

**A. VOCABULARY.**

STT	TỪ VỰNG	PHIÊN ÂM	TỪ LOẠI	NGHĨA
1	<b>education</b>	/,edʒ.ə'keɪʃən/	n	sự giáo dục
	<b>educate</b>	/'edʒukeɪt/	v	giáo dục
	<b>educational</b>	/,edʒ.ə'keɪʃən.əl/	adj	thuộc giáo dục
	<b>educative</b>	/'edʒ.ə.keɪ.tɪv/	adj	có tính giáo dục
	<b>educated</b>	/'edʒ.ə.keɪ.tɪd/	adj	được đào tạo, có học thức
2	<b>invent</b>	/ɪn'vent/	v	phát minh
	<b>invention</b>	/m'ven.ʃən/	n	sự phát minh
	<b>inventor</b>	/ɪn'ven.tʃə-/	n	nhà phát minh
	<b>inventive</b>	/ɪn'ven.tɪv/	adj	sáng tạo
3	<b>value</b>	/'vælju:/	n	giá trị
	<b>valuable</b>	/'væl.jə.bəl/	adj	có giá trị
	<b>valueless</b>	/'væl.ju:ləs/	adj	không đáng giá, vô giá trị
	<b>invaluable</b>	/ɪn'veljʊəbl/	adj	vô giá
4	<b>convenient</b>	/kən'vi:njənt/	adj	thuận tiện
	<b>convenience</b>	/kən'vi:.ni.əns/	n	sự thuận tiện
5	<b>express</b>	/ɪk'spres/	v	biểu lộ
	<b>expression</b>	/ɪk'spreʃ.ən/	n	vẻ mặt
6	<b>emotion</b>	/ɪ'məʊʃən/	n	cảm xúc
	<b>emotional</b>	/ɪ'moʊ.ʃən.əl/	adj	gây xúc động
7	<b>artificial intelligence</b>	/,ɑ:r.tɪʃ.əl 'tel.ə.dʒəns/	in np	trí tuệ nhân tạo
	<b>vacuum cleaner</b>	/'væk.ju:m ,kli:nə-/	np	máy hút bụi
9	<b>measure</b>	/'meʒə/	n/v	dụng cụ đo lường; biện pháp/ đo lường
10	<b>transport</b>	/'trænsɔ:t/	v/n	vận chuyển/ sự vận chuyển
11	<b>dimension</b>	/daɪ'menʃn/	n	chiều, kích thước
	<b>dimensional</b>	/,daɪ'menʃən.əl/	adj	thuộc về kích thước
12	<b>driverless</b>	/'draɪ.və.ləs/	adj	không người lái
	<b>driverless car</b>	/'draɪvləs kɑ:/	n.phr	xe không người lái
13	<b>charge</b>	/tʃɑ:ʒ/	v/n	ra giá; nạp điện / giá, chi phí
	<b>discharge</b>	/dɪs'tʃɑ:rdʒ/	v/n	phóng điện; thải ra; sự phóng điện
14	<b>diagram</b>	/'daɪəgræm/	n	biểu đồ
15	<b>Hardware</b>	/'hɑ:rd.wer/	n n	phần cứng (máy tính)
	<b>software</b>	/'sɔ:ft.wer/	n n	phần mềm (máy tính)
16	<b>basic</b>	/'beɪ.sɪk/	adj	cơ bản, mức độ đơn giản nhất
	<b>base</b>	/beɪs/	n	đáy; chân đế; thành phần chủ yếu
	<b>basement</b>	/'beɪsmənt/	n	tầng hầm
17	<b>process</b>	/'prɔ:səs/	n,v	quá trình; xử lý

	<b>processor</b>	/ˈprɑːses.ə/	n	bộ xử lý; máy chế biến
	<b>processing</b>	/ˈprɑːsesɪŋ/	n/adj	sự xử lý; đang xử lý
	<b>processed</b>	/ˈprɑːsɛst/	adj	đã qua xử lý
	<b>processional</b>	/prəˈseʃənəl/	adj	thuộc về nghi thức rước lễ
18	<b>gigahertz</b>	/ˈɡɪɡ.ə.hɜːts/	n	ghi - ga - héc (ghz: đơn vị đo tần số dao động)
	<b>gigabyte</b>	/ˈɡɪɡ.ə.baɪt/	n	gb (một đơn vị thông tin kỹ thuật số)
19	<b>random access memory (RAM)</b>	/ˈrændəm ˈæksɛs ˈmɛməri/	n	bộ nhớ truy cập ngẫu nhiên
20	<b>storage space</b>	/ˈstɔːrɪdʒ speɪs/	np	dung lượng
21	<b>display</b>	/dɪˈsplɛɪ/	v	hiển thị
22	<b>battery</b>	/ˈbætəri/	n	pin; ắc quy
23	<b>computer hardware</b>	/kəmˈpjʊ.tə ˈhɑːdweə/	n.phr	phần cứng máy tính
24	<b>complete</b>	/kəmˈpli:t/	v/adj	hoàn thành; hoàn toàn
	<b>completely</b>	/kəmˈpli:tli/	adv	hoàn toàn
	<b>completion</b>	/kəmˈpli:ʃn/	n	sự hoàn thành
	<b>incompletely</b>	/,ɪnkəmˈpli:tli/	adv	không hoàn toàn
25	<b>communicate</b>	/kəˈmjʊ.nɪkeɪt/	v	giao tiếp
	<b>communication</b>	/kəˈmjʊ.nɪˈkeɪʃn/	n	sự giao tiếp, thông tin liên lạc
	<b>communicative</b>	/kəˈmjʊ.nɪkətɪv/	adj	cởi mở, hay giao tiếp
26	<b>discuss</b>	/dɪˈskʌs/	v	bàn bạc, thảo luận
	<b>discussion</b>	/dɪˈskʌʃn/	n	cuộc thảo luận
27	<b>advantage</b>	/ədˈvɑːntɪdʒ/	v/n	tận dụng, lợi thế
28	<b>Africa</b>	/ˈæf.rɪ.kə/	n	Châu Phi
29	<b>experiment</b>	/ɪkˈsperɪmənt/	n	thí nghiệm
	<b>experiment</b>	/ɪkˈsperɪmənt/	v	tiến hành thí nghiệm
30	<b>avoid</b>	/əˈvɔɪd/	v	tránh
31	<b>angry</b>	/ˈæŋɡri/	adj	tức giận
32	<b>play computer games</b>	/pleɪ kəmˈpjʊ.tə geɪmz/	v.phr	chơi trò chơi máy tính
33	<b>modern device</b>	/ˈmɒdɪn dɪˈvaɪs/	n.phr	các thiết bị hiện đại
34	<b>computer science</b>	/kəmˈpjʊ.tə ˈsaɪəns/	n.phr	khoa học máy tính
35	<b>language games</b>	/ˈlæŋɡwɪdʒ geɪmz/	n.phr	trò chơi ngôn ngữ
36	<b>vacuum cleaners</b>	/ˈvækjʊəm ˈkliːnəz/	n	máy hút bụi
37	<b>effect</b>	/ɪˈfekt/	n	hiệu ứng, tác động
	<b>affect</b>	/əˈfekt/	v	ảnh hưởng
	<b>effective</b>	/ɪˈfektɪv/	adj	hiệu quả
	<b>effectively</b>	/ɪˈfektɪvli/	adv	một cách hiệu quả
	<b>ineffective</b>	/,ɪnɪˈfektɪv/	adj	không hiệu quả
38	<b>route</b>	/ruːt/	n	tuyến đường
	<b>routine</b>	/ruːˈtiːn/	n,adj	thói quen; thường ngày
39	<b>collect information</b>	/kəˈleɪkt ɪnfəˈmeɪʃən/	v.phr	thu thập thông tin
40	<b>computer programmes</b>	/kəmˈpjʊ.tə ˈprəʊɡræmz/	n.phr	chương trình máy tính
41	<b>make machines</b>	/meɪk məˈʃiːnz/	v.phr	cỗ máy
42	<b>E - readers</b>	/iː - ˈriːdəz/	n.phr	thiết bị đọc sách điện tử

43	<b>3D printing</b>	/θri:di: 'prɪntɪŋ/	n.phr	in 3D
44	<b>distance</b>	/'dɪstəns/	n	khoảng cách
45	<b>develop</b>	/dɪ'veləp/	v	phát triển
	<b>developer</b>	/dɪ'veləpə/	n	nhà phát triển
	<b>development</b>	/dɪ'veləpmənt/	n	sự phát triển
46	<b>stain</b>	/steɪn/	n	vết bẩn
47	<b>press</b>	/pres/	v	nhấn
48	<b>button</b>	/'bʌtn/	n	nút
49	<b>recommend</b>	/,rekə'mend/	v	gợi thiệu
50	<b>further information</b>	/'fɜ:ðər ,ɪnfə'meɪʃən/	n.phr	thông tin thêm
51	<b>assistant</b>	/ə'sɪstənt/	n	trợ lý
52	<b>run</b>	/rʌn/	v	hoạt động
53	<b>control</b>	/kən'trəʊl/	v	điều khiển
54	<b>processor speed</b>	/'prəʊsesə spi:d/	n.phr	tốc độ bộ xử lý
55	<b>design</b>	/dɪ'zaɪn/	v,n	thiết kế; bản thiết kế
	<b>designer</b>	/dɪ'zaɪnə/	n	nhà thiết kế
56	<b>TV designs</b>	/,ti:'vi: dɪ'zaɪnz/	n.phr	thiết kế TV
57	<b>prefer</b>	/prɪ'fɜ:(r)/	v	thích hơn
58	<b>Technology Fair</b>	/tek'nɒlədʒi feə/	n.phr	hội chợ công nghệ
59	<b>install</b>	/ɪn'stɔ:l/	v	lắp đặt
60	<b>CÂU TRÚC</b>		<b>NGHĨA</b>	
1	<b>allow/permit sb to do sth</b> = let sb do sth		cho phép ai làm gì	
	<b>allow/permit doing sth</b>		cho phép làm gì	
	<b>enable sb to do sth</b>		cho phép ai đó làm gì	
2	<b>be convenient for sth/doing sth</b>		thuận tiện cho	
3	<b>be suitable for something</b>		thích hợp cho	
4	<b>be useful for sth/doing sth</b>		được sử dụng	
5	<b>help (sb) to do sth / do sth</b>		giúp ai đó làm gì	
6	<b>decide to do sth</b> = make a decision to do sth		quyết định làm gì	
	<b>discuss sth</b> = have a discussion about sth		thảo luận về điều gì	
8	<b>be able to do sth</b>		có thể làm gì	
9	<b>enjoy + ving</b>		thích làm gì	
10	<b>communicate with sb</b>		liên lạc, giao tiếp với ai	
11	<b>let someone know</b>		cho ai đó biết điều gì	
12	<b>wipe away</b>		tẩy, lau sạch đi	
13	<b>be applied to</b>		được ứng dụng	
14	<b>thanks to sth/sb</b>		nhờ có	

## B. GRAMMAR

### 1. Thì hiện tại hoàn thành.

THÌ HIỆN TẠI HOÀN THÀNH		
CÁCH DÙNG	CÔNG THỨC	TỪ NHẬN BIẾT

<ul style="list-style-type: none"> <li>- Diễn tả hành động xảy ra trong quá khứ nhưng không rõ thời gian.</li> <li>- Diễn tả hành động lặp đi lặp lại nhiều lần trong quá khứ.</li> <li>- Diễn tả hành động xảy ra trong quá khứ nhưng để lại dấu hiệu hoặc hậu quả ở hiện tại.</li> <li>- Diễn tả những trải nghiệm.</li> <li>- Diễn tả những hành động xảy ra trong quá khứ nhưng kéo dài tới hiện tại và vẫn còn có khả năng sẽ tiếp diễn trong tương lai.</li> </ul>	<p>(+): S + have/ has + V<sub>pp</sub>          (-): S + have/ has + not + V<sub>pp</sub>          (?): Have/ Has + S + V<sub>pp</sub></p>	<ul style="list-style-type: none"> <li>- ever</li> <li>- never</li> <li>- so far</li> <li>- recently</li> <li>- just</li> <li>- already</li> <li>= lately</li> <li>- for + khoảng thời gian</li> <li>- since + mốc thời gian</li> <li>- all day/week</li> <li>- in recent years</li> <li>- before (đứng cuối câu)</li> <li>- up to now</li> <li>= up to the present</li> <li>= up to this moment</li> <li>= until now</li> <li>= until this time</li> <li>- not...yet (trong câu phủ định hoặc nghi vấn)</li> <li>- in/ over/ during/ for + the + past/last + time</li> <li>- several times, many times, once/ twice/ three times</li> <li>- It's the first/second/third... times</li> </ul>
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## 2. "Ving" & to V

### a. Những động từ theo sau bởi "Ving"

STT	Cấu trúc	Nghĩa
1	admit doing sth	thừa nhận làm gì
2	deny doing sth	phủ nhận làm gì
3	appreciate doing sth	cảm kích làm gì
4	avoid doing sth	tránh làm gì
5	delay/postpone/put off doing sth	hoãn lại làm gì
6	hate/detest/resent doing sth	ghét làm gì
7	enjoy/fancy doing sth	thích làm gì
8	imagine doing sth	tưởng tượng làm gì
9	involve doing sth	có liên quan làm gì
10	keep doing sth	cứ làm gì
11	mention doing sth	đề cập làm gì
12	mind doing sth	phiền/ngại làm gì
13	miss doing sth	suýt, lỡ làm gì
14	tolerate doing sth	chịu đựng làm gì
15	practice doing sth	thực hành làm gì
16	recall doing sth	nhớ lại làm gì
17	consider doing sth	xem xét, cân nhắc làm gì
18	resist doing sth	phản đối làm gì
19	risk doing sth	liều lĩnh làm gì
20	suggest doing sth	gợi ý làm gì
21	finish doing sth	hoàn thành làm gì
22	recommend doing sth	đề xuất làm gì
23	be busy doing sth	bận làm gì
24	be worth doing sth	đáng làm gì
25	look forward to doing sth	mong đợi làm gì

26	feel like doing sth	thích/muốn làm gì
27	there is no point in doing sth = it's no use/good doing sth	không đáng làm gì
28	get/be accustomed/used to doing sth	quen làm gì
29	spend time doing sth	dành thời gian làm gì
30	waste time doing sth	lãng phí thời gian làm gì
31	have difficulty (in) doing sth	gặp khó khăn trong việc làm gì
32	can't help/stand/bear doing sth	không thể chịu/nhịn được

### b. Những động từ theo sau bởi "To V"

STT	Cấu trúc	Nghĩa
1	afford to do sth	đủ khả năng làm gì
2	agree to do sth	đồng ý làm gì
3	appear to do sth	xuất hiện để làm gì
4	arrange to do sth	sắp xếp làm gì
5	decide to do sth	quyết định làm gì
6	demand to do sth	yêu cầu làm gì
7	deserve to do sth	xứng đáng làm gì
8	expect to do sth	mong đợi làm gì
9	fail to do sth	thất bại khi làm gì
10	hesitate to do sth	do dự làm gì
11	hope to do sth	hi vọng làm gì
12	learn to do sth	học để làm gì
13	manage to do sth	xoay sở để làm gì
14	need to do sth	cần làm gì
15	offer to do sth	đề nghị làm gì
16	plan to do sth	lên kế hoạch làm gì
17	prepare to do sth	chuẩn bị làm gì
18	pretend to do sth	giả vờ làm gì
19	promise to do sth	hứa làm gì
20	refuse to do sth	từ chối làm gì
21	seem to do sth	dường như làm gì
22	threaten to do sth	đe dọa làm gì
23	volunteer to do sth	tình nguyện làm gì
24	wait to do sth	đợi làm gì
25	want to do sth	muốn làm gì
26	wish to do sth	mong làm gì
27	would like to do sth	muốn làm gì
28	would love to do sth	rất thích làm gì

### c. Những động từ theo sau bởi cả "To V, V<sub>ing</sub> hoặc V(bare)"

STT	Cấu trúc	Nghĩa
1	try to do sth try doing sth	cố gắng làm gì thử làm gì
2	remember to do sth remember doing sth	nhớ phải làm gì nhớ đã làm gì
3	forget to do sth forget doing sth	quên phải làm gì quên đã làm gì
4	advise sb to do sth advise doing sth	khuyên ai đó làm gì khuyên làm gì
5	allow/permit sb to do sth allow/permit doing sth	cho phép ai đó làm gì cho phép làm gì
6	recommend sb to do sth recommend doing sth	khuyên bảo/dặn/đề nghị ai đó làm gì khuyên bảo/dặn/đề nghị làm gì

7	encourage sb to do sth encourage doing sth	khuyến khích ai đó làm gì khuyến khích làm gì
8	mean to do sth mean doing sth	dự định làm gì có nghĩa là phải làm gì
9	regret to do sth regret doing sth	rất lấy làm tiếc khi phải làm gì hối tiếc vì đã làm gì
10	go on to do sth go on doing sth	tiếp tục làm điều gì sau khi hoàn tất một công việc chỉ sự liên tục của hành động
11	$V_{\text{tri giác}} + O + \begin{cases} V_{\text{bare}} \\ V_{\text{ing}} \end{cases}$	khi chứng kiến toàn bộ sự việc khi chứng kiến một phần sự việc
12	stop to do sth stop doing sth	dừng lại để làm gì dừng hẳn làm gì
13	need to do sth need doing sth	cần phải làm gì cần phải được làm
15	help sb do/to do sth	giúp ai đó làm gì
16	have sb do sth = get sb to do sth have/get sth done	nhờ ai đó làm gì có cái gì được làm bởi ai
17	used to do sth be/get used to doing sth be used to do sth = be used for doing sth	thường làm gì trong quá khứ thường làm gì ở hiện tại được dùng để làm gì
18	start/begin to do sth/doing sth	bắt đầu làm gì
19	love/like to do sth/doing sth	thích làm gì
20	hate to do sth/doing sth	ghét làm gì

Lưu ý:

**Need/ want + V<sub>ing</sub> (trong nghĩa bị động)**

Ví dụ:

- My car needs **washing**. = My car needs **to be washed**. (Xe của tôi cần được rửa – không phải xe tự rửa.)
- The dress wants **ironing**. = The dress wants **to be ironed**. (Chiếc váy này cần được ủi.)

### C. PRACTICE

**Exercise 1: Mark the letter A, B, C, or D to indicate the correct answer to each of the following questions.**

**Question 1:** Modern inventions have transformed the face of \_\_\_\_\_, allowing students to access knowledge through e – readers and computer programmes.

- A. experiment                      B. communication                      C. education                      D. process

**Question 2:** The Technology Fair was organized to \_\_\_\_\_ students on how driverless cars function with advanced software.

- A. educate                      B. educative                      C. education                      D. educational

**Question 3:** Thomas Edison managed to \_\_\_\_\_ the electric light bulb, which became one of the most valuable inventions in history.

- A. discover                      B. invent                      C. detect                      D. observe

**Question 4:** A driverless car is a groundbreaking \_\_\_\_\_ that is convenient for both long – distance travel and daily routines.

- A. inventor                      B. inventiveness                      C. invent                      D. invention

**Question 5:** Being \_\_\_\_\_, she decided to use 3D printing to produce valuable educational materials for schools.

- A. emotional                      B. inventive                      C. dimensional                      D. driverless

**Question 6:** Teachers always highly \_\_\_\_\_ that enables students to collect information conveniently.

- A. software educational value                      B. educational value software  
C. educational software value                      D. value educational software

**Question 7:** For inventors, the support of educated assistants is absolutely \_\_\_\_\_ when conducting complicated experiments.

- A. valueless                      B. invaluable                      C. valuably                      D. value

**Question 8:** It is very \_\_\_\_\_ for inventors to use diagrams when they explain how machines work.

- A. convene                      B. convenience                      C. conveniently                      D. convenient

**Question 9:** Many inventions were created for human \_\_\_\_\_, such as vacuum cleaners and washing machines.

- A. conveniently                      B. convenience                      C. convention                      D. conventionally

**Question 10:** At the Technology Fair, students could \_\_\_\_\_ their opinions about the most valuable modern devices.

- A. depress                      B. suppress                      C. express                      D. impress

**Question 11:** Diagrams are a form of \_\_\_\_\_ that helps explain complicated experiments clearly.

- A. inform                      B. expression                      C. programmes                      D. discussion

**Question 12:** Every great invention can create strong \_\_\_\_\_ among people who value technology and development.

- A. emotive                      B. emotions                      C. emotional                      D. emoticon

**Question 13:** They are very \_\_\_\_\_ because their hard work in designing this robot has paid off.

- A. emotional                      B. exciting                      C. stressed                      D. satisfied

**Question 14:** Thanks to advances in \_\_\_\_\_, driverless cars can measure routes and run safely without human control.

- A. virtual reality                      B. machine learning                      C. smart devices                      D. artificial intelligence

**Question 15:** Without a \_\_\_\_\_, housework would take more time, especially in places that are difficult to clean.

- A. vacuum cleaner                      B. dishwasher                      C. washing powder                      D. air conditioner

**Question 16:** The assistant helped the inventor \_\_\_\_\_ the distance with a ruler between two points in a 3D printing experiment.

- A. calculate                      B. check                      C. measure                      D. define

**Question 17:** Scientists experiment with drones as a new form of \_\_\_\_\_ for delivering packages quickly.

- A. transaction                      B. transformation                      C. transport                      D. transfer

**Question 18:** In computer science, memory size is often described as a critical \_\_\_\_\_ of performance.

- A. direction                      B. dimensions                      C. distance                      D. factor

**Question 19:** Scientists measured the processor speed of a \_\_\_\_\_ to ensure its safety and efficiency for traffic participants.

- A. motorbike                      B. smartphone                      C. driverless car                      D. laboratory

**Question 20:** If you don't \_\_\_\_\_ the laptop properly, the system may shut down and affect your work.

- A. charge                      B. load                      C. connect                      D. restart

**Question 21:** Thomas Edison studied the \_\_\_\_\_ of electric current in vacuum tubes, which later inspired many inventions.

- A. expression                      B. discharge                      C. value                      D. transport

**Question 22:** Developers often rely on a wiring \_\_\_\_\_ before they install hardware or software.

- A. diary                      B. diagram                      C. draft                      D. chart

**Question 23:** The designer discussed the advantages of upgrading physical \_\_\_\_\_ at the Technology Fair.

- A. soft skills                      B. firmware                      C. software                      D. hardware

**Question 24:** The completion of any device requires both effective \_\_\_\_\_ and strong hardware.

- A. software                      B. program                      C. application                      D. storage

**Question 25:** Without \_\_\_\_\_ education, it is impossible to invent effective machines.

- A. processed                      B. educational                      C. basic                      D. practical

**Question 26:** A small laboratory was built in the \_\_\_\_\_ for testing driverless car software.

- A. distance                      B. diagram                      C. basement                      D. assistant

**Question 27:** Without education, it is difficult to understand the complicated \_\_\_\_\_ of computer science.

- A. expression                      B. diagram                      C. process                      D. basement

**Question 28:** Every modern device needs a powerful \_\_\_\_\_ to complete tasks quickly.

- A. procession                      B. processing                      C. processor                      D. process



- Question 51:** The driverless car is considered a \_\_\_\_\_ combining AI and inventive design.  
 A. household tool      B. traditional vehicle      C. modern device      D. electronic chip
- Question 52:** \_\_\_\_\_ is the basis of many modern devices, from e – readers to driverless cars.  
 A. Physics      B. Computer science      C. Hardware      D. Engineering
- Question 53:** AI – powered \_\_\_\_\_ help students communicate with native speakers worldwide.  
 A. processors      B. chatbots      C. language games      D. online libraries
- Question 54:** Inventors developed \_\_\_\_\_ as convenient devices for daily routines.  
 A. vacuum robot cleaners      B. robot vacuum cleaners      C. vacuum cleaners robot      D. cleaners robot vacuum
- Question 55:** Climate change pushes inventors to consider the \_\_\_\_\_ of technology on the environment.  
 A. reason      B. cause      C. effect      D. base
- Question 56:** Poor internet connections can \_\_\_\_\_ the quality of online education through video platforms.  
 A. enable      B. affect      C. support      D. value
- Question 57:** Installing security software is the most \_\_\_\_\_ method to avoid data loss.  
 A. convenient      B. temporary      C. inventive      D. effective
- Question 58:** Traditional teaching methods may be \_\_\_\_\_ compared to AI – powered educational tools.  
 A. supportive      B. useful      C. ineffective      D. reliable
- Question 59:** Scientists discussed how AI can optimize the \_\_\_\_\_ of public transport for convenience.  
 A. diagram      B. base      C. method      D. route
- Question 60:** Social media platforms \_\_\_\_\_ about users to improve targeted advertising.  
 A. decide      B. collect information      C. permit      D. discuss
- Question 61:** Engineers are working hard to \_\_\_\_\_ machines according to the existing design.  
 A. cover      B. invent      C. collect      D. make
- Question 62:** An \_\_\_\_\_ is a small device on which you can store and read texts downloaded from the Internet.  
 A. e – readers      B. smart boards      C. projectors      D. robots
- Question 63:** \_\_\_\_\_ has become an effective method to design educational tools for classrooms.  
 A. Artificial intelligence      B. Virtual reality      C. 3D printing      D. Online platforms
- Question 64:** AI drones are now used to deliver packages across great \_\_\_\_\_ safely.  
 A. directions      B. distances      C. dimensions      D. destinations
- Question 65:** Scientists decided to \_\_\_\_\_ new battery technology to improve energy efficiency.  
 A. discover      B. invent      C. develop      D. prepare
- Question 66:** EdTech companies contribute to the \_\_\_\_\_ of online education through E–readers and language games.  
 A. developer      B. development      C. developing      D. developed
- Question 67:** His new invention can easily remove stubborn \_\_\_\_\_ from clothes.  
 A. dust      B. effect      C. stains      D. waste
- Question 68:** Gamers often \_\_\_\_\_ multiple keys at once when playing computer games competitively.  
 A. push      B. hold      C. press      D. tap
- Question 69:** Smart devices now respond to voice commands, reducing the need to \_\_\_\_\_ a button.  
 A. switch      B. press      C. turn      D. touch
- Question 70:** Developers \_\_\_\_\_ updating software regularly to ensure effective performance.  
 A. allow      B. recommend      C. need      D. force
- Question 71:** For \_\_\_\_\_, the assistant recommended checking the diagram on the screen.  
 A. more news      B. further information      C. latest results      D. collect information
- Question 72:** Inventors often rely on an educated \_\_\_\_\_ to complete experiments effectively.  
 A. teacher      B. partner      C. assistant      D. supervisor
- Question 73:** The new software is designed to \_\_\_\_\_ smoothly on basic hardware.  
 A. open      B. boot      C. run      D. load
- Question 74:** Parents try to \_\_\_\_\_ how often children play computer games.  
 A. affect      B. discuss      C. control      D. allow
- Question 75:** Gamers prefer laptops with \_\_\_\_\_ to enjoy realistic displays.  
 A. high speed processor      B. high processor speed      C. processor speed high      D. processor high speed
- Question 76:** Engineers worked on the \_\_\_\_\_ of a battery that could charge completely in 10 minutes.

A. diagram                      B. drawing                      C. design                      D. plan

**Question 77:** A famous industrial \_\_\_\_\_ presented an inventive diagram of a new smartphone at the Technology Fair.

A. inventor                      B. designer                      C. assistant                      D. teacher

**Question 78:** Inventors introduced futuristic \_\_\_\_\_ at the Technology Fair, showing how modern devices evolve.

A. machines                      B. TV designs                      C. processors                      D. diagrams

**Question 79:** People \_\_\_\_\_ using driverless cars as they provide safety and save valuable time.

A. use                      B. prefer                      C. support                      D. enable

**Question 80:** Teachers recommend that students \_\_\_\_\_ and set up educational apps on their E-readers.

A. run                      B. download                      C. install                      D. check

**Question 81:** Open – source licenses permit developers \_\_\_\_\_ modify software, improving accessibility features for the blind.

A. with                      B. for                      C. to                      D. by

**Question 82:** Modular drones let farmers \_\_\_\_\_ crop surveys cheaply, replacing costly helicopter flights.

A. create                      B. do                      C. build                      D. prepare

**Question 83:** Low – cost sensors \_\_\_\_\_ farmers to monitor soil health and allocate water precisely.

A. force                      B. let                      C. enable                      D. cause

**Question 84:** Wireless charging pads are convenient \_\_\_\_\_ café hosting laptop – heavy study groups.

A. in                      B. on                      C. for                      D. at

**Question 85:** The lightweight drone is \_\_\_\_\_ indoor warehouse inventory audits.

A. capable of                      B. suitable for                      C. use in                      D. designed by

**Question 86:** Wearable EEG bands are useful \_\_\_\_\_ tracking student focus during VR lessons.

A. at                      B. for                      C. on                      D. to

**Question 87:** After community feedback, administrators \_\_\_\_\_ a decision to extend makerspace hours.

A. took                      B. set                      C. made                      D. gave

**Question 88:** Robotics kits \_\_\_\_\_ kids build confidence while solving real engineering problems.

A. allow                      B. support                      C. help                      D. encourage

**Question 89:** Let's have a \_\_\_\_\_ about cybersecurity for E – readers used in exams.

A. debate                      B. speak                      C. discussion                      D. talk

**Question 90:** Using 5G, ambulances \_\_\_\_\_ able to stream ultrasound to remote specialists.

A. had been                      B. are                      C. have been                      D. be

**Question 91:** Social robots communicate \_\_\_\_\_ children gently, supporting therapy for autism.

A. to                      B. with                      C. by                      D. for

**Question 92:** Digital twins are \_\_\_\_\_ optimizing energy use in new campus buildings.

A. aimed at                      B. decide to                      C. applied to                      D. wipe away

**Question 93:** You should \_\_\_\_\_ the batteries fully before using the smartphones.

A. apply                      B. display                      C. store                      D. charge

**Question 94:** This device \_\_\_\_\_ people to communicate by using voice commands.

A allows                      B. makes                      C. applies                      D. lets

**Question 95:** \_\_\_\_\_ cars can work with little human control.

A. Driver                      B. Driven                      C. Driverless                      D. Non – driver

**Question 96:** \_\_\_\_\_ ' means 'made by humans'.

A. valuable                      B. useful                      C. artificial                      D. helpful

**Question 97:** \_\_\_\_\_ is not part of a computer.

A. Hardware                      B. Software                      C. Process                      D. RAM

**Question 98:** This device is not \_\_\_\_\_ for children.

A. suitable                      B. valuable                      C. various                      D. artificial

**Question 99:** We do not like \_\_\_\_\_ on animals.

A experiences                      B. experiments                      C. exercises                      D. expressions

**Question 100:** They \_\_\_\_\_ a new camera in the classroom to monitor the activities

A. applied                      B. installed                      C. displayed                      D. stored

**Question 101:** The door and the window are open. I think someone \_\_\_\_\_ into our house!



**Question 126:** My brother is a software developer. He \_\_\_\_\_ three useful applications that help students learn foreign languages more effectively.

A. has already created      B. already created      C. is already creating      D. have already create

**Question 127:** We have discussed the disadvantages of vacuum cleaners several times, but we \_\_\_\_\_ a discussion about their environmental effects before.

A. have never had      B. had never had      C. are never having      D. will never have

**Question 128:** The company has introduced a new kind of battery that lasts longer than anything they produced \_\_\_\_\_.

A. after      B. before      C. just      D. since

**Question 129:** The researchers have checked the new driverless car carefully. \_\_\_\_\_ these tests, they have discovered several serious problems that still need to be solved.

A. Before      B. After      C. Since      D. Until

**Question 130:** How many driverless cars has the company tested \_\_\_\_\_?

A. so far      B. yet      C. now      D. before

**Exercise 2: Read the following passage and mark the letter A, B, C, or D to indicate the correct word or phrase that best fits each of the numbered blanks.**

### Flat computers

(1) \_\_\_\_\_ are small, light personal computers for mobile use. They have most of the same components as (2) \_\_\_\_\_ computers including a screen, speakers and a (3) \_\_\_\_\_ to write / type with. In the 1970s, IBM (4) \_\_\_\_\_ the first company to make and sell these mobile computers. At first, laptops didn't (5) \_\_\_\_\_ to have batteries and the screens were black and white and very small. Later, in the 1990s, colour screens (6) \_\_\_\_\_ more popular. Nowadays, laptops are more popular than any other type of computer.

**Question 1:** A. Desktops      B. Websites      C. Laptops      D. Tablets

**Question 2:** A. electric      B. desktop      C. Internet      D. mainframe

**Question 3:** A. keyboard      B. password      C. web browser      D. touchscreen

**Question 4:** A. was      B. used to be      C. used to      D. had been

**Question 5:** A. use      B. Used      C. have      D. need

**Question 6:** A. were becoming      B. used to become      C. became      D. had become

**Exercise 3: Read the following passage and mark the letter A, B, C, or D to indicate the correct word or phrase that best fits each of the numbered blanks.**

### E-READERS

An e-reader is a small (1) \_\_\_\_\_ on which you can store and read texts downloaded from the Internet. Compared with printed books, e-readers are often more (2) \_\_\_\_\_ because an e-reader allows us to store thousands of books while it is only as heavy as a single book. Besides, it has a lot of useful features that a (3) \_\_\_\_\_ does not have. The first e-reader was introduced by a small company in 1999. However, it was not until people became interested in e-books that e-readers became (4) \_\_\_\_\_ around the world. In 2007, Amazon created Kindle, a famous e-reader which has been widely used since then. (5) \_\_\_\_\_ e-readers have become less popular since tablets and smartphones were introduced, they are still used by many book lovers today.

**Question 1:** A. device      B. hardware      C. software      D. vehicle

**Question 2:** A. expensive      B. Inexpensive      C. convenient      D. Inconvenient

**Question 3:** A. smartphone      B. laptop      C. computer      D. printed book

**Question 4:** A. convenient      B. popular      C. helpful      D. cheap

**Question 5:** A. Because      B. Although      C. When      D. Until

**Exercise 4: Read the following passage and mark the letter A, B, C, or D to indicate the correct word or phrase that best fits each of the numbered blanks.**

Artificial intelligence (AI) can already predict the future. Police forces are using it to map when and where (1) \_\_\_\_\_ is likely to occur. Doctors can use it to predict (2) \_\_\_\_\_ a patient is most likely to have a heart attack or stroke. Researchers are even trying to give AI imagination so it can plan for unexpected consequences.

Many decisions in our lives require a good forecast, and AI is almost always better at forecasting than we (3) \_\_\_\_\_. Yet for all these technological advances, we still seem to deeply lack confidence in AI predictions. Recent cases show that people don't like relying on AI and prefer to trust human experts, (4) \_\_\_\_\_ these

experts are wrong.

If we want AI to really benefit people, we need to find a way to get people to trust it. To do that, we need to understand why people are so reluctant to trust AI in the first (5) \_\_\_\_\_.

[Adapted from IELTS Cambridge 16]

**Question 1:** A. criminal                      B. discrimination                      C. crime                      D. compliance

**Question 2:** A. when                      B. who                      C. that                      D. which

**Question 3:** A. do                      B. are                      C. have                      D. did

**Question 4:** A. unless                      B. thanks to                      C. although                      D. even if

**Question 5:** A. area                      B. site                      C. position                      D. place

**Exercise 5: Read the following passage and mark the letter A, B, C, or D to indicate the correct word or phrase that best fits each of the numbered blanks.**

Humans have been developing technology for a very long time. The ability to design and create tools and devices is considered a definitive aspect of human beings. Many other species behave out of (1) \_\_\_\_\_, as is the case of bees building hives and beavers constructing dams.

Humans, alternatively, are (2) \_\_\_\_\_ to use creative and organizational skills to develop new solutions to problems. Tools are objects generated by humans with the (3) \_\_\_\_\_ of solving problems. Early humans who invented technology did so with the motivation to have the power to change their environments. When technology was invented, people were able to use technology to (4) \_\_\_\_\_ human needs, wants, and desires.

An example of early technology is fire. There is evidence that humans started using fire in stone hearths approximately 1.5 million years ago. It is thought that, (5) \_\_\_\_\_ early humans were scared (6) \_\_\_\_\_ the dangers of fire, they understood that fire could help improve their lives. Fire could provide warmth, scare predators away and be used (7) \_\_\_\_\_ food.

Clocks, as a technology, were created about five thousand to six thousand years ago in (8) \_\_\_\_\_ to allow people to organize their time in a more coordinated fashion. The initial clock design used shadows created by the sun to (9) \_\_\_\_\_ time. Mechanical clocks were developed later, in China. Writing is also an important early human technology and was created more than three thousand years ago. Initially, writing served to track commodities. Writing later became a way to share ideas, record history, and disseminate information, among (10) \_\_\_\_\_ functions.

[Adapted from <https://study.com/learn/lesson/invention-technology-purpose-history.html>]

**Question 1:** A. intuition                      B. instinct                      C. gut                      D. mind

**Question 2:** A. capable                      B. likely                      C. able                      D. possible

**Question 3:** A. purpose                      B. goal                      C. view                      D. aim

**Question 4:** A. see                      B. face                      C. watch                      D. meet

**Question 5:** A. despite                      B. because                      C. although                      D. when

**Question 6:** A. by                      B. to                      C. of                      D. about

**Question 7:** A. cooking                      B. cook                      C. for cooking                      D. to cooking

**Question 8:** A. addition                      B. case                      C. order                      D. regard

**Question 9:** A. talk                      B. say                      C. tell                      D. speak

**Question 10:** A. other                      B. another                      C. others                      D. the other

**Exercise 6: Complete the sentences using the words in the box.**

buttons	charged	suitable	valuable
smartphones	laptop	computers	stain

1. Modern \_\_\_\_\_ nowadays do not have many \_\_\_\_\_ to look better.
2. Some personal \_\_\_\_\_ are not \_\_\_\_\_ for outdoor use because they are not portable.
3. The \_\_\_\_\_ is not working because you haven't \_\_\_\_\_ it yet.
4. The Internet has become a very \_\_\_\_\_ learning tool.
5. He spilled his coffee on his desk and so now there is \_\_\_\_\_ a on the desk.

**Exercise 7: Fill in the blanks with the given words.**

invention	experiments	inventor
patent	assistant	

1. The \_\_\_\_\_ of the computer was a milestone in the history of man.
2. The scientist needed an \_\_\_\_\_ to help him with his invention.

3. A number of \_\_\_\_\_ have been done on animals to develop a vaccine for COVID – 19.
4. Thomas Edison was known as the \_\_\_\_\_ of the electric light bulb.
5. A \_\_\_\_\_ is a document which claims the right to be the only person or organization to make, use or sell an invention.

**Exercise 8: Complete the sentences with the correct form of the verbs from the box.**

download	follow	go
post	update	visit

1. How do I \_\_\_\_\_ this photograph of us on social media?
2. I don't understand why so many people \_\_\_\_\_ celebrities on Twitter.
3. Akito \_\_\_\_\_ online the moment she wakes up to check her social media messages.
4. I've never \_\_\_\_\_ this website before. It has some excellent information on it!
5. It's very important to \_\_\_\_\_ social media profile. Then everybody has the latest information about you.
6. Dean is the only person I know that still buys CDs. Most people \_\_\_\_\_ music on computers now.

**Exercise 9: Choose the correct verbs complete the sentences.**

notice	access	transport	reduce
treat	entertain	protect	communicate

1. Electric cars help us \_\_\_\_\_ pollution in town and cities.
2. Aeroplanes \_\_\_\_\_ people to other countries in a few hours.
3. Doctors use stethoscopes to \_\_\_\_\_ problem with our heartbeat.
4. The World Wide Web lets people \_\_\_\_\_ information online.
5. Penicilin is an important medicine that helps \_\_\_\_\_ infections.
6. We can use CCTV Security Systems to \_\_\_\_\_ our homes from criminals.
7. Thanks to the telephone, people can \_\_\_\_\_ with friends anywhere.
8. Cartoon are television shows that \_\_\_\_\_ children.

**Exercise 10: Reorder the sentences to make a meaning talk about e – readers.**

- a. Besides, if this device happens to be stolen, our money and books are all gone forever.
- b. For me, one of the cons is that e – readers take away many feelings related to paper books.
- c. I remember having read somewhere that we can save about one tree per year if we replace our daily newspaper with the e – versions.
- d. In other words, it helps to save trees.
- e. It is a small hand – held electronic device for reading books.
- f. Secondly, e – readers are green.
- g. So now, let me move on to talk about some disadvantages of this device.
- h. The best thing about e – readers is that they are not only lightweight and portable but can also store thousands of books.
- i. Those are the two advantages of e – readers I want to mention, but you know, everything has its pros and cons.
- j. To begin with, I will tell you about how e – readers benefit our life.
- k. Today, I would like to talk about an important invention of the last few decades, which is the e – reader.
- l. We can take any books with us wherever we go, even when being outdoors.
- m. We do not go to the bookstores, judging book covers, holding a book, turning the pages and smelling the scent of new paper.

**Your answer:** \_\_\_\_\_.

**Exercise 11: Mark the letter A, B, C or D on your answer sheet to indicate the best arrangement of utterances or sentences to make a cohesive and coherent exchange or text in each of the following questions.**

**Question 1:**

- a. **Maya:** Thanks to 3D printing, we can install new sensors fast; it's useful for buses that must communicate with traffic lights.
- b. **Ken:** With higher processor speed and extra RAM, it enables real – time decisions, and the long – life battery is convenient for distance travel.
- c. **Maya:** Our inventor just unveiled an inventive driverless car; the software lets users set routes, and the

computer hardware allows offline navigation.

A. a - c - b

B. a - b - c

C. c - b - a

D. b - c - a

**Question 2:**

**a. Iris:** The battery supports fast charge, the storage space is 256 gigabytes—convenient for distance work—and it can communicate with your laptop offline.

**b. Nate:** Thanks to 3D printing, we can install new camera modules quickly; if your team decides to pilot it, let me know.

**c. Nate:** We've invented a modular phone; the software allows users to personalize the display, and higher processor speed plus extra RAM enable smooth video editing.

A. c - b - a

B. c - a - b

C. a - c - b

D. b - c - a

**Question 3:**

**a. Nick:** Have you ever used a vacuum cleaner? It is very convenient for cleaning the house.

**b. Omar:** I agree. Thanks to this invention, people can enjoy doing housework more and be able to keep their home tidy.

**c. Nick:** I think it's one of the most valuable inventions because it can wipe away dust and stains easily.

**d. Omar:** Yes, I have. This modern device helps people to save time and keep rooms clean.

A. d - a - b - c

B. a - c - d - b

C. a - b - c - d

D. a - d - c - b

**Question 4:**

**a. David:** It really helps doctors to save time and complete operations more effectively.

**b. David:** Developers also use it to design organs for experiments and future surgeries.

**c. Anna:** Thanks to this invention, patients can be able to recover faster and avoid complicated operations.

**d. Anna:** 3D printing is now applied to medicine to create artificial bones.

**e. Anna:** The process is valuable for patients because it makes treatments more convenient.

A. d - b - a - e - c

B. c - b - a - e - d

C. d - a - e - b - c

D. c - d - e - b - a

**Question 5:**

Dear Linh,

**a.** In the future, 3D printing will be widely used in many fields and make life more comfortable.

**b.** It allows developers to design and create objects quickly, which is very convenient for experiments.

**c.** Thanks to its effectiveness, patients can recover faster and avoid complicated operations.

**d.** 3D printing is one of the most valuable inventions in modern technology.

**e.** In medicine, this invention is applied to produce artificial bones and organs, helping doctors save time in treatment.

Best wishes,

Mai

A. c - b - e - a - d

B. d - b - e - c - a

C. d - a - e - c - b

D. b - c - e - d - a

**Question 6:**

Dear John,

**a.** In the future, they will continue to be developed with even faster systems and better designs, and they will connect more countries around the world in a modern network.

**b.** Fast trains are considered one of the most valuable inventions in modern transport because they allow people to travel long distances quickly and safely while saving a great deal of time.

**c.** Thanks to advanced technology, these trains can reach very high speeds, and they still provide comfort and convenience for millions of passengers in different parts of the world.

**d.** Moreover, fast trains not only make travelling more efficient but also create economic opportunities by connecting major regions and supporting tourism and business development.

**e.** This invention is especially important for big cities since it helps reduce serious traffic jams and lowers air pollution, which greatly benefits the environment and public health.

Best wishes,

Anna

A. b - e - c - a - d

B. b - e - c - d - a

C. d - a - e - c - a

D. b - c - e - d - a

**Question 8:**

**a.** Most course papers end with a short, clear paragraph that summarizes the key arguments and ties them together to support the thesis.

- b. Rather than focusing on details, it emphasizes the main point and the overall structure of the work.
  - c. A paper's conclusion is an important part because it provides closure and reminds the reader of the paper's overall significance.
  - d. The conclusion should clarify the purpose and importance of the paper without adding any new information.
  - e. It may also suggest possible directions for further study on the topic.
- A. c - b - a - d - e      B. d - b - c - a - e      C. a - b - c - d - e      D. d - c - b - e - a

**Question 9:**

- a. The invention of the airplane allowed people to cross continents and oceans in just a few hours.
  - b. The steam engine and railway system transformed entire societies, making travel faster and boosting industrial development.
  - c. From the invention of the wheel in ancient times, humans have always tried to improve transportation methods.
  - d. Today, modern transport inventions such as high - speed trains and driverless cars are making travel safer and more convenient.
  - e. These inventions clearly demonstrate how human creativity in transport has changed the way we live and connect.
- A. d - c - a - b - e      B. c - b - a - d - e      C. c - d - b - a - e      D. e - a - c - d - b

**Question 10:**

- a. Although the internet began as a simple network for scientists, it has grown into a vast system where people can share ideas and create new technologies together.
  - b. After the light bulb appeared, other inventors created electric appliances that made our homes more comfortable and our lives easier.
  - c. The computer, which was first developed for military purposes, has evolved into smartphones and tablets that connect people across the globe.
  - d. If we look at history carefully, we can see that each invention is like a stone thrown into water because it creates waves that inspire new ideas and innovations.
  - e. When Thomas Edison invented the light bulb, he could not have imagined how it would change our world forever.
- A. b - c - d - e - a      B. e - b - d - c - a      C. c - b - e - d - a      D. d - c - b - e - a

**Exercise 12: Read the paragraph and complete the gaps (1 - 3) with sentences (A - D). There is one extra sentence.**

**30 PRINTERS are changing everything!**

I personally believe that 3D printers will be more popular in the near future and will change our lives the most. First of all, once everyone has a 3D printer at home, we can make anything we need. (1) \_\_\_\_\_. Furthermore, 3D printers will change important areas like medicine completely. For example, doctors already make new bones for patients using them. (2) \_\_\_\_\_. To sum up, the 3D printer has changed many parts of our lives already, and it will soon have an impact everywhere. (3) \_\_\_\_\_

- A. On the other hand, there are problems with 3D printers
- B. One day, they might even print new hearts
- C. That means we can fix things that break instead of buying new ones
- D. It is the greatest invention in the world!

**Exercise 13: Read the passage and mark the letter A, B, C or D on your answer sheet to indicate the best answer to each of the following questions.**

The usage of technology, such as cell phones and tablets, laptops (1) \_\_\_\_\_. Everyone's life has been impacted by it, but notably the young. While a sizable portion of people believe that contemporary technologies provide youth with many advantages, some claim that youngsters are encountering a number of problems as a result of their negative consequences. (2) \_\_\_\_\_. It is clear that technological innovations have given young people access to a variety of benefits. They are, first and foremost, comprehensive information sources (3) \_\_\_\_\_. (4) \_\_\_\_\_. Secondly, social networks and smart devices have made the world smaller. Making new friends, communicating across great distances, or reconnecting with existing acquaintances is simple and affordable. Additionally, (5) \_\_\_\_\_, young people can do everything more easily, such as book flights, look for employment, or purchase online anywhere. In particular, they particularly aid everyone's relaxation through the use of films, literature, music, etc. In conclusion, technology brings a lot of benefits to humans. However,

everything has two sides, so let's use them wisely to make it effective in our lives.

**Question 1:**

- A. grew quickly in the modern world over recent years
- B. has been growing quickly in the modern world
- C. is growing rapidly across the modern world
- D. have been growing quickly in the modern world

**Question 2:**

- A. Modern technologies offer so many benefits that it is impossible to count all of them
- B. Humans are now living in a world full of technological advancements and innovations
- C. In contrast, many argue that restrictions should replace most modern devices
- D. I believe that technological innovations have numerous advantages for humans

**Question 3:**

- A. where any type of information on any subject may be easily and quickly located
- B. that any type of information on any subject can be easily and quickly find
- C. provided easy and quick access to any type of information on any subject
- D. in which learners must invest more time before anything becomes accessible

**Question 4:**

- A. as a result of the availability of helpful documents and free books to support students' learning
- B. many learners end up distracted by constant notifications and trending topics online
- C. studying is no longer tough since there are a ton of helpful documents and free books available
- D. because there are a ton of helpful documents and free books available, they do not need to study hard

**Question 5:**

- A. because of the portability of current technological services which is a helpful aspect
- B. because the world today faces complex digital challenges and privacy concerns
- C. in addition, with a variety of current technological services and their portability
- D. thanks to a variety of current technological services and their portability

**Exercise 14: Read the passage and mark the letter A, B, C or D on your answer sheet to indicate the best answer to each of the following questions.**

A large number of inventions require years of **arduous** research and development before they are perfected. For instance, Thomas Edison had to make more than 1,000 attempts to invent the incandescent light bulb before he finally succeeded. **History is replete with numerous other examples of people trying, yet failing to make inventions before they eventually succeeded.** Yet some inventions have come about not through hard work but simply **by accident**.

In most cases, when someone unintentionally invented something, the inventor was attempting to create something else. For example, in the 1930s, chemist Roy Plunkett was attempting to make a new substance that could be used to refrigerate items. He mixed some chemicals together. Then, he put them into a pressurized container and cooled the mixture. By the time his experiment was complete, he had a new invention. It was not a new substance that could be used for refrigeration though. Instead, he had invented Teflon, which is today most commonly used to make nonstick pots and pans. Similarly, decades earlier, John Pemberton was a pharmacist in Atlanta, Georgia. He was attempting to create a tonic that people could use whenever they had headaches. While he was not successful in that endeavor, he managed to invent Coca – Cola, the world – famous carbonated soft drink.

Scientists have also made crucial discoveries by accident when they were conducting experiments. In 1928, Alexander Fleming discovered penicillin, an antibiotic, in this manner. He discovered some mold growing in a dish with some bacteria. He noticed that the bacteria seemed to be avoiding the mold. When he investigated further, he determined some of the many useful properties of penicillin, which has saved millions of lives over the past few decades. Likewise, in 1946, scientist Percy Spencer was conducting an experiment with microwaves. He had a candy bar in his pocket, and he noticed that **it** suddenly melted. He investigated and learned the reason why that had happened. Soon afterward, he built a device that could utilize microwaves to heat food: the microwave oven.

**Question 1:** According to the passage, which of the following inventions is **NOT** mentioned as having been created by accident?

A. Teflon

B. Coca – Cola

C. Penicillin

D. The incandescent light bulb

**Question 2:** The word "**arduous**" in paragraph 1 is closest in meaning to which of the following?

A. simple

B. lengthy

C. difficult

D. expensive

**Question 3:** The phrase "**by accident**" in paragraph 1 is **OPPOSITE** in meaning to \_\_\_\_\_.

A. intentionally

B. rarely

C. carefully

D. experimentally

**Question 4:** Which of the following is closest in meaning to the sentence: "History is replete with numerous other examples of people trying, yet failing to make inventions before they eventually succeeded."?

A. History shows that most people fail many times before they finally invent something successfully.

B. History is full of people who never succeed in making their inventions.

C. Only a few people in history have managed to succeed in their inventions after many failures.

D. Successful inventors rarely have to try more than once to perfect their creations.

**Question 5:** The word "**it**" in paragraph 3 refers to:

A. The experiment

B. The microwave oven

C. The candy bar

D. The device

**Question 6:** Which of the following statements is TRUE according to the passage?

A. Alexander Fleming discovered penicillin by accident while researching an unknown type of bacteria.

B. Thomas Edison's first successful attempt to invent the incandescent light bulb was his 1,000th.

C. Both Teflon and Coca – Cola were accidentally created by scientists while in a lab setting.

D. The principle behind the microwave oven was discovered when a candy bar melted in Percy Spencer's pocket.

**Question 7:** In which paragraph does the author provide an example of an invention that resulted from an experiment with bacteria?

A. Paragraph 1

B. Paragraph 2

C. Paragraph 3

D. No paragraph

**Question 8:** In which paragraph does the passage contrast long, difficult invention processes with accidental ones?

A. Paragraph 1

B. Paragraph 2

C. Paragraph 3

D. No paragraph

**Exercise 15: Read the passage and mark the letter A, B, C or D on your answer sheet to indicate the best answer to each of the following questions.**

There are thousands of other inventions that have improved human life over millennia. Many have even benefited animals and other living species. At the root of every invention lies necessity.

The defining quality of an inventor is the ability to see what others overlook. While most of us simply see a blue sky, some discern patterns that prompt deeper investigation. [I] Another vital trait is the determination to solve problems. Inventors **keep abreast of** the difficulties people face and stay focused on resolving **them**.

Many of the inventors mentioned above were recognized neither by their teachers nor by their peers. [II] They often had eccentric personalities and **unconventional** routines. For example, Albert Einstein was uncomfortable with his school's teaching methods and preferred to teach himself challenging subjects such as mathematics and algebra. He dressed eccentrically, kept an unusual hairstyle, and was frequently ridiculed for his views. [III] Yet his uniqueness changed the way we approach science and led to the groundbreaking theory of relativity.

**An invention is any new discovery or creation that changes how we see the world.** [IV] Any process, composition, device, or method that expands the limits of human knowledge, creativity, experience, or capability may be called an invention—and it can come from anyone who dares to think outside the box.

**Question 1:** Where in paragraph [ ] does the following sentence best fit?

It can arise in art, science, tools, machines, society, or even ideas.

A. [I]

B. [II]

C. [III]

D. [IV]

**Question 2:** Which of the following is **NOT** mentioned in the passage as a trait or habit associated with notable inventors?

A. preferring self – directed study in challenging subjects such as mathematics and algebra

B. being recognized and praised by their peers during their school years

C. maintaining unconventional routines that others sometimes consider unusual or odd

D. possessing the ability to see what most people overlook in everyday situations

**Question 3:** The phrase "**keep abreast of**" in the second paragraph is closest in meaning to...

A. ignore and avoid

B. stay informed about

C. create and generate

D. underestimate the severity of

**Question 4:** The word "**them**" in paragraph 2 refers to \_\_\_\_\_.

- A. inventors                      B. qualities of an inventor      C. human beings                      D. difficulties

**Question 5:** The word "**unconventional**" in the third paragraph is opposite in meaning to which of the following?

- A. abnormal                      B. traditional                      C. innovative                      D. peculiar

**Question 6:** Which of the following best paraphrases the first sentence in paragraph 4?

- A. An invention is any new discovery that alters people's perspective of their surroundings.  
B. A new discovery can only be called an invention if it completely changes the world.  
C. The most important inventions are those that change the way we approach science and technology.  
D. Inventions are created to change the way we approach difficult problems in the world.

**Question 7:** Which option best restates the idea "An invention is any new discovery or creation that changes how we see the world"?

- A. An invention is strictly a mechanical device, since ideas or artworks cannot alter human perspectives in significant or lasting ways for educated audiences.  
B. An invention is a novel breakthrough—whether object, method, or insight—that reshapes our understanding and broadens how people interpret experience and knowledge.  
C. An invention is any product that sells quickly, because commercial popularity alone determines whether societies consider something creative, useful, or intellectually valuable.  
D. An invention is identical to scientific law, emerging only after experiments prove it universal and replacing earlier theories that failed basic tests in every laboratory.

**Question 8:** Which of the following is **TRUE** according to the passage?

- A. Einstein admired his school's methods and avoided independent study in advanced subjects.  
B. Einstein's distinct personal style and independent learning contributed to ideas that reshaped modern science.  
C. The passage says Einstein's peers consistently supported his views and copied his routines at university.  
D. Einstein's reputation for conformity led teachers to reward his precise obedience to every classroom rule.

**Question 9:** Which of the following can most likely be inferred from the passage?

- A. Since many inventors notice overlooked patterns and track real – world problems, creative progress often begins with paying close attention to ordinary life and refusing to accept easy answers.  
B. Because teachers rarely misjudge talent, inventive minds usually succeed inside traditional classrooms and seldom need independence, persistence, or unusual working habits.  
C. The passage implies that necessity is no longer relevant to innovation, as modern creators rely mainly on fashion trends and celebrity endorsements to shape public opinion.  
D. Once peers criticize unconventional routines, genuine discovery becomes impossible, so eccentricity typically prevents breakthroughs instead of helping creative investigation.

**Question 10:** Which of the following best summarises the passage?

- A. Claiming inventions come only from complex machines, dismissing artistic and social creativity while ignoring how distinctive personalities shape scientific thought in meaningful ways.  
B. Surveying what defines inventors—their talent for noticing overlooked patterns, persistent problem – solving, and examples like Einstein's self – directed study—and broadening "invention" to include ideas that expand human capacity.  
C. It concentrates exclusively on Einstein's hairstyle and clothing choices, concluding that appearance alone determines who will revolutionize physics and permanently transform humanity's understanding of the universe.  
D. The passage claims animals benefit from technology more than humans, emphasizing that necessity actually prevents creativity and discourages people from contributing useful new methods to society.

**Exercise 16: Instructions to candidates:**

- You will hear a short radio segment **twice**.
- **While listening:** Decide whether each statement accurately reflects the information in the audio.
  - Write **T** (True) if the statement agrees with the recording.
  - Write **F** (False) if it contradicts the recording or is not stated.

1. Wingsuits are getting cheaper.
2. Gabriele Diamanti's water distiller is powered by the sun.
3. The 'enable talk gloves' help people to use sign language in really cold conditions.
4. MIT students have invented a new type of ketchup.
5. The last invention is a way of producing clouds indoors.

\_\_\_\_\_ . 1    \_\_\_\_\_ . 2    \_\_\_\_\_ . 3    \_\_\_\_\_ . 4    \_\_\_\_\_ . 5

**Exercise 17: Instructions to candidates:**

- You will hear the same radio segment **twice**.
- Complete **Items 1–10** by writing **ONE word or ONE number only** in each blank, taken from what you hear.

1. Wingsuits are not very \_\_\_\_\_ but the modern ones are better than ever.
2. Last October was the first ever wingsuit world \_\_\_\_\_ in China.
3. You can buy a wingsuit for 600 to \_\_\_\_\_ dollars.
4. The water distiller is for places where it's hard to get clean \_\_\_\_\_ water.
5. To produce the water distiller properly, they still need help with \_\_\_\_\_.
6. The 'enable talk gloves' were invented by some Ukrainian \_\_\_\_\_.
7. The gloves use sensors to turn sign language into \_\_\_\_\_ and then into spoken \_\_\_\_\_.
8. James Cameron was part of a team which designed a submarine capable of descending to \_\_\_\_\_ kilometres down.
9. James Cameron was the first person to do a solo \_\_\_\_\_ so deep under the sea.
10. MIT students have invented a product that helps people get the contents out of \_\_\_\_\_.