the	cultural aspec	t that led to th	ne instant succ	ess of Avatar.			
3. Nearly 10	) Academy Av	wards were pro	esented to Ava	atar's crew.			
4. Avatar's c	easts became b	ig names in th	ne field as a re	esult of the mo	vie's success.	•	
5. The movie	e could be full	y enjoyed bot	h at cinema aı	nd with conve	ntional projec	etors.	
6. 3D movie	s had seen a co	onsiderate dec	cline in popula	arity before the	e release of A	vatar	
7. Disney is	known to dist	ribute all Ava	tar's seasons.				
8. Technolog	gy mainly con	tributed to the	success of "T	The Avengers'	,		
Your answer	rs						
1.	2.	3.	4.	5.	6.	7.	8.
B. Fill in the	 e blank in the	following ser	ntences with	NO MORE T	THAN TWO	<u> </u> WORDS. (14	   points)
	ther (1)	_					_
	ow (2)						
it the (3)		of al	l time.				
- It is James	Cameron's 3I	O (4)		, "Avatar,	" which had h	neld the top sp	ot for a
decade. But	according to v	vriters like Ke	vin Fallon, de	espite all of "A	vatar's" box o	office success,	, the film
has left a rela	atively small (	5)		_•			
	6)				roke this box	-office record	is a movie
that really ha	as no pop cultu	ıre (7)		or (8)		·	
- It's not talk	ed about in an	y (9)		way. It ce	rtainly hasn't	- well, and it's	spawning
sequels, but	those sequels	- part of the p	op culture (10	)		is that they're	e being
delayed.							
- You know,	(11)		, like we do	o with things t	hat really cap	ture the	
(12)		of a mom	nent, or someti	hing.			
- Whereas w	e saw a (13)		in 3D mo	vies and we sa	aw the (14)		_to 3D
movies							

#### Your answers

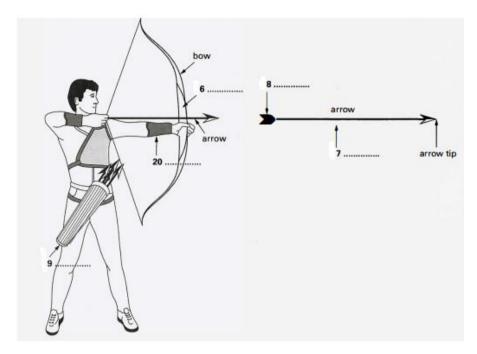
1.	2.
3.	4.
5.	6.
7.	8.
9.	10.
11.	12.
13.	14.

Question II: Listen to a talk on archery and complete the following tasks (10 points):

Questions 1-3. Complete the flow chart below. Use NO MORE THAN THREE WORDS for each answer.

	A BRIEF H	ISTORY OF ARCI	HERY
1	to hunt and in warfare - bom curved bows when (1)	ŭ	
	s had bows and arrows - (i using them.	2)t	pest-
Advarro	vent of (3)	saw a decline in use of	f bows and
	Archery as recreationa	l activity grew in popul	arity.
Your answers			
1.	2.		3.
Questions 4-5. Con	nplete the summary below	. Use NO MORE THA	N TWO WORDS for each answer.
	SAFE	ETY PROCEDURES	
All equipment must	t be used properly and safe	ely. Archers must not th	nink of the bows and arrows as
(4)			
Nobody is allowed	to enter the (5)	until told to do s	so by the group of supervisor.
-	ast use their weapon only		
Your answers:			
4		5	

# Questions 6-10. Label the diagram below. Choose five answers from the box and write the letters A-J in the box.



A. bracer	B. chest guard	C. drawstring	D. fiber glass	E. fletching
F. hand guard	G. quiver	H. shaft	I. sight	J. tension

#### Your answers:

4	•	2	4	~
	1 <i>7</i>	1 3	Ι Δ	5
1.	<b>4</b> .	J.	'•	J.

# Question III: You will hear five short extracts in which people talk about fitness and health. While you listen, you must complete both tasks. (10 points)

TASK ONE: For questions 1-5, choose from list A-H, what each person says is his or her reason for attending a gym regularly.

A. The gym has a social function for me.	
B. I have a sedentary job.	1. Speaker 1
C. My company pays for me to attend a gym.	2. Speaker 2
D. I'm studying sport science at college.	3. Speaker 3
E. Being fit gives me a sense of achievement.	4. Speaker 4
F. I compete in high-level sporting events.	5. Speaker 5

G. I come here with members of my cycling club.

H. I started exercising regularly after an injury.

TASK TWO: For questions 6-10, choose from list A-H what opinion each speaker expresses about fitness and health, generally.

ana neatth, generally.	<u></u>
A. It is alarming that so many people have an unhealthy lifestyle.	
B. Being good at sport commands respect.	6. Speaker 1
C. I find it hard to commit myself to exercising.	7. Speaker 2
D. Diet is as important as exercise.	8. Speaker 3
E. Exercise machines are extremely boring.	9. Speaker 4
F. Achieving health requires self-sacrifice.	10. Speaker 5
G. Exercise is necessary to keep weight under control.	
H. Genetic make-up has a lot to do with fitness.	

#### Your answers:

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.

## SỞ GD&ĐT HẢI DƯƠNG TRƯ**ỜNG THPT CHUYỆN** NGUYỄN TRÃI

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## LEXICO – GRAMMAR (40 POINTS)

Question IV. Choose the	correct answer that best fit	ts each blank. (10 points)	
1. The escaped prisoners i	remain on the in	n the hills.	
A. open	B. loose	C. liberty	D. free
2. Just because he's seven	ty doesn't mean he's	·	
A. lost it	B. past it	C. up to it	D. over the hill
3. Being very frustrated by	y his accusation, she has no	alternative butt	he boat.
A. rattling	B. shake	C. to rock	D. to roll
4. Sandra's unpleasant	suggested that she kn	new about Amanda's terrib	le secret.
A. grimace	B. smirk	C. snort	D. wince
5. The student's rude inter	rruption brought a sharp	from his teacher.	
A. recoup	B. repeat	C. report	D. retort
6. All Jane's friends visite	ed her in hospital to wish he	er	
A. a rushing recovery	B. a speedy recovery	C. recovering hastily	D. recovering quickly
7. It's clear that t	elevision is taking us down	roads that no one in their	right mind would wish for
the medium.			
A. abundantly	B. out-and-out	C. outright	D. plain
8. Nicky would always be	the one who juices	the classroom when we we	ere stressed out by the test
results.			
A. down	B. up	C. over	D. off
9. The manager hesitated	to assign the job to the new	comer as he was	
A. wet behind the ears	B. feeling your ears burning	C. ringing in your ears	D. keeping your ears open
10. Despite incessant adva	ancement of technology and	d space travel, residence in	other planets is still a
dream			
A. cloud	B. drain	C. pipe	D. plumb
11. The couple's broken u	p after a decade being toge	ther. Sometimes,	plans can just turn
into one-night stands.			
A. fastest-laid	B. longest-laid	C. perfect-laid	D. best-laid
12. Men, commonly tagge	ed "the breadwinner", seem	to be struggling to	their family under
their wings due to the ceas	seless increase in rental and	l catering cost.	
A. take	B. make	C. cover	D. put

13. Unint	entionally,	Ms.Green	always con	nes across	nol	ble despite	her underp	rivileged f	amily
backgrou	nd.								
A. with		B. a	S		C. by D. from				
14	up	a conversa	ation with a	stranger a	ppears to b	e a nightm	are to the i	ntroverts.	
A. Startin	g	В. Н	Iolding		C. Strikin	ıg	D. E	Building	
15. But th	e reality is	that these	two charac	ters have g	ot	_ together	by forces b	beyond the	ir control.
A. lived	B. loved		C. tied		D. tl	hrown			
16. We ha	appened to	meet each	other at a r	nuseum. O	ur conversa	ation	so w	ell as if we	had been
close for	very long ti	ime before.							
A. went		B. fl	lowed		C. got		D. h	appened	
17. On the	e street tod	ay, I stumb	oled	my cł	nildhood fri	end who h	ad left for a	another city	y after we
finished p	rimary sch	ool.							
A. into		B. o	ut		C. over		D. u	pon	
18. Keepi	ng track of	what and	where you	spend mon	ey on is a g	great way to	O C	_ your sper	nding
which is r	normally to	o tempting	to resist.						
A. curtail		B. e	ntail		C. reduce		D. n	nanage	
19. Studs	was only th	he boy's	I	His real nar	ne was Wil	lliam.			
A. label		B. n	ickname		C. identity	y	D. f	igure	
20. This c	cheese isn't	fit for eati	ng. It's	all ov	er after lyi	ng in the b	in for so lo	ng.	
A. rusty		B. n	nouldy		C. spoiled	d	D. s	our	
Your ans	wers:								
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
Question	V: Comple	ete the sent	ence with	the correct	form of th	e bolded w	ord (10 po	ints)	<u>.I</u>
1. Thousa	nds of refu	gees are dy	ying becaus	se of the in	competence	e and	_ of local o	officials. (A	ADMIN)
2. There a	appears to b	be a	in the	patient's re	espiratory s	ystem. (FU	JNCTION	)	
3. Since the	he mid-197	0s, exchan	ges have b	een made 1	nore conve	nient, it wa	as even con	sidered as	the era
project du	ıring	p	eriod. (WA	AR)					
4. Henry	is so	tl	nat it's a m	iracle anyc	one bothers	with him a	t all. (ABS	ORB)	
5. We had	l to quickly	/	the libra	ary after th	e flood so t	that the ren	naining boo	oks were no	ot lost.
(HUMID	)								
6. The yo	ung today s	seems to be	e too	of	what their	social and	domestic r	esponsibili	ties are
(INFORM	M)								
7	intellige	ence is the	ability to u	nderstand	oneself and	l one's emo	tions. (PE)	RSON)	
8. "How o	lo I get the	top off this	s bottle?" "	Push it dov	vn and twis	st it	." ( <b>CLC</b>	OCK)	

9. Traf	fic congestion	n in large ci	ties seems to be an	·	problem as that t	here are more and more
cars bo	ought and used	d. (SOLVE	)			
10. W	e heard an		cry by a cancer pa	atient and co	ouldn't help shede	ding tears for her pitiful
short l	ife. (AGONY	)				
Your d	inswers:					
1.		2.	3.		4.	5.
6.		7.	8.		9.	10.
Questi	on VI. Find a	nd correct	10 mistakes in the	following p	passage. (20 poin	ts)
Line						
1	Most	of people v	work so that to earn	n a living, aı	nd produce goods	and services. Goods are
2	either agricu	ltural (like i	maize and milk) no	or manufact	ured (like cars and	d paper). Services are such
3	things as edu	cating, med	dicine, and comme	rce. Some p	eople provide go	ods, some provide
4	services. For	example, i	n the same garage	a man may	buy a car or some	e service which helps them
5	to maintain h	nis car.				
6	The v	work people	e do is called econo	mic activity	y. All economic a	ctivities together make up
7	the economic	e system of	a town, a city, a co	ountry or a v	world. Such an ec	onomic system is the sum-
8	total of when	people do	and want. The wor	rk people ur	ndertake provide	either what they need or
9	provides the	money with	n it they can buy es	ssential com	modities. Of cour	rse, many people hope to
10	earn enough	money to b	uy commodities ar	nd services	which are non-ess	sentially but which provide
11	some particu	lar persona	l satisfaction, like t	toys for chil	dren, to visit to th	ne cinema, and books.
Your o	inswers:					
Line	Mistak	ke	Correction	Line	Mistake	Correction
REA	DING (65	S POINT	······································			
	•		,	1. 1.11	d ONE	
_			low and Fill in eac			· -
			•		-	admit, for I know about
						owever, I must confine (2)
					you (3)	out on your
			ır (4)			1
						an adviser, I do have
						over twenty years of global
trotting	g. First, some	basic groun	a rules that (8)		in all situ	uations. If something does

go wr	ong, then bear in (9)	th	at you are not the first perso	n to have (10)
	sonson	nething lost or stolen, or t	to have been (11)	in an accident
or illr	ness. The people to (1	with		
the pr	oper way of doing th	ings and you can best hel	lp by keeping as (14)	as
possil	ole and (15)	them with	the information they need.	
(16)	)	to say, you should be	adequately insured and carry	<i>i</i> (17)
	of t	hat insurance. (18)	who travels	abroad without proper
cover	(19)	little sympathy in	the (20)	of trouble.
Your	answers:			
1.	2.	3.	4.	5.
6.	7.	8.	9.	10.
11.	12.	13.	14.	15.
16.	17.	18.	19.	20.
Quesi	tion VIII . Choose th	e word that best fits each	n gap. (15 points)	
circul instru	ating their heat arouments examine the s	and the planet is from surface and the bottom o	of the everchanging map pace. Weather satellites (9) f the oceans and determine	with complicated the exact height of water.
		•	ning is that measurements ca	` '
	-	-	ovide daily pictures of the w	ater surface together with
`	1)wave heigh	-	adiatina alimatia andikiana	a for tourista former
			edicting climatic conditions nce warnings against storms	
			selves against these destruct	
1	A. obviate	B. account	C. decipher	D. elaborate
2	A. subject	B. objectivity	C. subjection	D. objective
3	A. unravel	B. perceive	C. forecast	D. explore
4	A. looked	B. directed	C. focused	D. applied
5	A. come	B. turn	C. bring	D. get
6	A. utmost	B. indefinite	C. terminal	D. ultimate
7	A. accomplish	B. procure	C. generate	D. formulate
1	A. accompnish	B. procure	C. generate	D. Iominate

8	A. getting	B. coming	ing C. finding		D. making
9	A. equipped	B. deliver	red	C. supplemented	D. donated
10	A. done	B. formed	l	C. fulfilled	D. taken
11	A. calculated	B. amoun	ted	C. scored	D. enumerated
12	A. Besides	B. Apart		C. Otherwise	D. Whereby
13	A. denote	B. procee	d	C. emerge	D. issue
14	A. entitle	B. entail		C. enable	D. enforce
15	A. protect	B. ward		C. sustain	D. preserve
Your answers:					
1	•	2.	3.	4.	5.
6.		7.	8.	9.	10.

Question IX. You are going to read a newspaper about a company that makes fruit drinks. Six paragraphs have been removed from the article. Choose from the paragraphs A-G the one which fits each gap (1-6). There is one extra paragraph which you do not need to use. (6 points)

13.

#### PEACH OF AN IDEA

14.

15.

At the end of the 1990s, three friends in their mid-20s. Adam Balon, Richard Reed and Jon Wright were thinking of starting a business. They took £500 worth of fruit to a music festival in west London, made a huge batch of smoothies fruit drinks blended with milk and yoghurt - and asked their customers for a verdict.

1.

11.

12.

Looking back, they now admit that they were amazingly naive, thinking it would just take off once they had the recipes and packaging figured out. In fact, the three budding entrepreneurs had nine months living on credit cards and overdrafts before they sold their first smoothie.

2.

Only five years later, though. Innocent had become Britain's leading brand of smoothie, selling about 40% of the 50 million downed annually by British drinkers. Eight years after that. Innocent employed 250 staff, were selling over 200 million smoothies per week around the world, and a majority stake in the company had been bought up by the international giant. Coca Cola. What was the recipe for this startling success?

3.

Innocent's refusal to compromise on this point presented them with some problems when they first started talking to potential suppliers, Adam says. This was when they discovered the truth about the majority of so-called natural fruit drinks.

4.

'Naivety', adds Richard, who is always ready with a soundbite, 'can be a great asset in business because you challenge the status quo.' Although Innocent's drinks are fiendishly healthy, the company has always been very careful not to preach. 'Everyone knows what they're supposed to do,' says Richard. "But people just don't, especially when they live in a city. We just thought, "Wouldn't it be great to make it easy to get hold of this natural fresh goodness?" Then at least you've got one healthy habit in a world of bad ones.'

5.

'In essence,' explains Jon, 'we simply froze some of our smoothies and threw in a bit of egg to make it all stick together.' To help testers make up their minds about which combinations worked, they dusted off the old "yes" and "no" bins and put thorn out again. And once again their methods proved fruitful.

6.

We didn't rule it out completely,' says Richard. 'But the three of us have always gone away once every three months to talk about what we want out of the business and we've always been in the same place. So as long as we're excited and challenged and proud of the business, we're going to want to be a part of it.'

- A. Most are made from concentrated juice with water and perhaps sweeteners, colours and preservatives added. 'We didn't even know about that when we started," Adam explains. 'It was when we started talking to people and they said, "OK, we'll use orange concentrate," and we said, "What's concentrate?" and they explained it and we said, "No, we want orange juice."
- **E.** They also seem to have managed to stay friends, and the fact that each member of the team brings a different and complementary set of skills to Innocent seems to have helped them avoid any big bust-ups over strategy.
- **B.** Probably something to do with pure, unadulterated ingredients with a dash of quirky advertising. As one campaign put it, their drinks are not made from fruit, they are fruit.
- **F.** So, at another festival in 2004, the Innocent team tried extending their range of products into desserts. 'For us there was this problem of Sunday evenings, sitting down to watch a film with a big tub of ice cream it's nice to munch through it, but very bad for you,' Richard adds
- C. 'We decided to keep it simple,' says Richard. We had a bin that said "yes" and a bin that said "no", and at the end of the weekend the "yes" bin was full of empty bottles. We quit our jobs the next day.'
- **G.** They found that the finances were the basic stumbling block. But they eventually had a lucky break when Maurice Pinto, a wealthy American businessman, decided to invest in them. In total, it took 15 months from the initial idea to taking the product to market.
- **D.** Their early years of success coincided with increasing consumer concerns about healthy eating, and Innocent soon became worth a lot of money to potential buyers. Was there ever a temptation in those early years to sell up and go and live on a desert island?

#### Your answers:

1.	2.	3.	4.	5.	6.	

Question X: Read the following passage and mark A, B, C or D on your answer sheet to indicate the correct answer to each of the questions. (12 points)

#### **DESERT PLANTS**

On the surface, a desert appears to be one of the harshest environments on Earth, yet a remarkable variety of plants have adapted to thrive in this dry climate. Despite their origins in different locations around the globe, desert plants have developed similar strategies for surviving in arid environments. Some plants have adapted in such a way that it is hard to tell them apart, even though they belong to very different biological families. One useful way to classify, and thus better understand, desert plants is to

examine the evolution of certain survival strategies, which are shared across geographic and biological boundaries.

In general, the survival strategies of desert plants can be divided into two kinds: adaptation for quick use of **ephemeral** resources ("maximum variance behavior") and adaptation for the best use of poor but more permanent resources ("minimum variance behavior"). The former strategy involves adaptation to environmental changes, such as seasonal availability of water. This is observed in desert annuals and perennials alike. Such plants tend to grow rapidly and produce many seeds under the right conditions. The latter strategy involves adaptation to the worst possible conditions, which can be seen in succulents, true xerophytes, and grasses. These plants usually grow slowly, use water efficiently, and exhibit passive cooling.

Water scarcity and heat are the key factors limiting the survival of desert plants. Plants that have adapted to the worst possible conditions have evolved ways for quickly acquiring and storing water to ensure their survival. • A) Depending on strategies and physical adaptations, they can be divided into either succulents or drought-resistant plants. • B) For the most part, succulents have evolved extensive, shallow root systems to quickly absorb water during brief periods of heavy rainfall. Water is then stored in the fleshy tissue of their thick trunks or lobes. as well as in the roots. The cactus is a good example of a succulent. To retain water, succulents have waxy coatings on their skin and a modified system of respiration. The stomata (surface pores), through which the plant takes in carbon dioxide and releases oxygen, open only at night when temperatures are cooler and less water from the plant will evaporate. • C) Unlike most other plants, a succulent stores all or most of its chlorophyll, the chemical essential to photosynthesis, in its stem, skin, or other outer tissues, rather than concentrating it in the leaves. Doing this places it in a strong, well-watered part of the plant, rather than in an appendage susceptible to drying out and dropping off. • D)

Drought-resistant plants, or xerophytes, come in many forms including true xerophytes, deciduous plants, and grasses. Xerophytic shrubs, such as the five species of creosote bush, are the most abundant type of vegetation in most arid environments. They are able to withstand **desiccation** in severe droughts without dying. Some have evolved small leaves with special coatings to reduce loss of water through evaporation. Others have replaced leaves with thorns or spines. While succulent roots form shallow, dense webs, xerophytes tend to develop deep root networks that pull water out of soil other desert plants cannot reach. For example, the roots of the mesquite bush, said to have the deepest root systems among desert plants, can reach depths of up to eighty feet.

Succulents and xerophytes, on one hand, have physically adapted to gather and retain water to survive long periods of drought. Drought-avoiding plants, on the other hand, escape unfavorable conditions by perishing. These include annuals and perennials. Because profuse seed development is crucial to the survival of most annual species, they tend to produce far more flowers than other types of desert plants. The desert marigold of the American southwest, for example, has adapted to seasonal changes in rainfall

by growing rapidly, bursting into a brilliant display of yellow flowers, and then dropping a cascade of seeds before dying. In some cases, annuals complete their entire life cycle in a matter of a few weeks or months. Their seeds may remain inactive for up to ten years while waiting for wetter conditions. Perennials, such as the ocotillo, may go dormant during dry periods, spring to life when it rains, and then return to dormancy in a process that may occur up to five times per year. 1. According to paragraph 1, which of the following is true of desert plants? They are hard to see in the harsh desert landscape. (A) (B) They have evolved similar features, regardless of geographic origins. (C) They have evolved from different families that exchanged survival strategies. (D) They all look essentially the same. 2. The word ephemeral in the passage is closest in meaning to (A) minimal (B) yearly (C) short-lived (D) abundant 3. Look at the four squares [■] that indicate where the following sentence could be added to the passage. All of these adaptations together make succulents particularly well suited to dry climates. Where would the sentence best fit? Choose the square [■] where the sentence should be added to the passage. (D) 4th square (B) 2<sup>nd</sup> square (C) 3<sup>rd</sup> square (A) 1<sup>st</sup> square 4. The word respiration in the passage is closest in meaning to \_\_\_\_ (B) breathing (C) growing (D) coloration

- (A) nutrition 5. Why does the author mention the action of stomata in the passage? To explain how chlorophyll works (A) (B) To emphasize a unique adaptation of succulents (C) To illustrate that cacti have no leaves To describe the basic parts of a succulent (D) 6. The word desiccation in the passage is closest in meaning to \_\_\_\_\_\_. (A) destruction (B) (C) adaptation (D) drying growth
- 7. The word others in the passage refers to \_\_\_\_\_.
- (A) grasses (B) shrubs (C) coatings (D) leaves
- 8. Which of the following best expresses the essential information in the highlighted sentence in the passage?
- (A) At the same time that xerophytes evolved their thick webs of low-lying roots, succulents formed thin networks to reach surface water.
- (B) Both succulents and xerophytes form long, dense networks of roots in order to reach water within the soil that non-desert plants could not reach.
- (C) Because of their long roots systems developed to reach water deep within the soil, xerophytes have become more dominant in desert environments than succulents.

(D) III collica	in contrast to xerophytes, which produce long root systems to tap water deep within the soil,					
succulents develop a thick web of roots just below the soil surface.						
9. According to p	paragraph 4, thorn	ns on Xerophytes _	·			
(A) are similar	are similar to blades of grass					
(B) can reach	can reach water very far underground					
(C) are what	are what some plants have instead of leaves					
(D) help keep	(D) help keep the plants from being eaten by animals					
10. In what form	do drought-avoid	ing annuals wait f	or wetter weather:	?		
(A) stems (B) flowers (C) roots (D) seeds				eds		
11. The word dormant in the passage is closest in meaning to						
(A) dry (B) inactive (C) dead (D) weak			eak			
12. According to the author, all of the following are associated with plants that exhibit "minimum						
variance behavior" EXCEPT						
(A) slow growth (B) modified respiration (C) rapid seed production (D) deep root systems						
Your answers:						
1.	2.	3.	4.	5.	6.	
7.	8.	9.	10.	11.	12.	

Question XI. Read the following passage then do the tasks that follow. (12 points)

#### CARS THAT CAN DRIVE THEMSELVES

**A.** The idea of the self-driving car dates back to before the Second World War. Visitors to General Motors 'Futurama' at the 1939 World Fair in New York were shown a vision of the future in 1960, in which radio-controlled automobiles would zip along perfectly safe highways. In the 1950s, General Motors and the Radio Corporation of America began experimenting with such a system, digging radio-transmitting cables into roads at a cost of around \$100,000 per mile.

**B.** The system worked. In 1958, a Chevrolet impala made it round a special course without the driver's hands on the steering wheel' but it joined the list of other expensive automated dreams. The first real breakthroughs for self-driving cars took place in the late 1980s, in the £800m Eureka Promethesus Project, led by Ernst Dickmanns of the Bundeswehr University Munich, a pioneer of computer vision. Using just four black and white cameras, Dickmanns's cars managed two road trips of more than 1,000 kilometres through Europe in 1994 and 1995, driving without human intervention 95% of the time. Automated cars have made huge leaps and bounds in recent years. Starting in 2004, Darpa, the high-tech research wing of the US military, ran a series of competitions for driverless vehicles. The winning team was hired by Google, and for years the technology company ran a fleet of automated cars around the highways of California. So far the cars have clocked up 200,000 miles and have been involved in one minor human-caused accident. Google is not on its own. Other car manufacturers also have some kind of automated car in the works, with research and testing also going on in the UK and Germany.

- C. Most driverless cars share the same 'Velodyne' laser system on their roofs. 64 spinning lasers provide a constant 3D view of the environment 40 metres around the car, while radars on the bumpers and a rearview camera also feed in information. The data is sorted by algorithms that distinguish between cars, pedestrians, plastic bags and cats, and tell the car what to do. Automated cars are programmed to be model drivers: they stop when pedestrians step onto the road; they give way when they should; they stay out of other cars' blindspots and nudge forward when other cars should be letting them through.
- **D.** Across the world, 1.2 million people are killed or injured on the roads each year with human error to blame 90% of the time. 'It's amazing to me that we let humans drive cars,' says Eric Schmidt, the executive director of Google. Paul Newman, a robotics engineer at Oxford University, says it is only a matter of time before we hand over the wheel. 'It's crazy to imagine that in ten to twenty years we'll still have to sit behind a wheel, concentrating hard, not falling asleep and not running over people', he says. Computer-controlled cars offer the benefits of safety, fuel efficiency and speed. Roads full of automated cars, all communicating with one another, will see vehicles going bumper-to-bumper at 70mph, eliminating traffic jams.
- **E.** In spite of the encouraging pace of development, however, enormous hurdles still remain, notably how to engineer human common sense. 'Imagine a situation where a box falls onto the road in front of you,' says John Leonard, a mechanical engineering professor at the Massachusetts Institute of Technology. The system needs to make a split-second decision to either go straight through it or to swerve left or right which might have worse consequences than just going forward'. Other challenges include recognising the weaknesses of automated cars: how do their sensors respond to glare, poor weather, or damage?
- **F.** However, no matter how good, their guidance systems are, self-driven cars will still have accidents. In which case, who will be responsible- the car manufacturer, the software developer or the human driver for failing to override the computer at the critical moment? But will the cars even have people on board? One of the attractions, surely, will be in ordering them to come and pick us up: in which case will it be empty car A, or car B with driver, which is to blame for a driving mistake? In whatever form they emerge, automated cars will require the greatest overhaul of the law of the roads since the rise of the automobile in the first half of the 20th century.
- **G.** It seems unlikely, at least for the time being, that drivers will hand over their car keys. A lot of people actually like to drive and hate being passengers. More likely we will see a continuation of the gradual automation of cars that have been under way for two decades, during which automatic lane-keeping, cruise control and parking aids have been gratefully taken up. A new Volvo, for example, now maintains safe distances in heavy traffic without human intervention, and Nissan is working on software that anticipates a driver's next move, adjusting the car ahead of time. Piece by piece, radars, lasers, car to car communication, and the warning of dangers ahead will be added as well, slowly easing the wheel out of our hands.

#### **Questions 1-6**

Reading Passage 1 has seven paragraphs, A-G. Choose the correct heading for each paragraph from the list of headings below.

	List of Headings
i	The legal implications of automated driving
ii	The limitations of the automated car
iii	Towards a partial public acceptance of automated cars
iv	The long dream of the automated car
v	The downward trend in the demand for automated cars
vi	The definition of an automated car
vii	The current financial cost of developing automated car technology
viii	The rationale behind the concept of the automated car
ix	Common technological features of automated cars
X	Remarkable success of automated cars on the road

#### Your answers:

1. Paragraph B	2. Paragraph C	3. Paragraph D
4. Paragraph E	5. Paragraph F	6. Paragraph G

## Questions 7-12. Complete the summary below using words from the box.

#### THE BENEFITS OF DRIVERLESS CARS

Driveriess cars are designed to react (/) in comparison to numans. They also have 360						
degree perception and do not get distracted or sleepy. Engineers believe that the technology could (8)						
the ca	apacity of roads	s by allowing cars to drive with	a greater degree of safety when			
they are (9) together. Because driverless cars are (10) to be involved						
in collisions, they could b	in collisions, they could be built lighter and therefore use (11) fuel. However, to be					
completely safe, driverless cars must be (12) in comparison with today's computers.						
substantially increase	bstantially increase more slowly		a lot less likely			
less than double	more reliable	more likely	far higher			
further	heavier	less	faster			
Your answers:						
1.		2.	3.			
4.		5.	6.			

## **WRITING (45 POINTS)**

Question XIIa. Finish each of the following sentences in such a way that it means exactly the sentence before it. (5 points)

1. Linda was very nervous, which made her look like a bashful girl.

→ Such was
2. I will only be satisfied if the manager apologizes fully
→ Nothing short
3. Any correspondence from the Canberra office must be dealt with before other matters
$\rightarrow$ Any correspondence office must take
4. It is a forgone conclusion that Mark will get the job.
$\rightarrow$ It goes
5. Fiona said she was against the proposal.
→ Fiona expressed
Your answers:
1.
2.
3.
4.
5.
Question XIIb. For each of the sentences below, write a new sentence as similar as possible in
meaning to the original one, using the word given. DO NOT CHANGE the word given. (5 points)
6. She was dismissed from her job, which really disappointed her after all the work she'd done.
(TEETH)
$\rightarrow$ She was dismissed from her job, which was a real after all the work she'd done.
7. There is a lot of public anger about corporate powerful and wealthy officers and their huge bonuses.
(CAT)
→ There is a lot of public anger about corporate and their huge bonuses.
8. Don't tell anyone about our scheme. (WORD)
→ Don't about our scheme.
9. Your empty promises won't have any effect on me. (ICE)
$\rightarrow$ I've heard her excuses and they with me.
10. He is becoming quite famous as an interviewer. (NAME)
→ He's as an interviewer.
Your answers:
6.
7.
8.
9.
10.

Question XIII. Write a paragraph of 150-180 words about the following topic: (35 points)

"Some people say that to prevent illnesses and diseases, governments should focus more on reducing environmental pollution and housing problems." To what extent do you agree with this statement? "1"