

Listening (9-11)

points: 20

time: 20 minutes

Participant's ID number

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Mark your answers on the separate answer sheet.

Part 1

For Questions 1–10, you are going to listen to a conversation between two students. This part will be played **once only**.

Questions 1–2

Choose **TWO** letters, A-E.

- Which **TWO** groups of people is the display primarily intended for?

A students from the English department

B residents of the local area

C the university's teaching staff

D potential new students

E students from other departments

Questions 3–4

Choose **TWO** letters, A-E.

- What are Cathy and Graham's **TWO** reasons for choosing the novelist Charles Dickens?

A His speeches inspired others to try to improve society.

B He used his publications to draw attention to social problems.

C His novels are well-known now.

D He was consulted on a number of social issues.

E His reputation has changed in recent times.

Questions 5–10

What topic do Cathy and Graham choose to illustrate with each novel?

Choose **SIX** answers from the box and write the correct letter, A–H, next to questions 5–10.

Novels by Dickens	Topics
5 <i>The Pickwick Papers</i>	A poverty
6 <i>Oliver Twist</i>	B education
7 <i>Nicholas Nickleby</i>	C Dickens's travels
8 <i>Martin Chuzzlewit</i>	D entertainment
9 <i>Bleak House</i>	E crime and the law
10 <i>Little Dorrit</i>	F wealth
	G medicine
	H a woman's life

Part 2

You will hear a talk about the connection between blood group and diet. For questions 11–20, complete the sentences with a word or short phrase. You are going to listen to Part 2 **twice**.

According to the presenter, the notion that fatty meat would be good for us is considered 11 _____. To remain healthy type O people should eat 12 _____ and fish. People with blood type O can eat red meat apart from 13 _____.

Animal products do not make those with blood type A feel 14 _____.

The connection between blood group and bad health is a 15 _____ one.

Bacteria in the bloodstream, for example, will be destroyed by 16 _____.

Antigens are 17 _____ which distinguish one kind of blood cell from another.

Lectins are often mistakenly 18 _____ as antigens because they are very much alike.

The diet of humans 100,000 years ago was completely lacking in 19_____.

The last blood type to evolve was type AB, in about 20_____.

You have up to 5 minutes to finish your work and transfer your answers.

Use of English (9-11)

points: 20

time: 20 minutes

Participant's ID number

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Mark your answers on the separate answer sheet.

Part 1

Complete the text below by filling each space with one suitable word.

Applying for your first job?

Getting a job is too important to leave to chance; 1 _____ all, work is likely to play a significant role in your life for many years. So before sending in any applications, think hard about 2 _____ would really suit you. Concentrate on jobs for 3 _____ you have an aptitude – 4 _____ can be very demoralising to have your application turned down. Ideally, your job should be not only one you can do well, 5 _____ also one that makes you look forward to going to work every morning.

It's important to consider the culture of the organisations you're applying 6_____. Some companies are 7 _____ obsessed with results and profits that employees are under stress all the time. You need to be clear in your own mind 8 _____ or not you could work in an environment like that.

Making an effort in the early stages of applying for a job will almost certainly pay off in the long run.

Part 2

For questions 9–20, identify 12 extra words in the dialogue. There might be several extra words in one reply or there might be none.

Tina: Well Martin, pleased to meet with you, and congratulations on getting the job. I'm going to show you round the department, so that you know a bit more before you will start work next week. I gather you're coming with me to the Paris conference.

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Martin: Yes, in two weeks' time. Is the job going to be involve a lot of travelling to abroad?

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Tina: A fair bit – Korea mainly. You'd better to get yourself a Korean phrasebook!

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Martin: I've ever been to Korea once before, so I know a few words.

12	
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Tina: Good. We have contacts with most of Asian countries in fact. Well, here's the office you'll be working in. As you can see this room has a photocopier, your computer ... by the way, are you familiar with PowerPoint?

13	
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Martin: Well, yes.

14	
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Tina: You really need to spend a few hours studying this book. I'm sure it'll explain you how the system works.

15	
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Martin: May I ask who that man was who was leaving the office when we came in?

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Tina: Oh that's Mike. I'm surprised he wasn't at your interview. He's probably the nicest one of the managers.

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Martin: He looks very cheerful.

18	
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Tina: As I say it, he's a very nice guy. He's my immediate boss. The only thing is, he does tend to make me to do more jobs than I can cope with.

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Martin: Still, he's letting you go home early today, so you shouldn't have complain!

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Reading (9-11)

points: 20

time: 30 minutes

Participant's ID number

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Mark you answers on the separate answer sheet.

Part 1

Read the passage and answer questions 1–14.

TITAN of technology

Gordon Moore is the scientific brain behind Intel, the world's biggest maker of computer chips. Both funny and self-deprecating, he's a shrewd businessman too, but admits to being an 'accidental entrepreneur', happier in the back room trading ideas with techies than out selling the product or chatting up the stockholders. When he applied for a job at Dow Chemical after gaining his PhD, the company psychologist ruled that 'I was okay technically, but that I'd never manage anything'. This year Intel is set to turn over \$28 billion.

When Moore co-founded Intel (short for Integrated Electronics) to develop integrated circuits thirty-five years ago, he provided the motive force in R&D (Research & Development) while his more extrovert partner Robert Noyce became the public face of the company. Intel's ethos was distinctively Californian: laid-back, democratic, polo shirt and chinos. Moore worked in a cubicle like everyone else, never had a designated parking space and flew Economy. None of this implied lack of ambition. Moore and Noyce shared a vision, recognising that success depended just as much on intellectual pizazz as on Intel's ability to deliver a product. Noyce himself received the first patent for an integrated circuit in 1961,

while both partners were learning the business of electronics at Fairchild Semiconductor.

Fairchild's success put money in Moore and Noyce's pockets, but they were starved of R&D money. They resigned, frustrated, to found Intel in 1968. 'It was one of those rare periods when money was available,' says Moore. They put in \$250,000 each and drummed up another \$2.5m of venture capital 'on the strength of a one-page business plan that said essentially nothing'. Ownership was divided 50:50 between founders and backers. Three years later, Intel's first microprocessor was released: the 4004, carrying 2,250 transistors. Progress after that was rapid. By the time the competition realised what was happening, Intel had amassed a seven-year R&D lead that it was never to relinquish.

By the year 2000, Intel's Pentium®4 chip was carrying 42 million transistors. 'Now', says Moore, 'we put a quarter of a billion transistors on a chip and are looking forward to a billion in the near future.' The performance gains have been phenomenal. The 4004 ran at 108 kilohertz (108,000 hertz), the Pentium®4 at three gigahertz (3 billion hertz). It's calculated that if automobile speed had increased similarly over the same period, you could now drive from New York to San Francisco in six seconds.

Moore's prescience in forecasting this revolution is legendary. In 1965, while still head of the R&D laboratory at Fairchild, he wrote a piece for Electronics magazine observing 'that over the first few years we had essentially doubled the complexity of integrated circuits every year. I blindly extrapolated for the next ten years and said we'd go from about 60 to about 60,000 transistors on a chip. It proved a much more spot-on prediction than I could ever have imagined. Up until then, integrated circuits had been expensive and had had principally military applications. But I could see that the economics were going to switch dramatically. This was going to become the cheapest way to make electronics.'

The prediction that a chip's transistor-count - and thus its performance - would keep doubling every year soon proved so accurate that Carver Mead, a friend from Caltech, dubbed it 'Moore's Law'. The name has stuck. 'Moore's Law' has become the yardstick by which the exponential growth of the computer industry has been measured ever since. When, in 1975, Moore looked around him again and saw transistor-counts slowing, he predicted that in future chip-performance would double only every two years. But that proved pessimistic. Actual growth since then has split the difference between his two predictions, with performance doubling every 18 months.

And there's a corollary, says Moore. 'If the cost of a given amount of computer power drops 50 per cent every 18 months, each time that happens the market explodes with new applications that hadn't been economical before.' He sees the microprocessor as 'almost infinitely elastic'. As prices fall, new applications keep emerging: smart light bulbs, flashing trainers or greetings cards that sing 'Happy Birthday'. Where will it all stop? Well, it's true, he says, 'that in a few more generations [of chips], the fact that materials are made of atoms starts to be a real problem. Essentially, you can't make things any smaller.' But in practice, the day of reckoning is endlessly postponed as engineers find endlessly more ingenious ways of loading more transistors on a chip. 'I suspect I shared the feelings of everybody else that when we got to the dimensions of a micron [about 1986], we wouldn't be able to continue because we were touching the wavelength of light. But as we got closer, the barriers just melted away.'

When conventional chips finally reach their limits, nanotechnology beckons. Researchers are already working on sci-fi sounding alternatives such as molecular computers, built atom by atom, that theoretically could process hundreds of thousands times more information than today's processors. Quantum computers using the state of electrons as the basis for calculation could operate still faster. On any measure, there looks to be plenty of life left in Moore's Law yet.

Choose the correct letter **A, B, C** or **D**.

- 1 What do we learn about Gordon Moore's personality in the first two paragraphs?
 - A. It has changed noticeably as his career has developed.
 - B. It was once considered unsuitable for the particular type of business he was in.
 - C. It made him more suited to producing things than to selling them.
 - D. It is less complicated than it may at first appear.
- 2 What do we learn about Intel when it was first established?
 - A. It was unlike any other company in its field at the time.
 - B. It combined a relaxed atmosphere with serious intent.
 - C. It attracted attention because of the unconventional way in which it was run.
 - D. It placed more emphasis on ingenuity than on any other aspect.
- 3 What is stated about the setting up of Intel in the third paragraph?
 - A. It was primarily motivated by the existence of funds that made it possible.
 - B. It involved keeping certain sensitive information secret.

- C. It resulted from the founders' desire to launch a particular product.
D. It was caused by the founders' dissatisfaction with their employer's priorities.

Do the following statements agree with the information given in Reading Passage?

TRUE if the statement agrees with the information

FALSE if the statement contradicts the information

NOT GIVEN if there is no information on this

4	Competitors soon came close to catching up with Intel's progress.	
5	Intel's Pentium®4 chip was more successful than Moore had anticipated.	
6	Moore's prediction in 1975 was based on too little evidence.	
7	Flashing trainers are an example of Moore's theory about the relationship between cost and applications.	
8	Moore has always been confident that problems concerning the size of components will be overcome.	

Complete the summary below choosing the correct words from the box.

MOORE'S LAW

Gordon Moore's ability to foresee developments is well-known. In 1965, he referred to the increase in the **9** _____ of integrated circuits and guessed that the number of transistors would go on rising for a decade. The **10** _____ of his prediction surprised him. Previously, the **11** _____ and main **12** _____ of integrated circuits had been the major **13** _____ with regard to their development. But Moore observed that the **14** _____ of integrated circuits was going to improve dramatically. His resulting forecasts concerning chips led to the creation of the term 'Moore's Law'.

design	use	opinion	invention
cost-effectiveness	failure	sophistication	proposition
production	influence	understanding	cost

accuracy	demand	theory	inter-dependence
familiarity	reception	appearance	reference

Part 2

You are going to read an article about taking up running. For questions 15–20, choose from the sections of the article (A–D). The sections may be chosen more than once.

I want to become a runner

A

Last year, it began to hit me that I needed to start taking my fitness more seriously. I'd been doing yoga, but it wasn't giving me a cardiovascular workout, and as a sports journalist, I know how important aerobic activity is for heart health. I'm self-employed with unpredictable working hours, so running seemed a good option. It's free and easy to fit into your life, as you can do it any time, and pretty much anywhere. Unfortunately, I've always found it very dull. A friend suggested I get past this by running with a club, so I signed up for a beginners' course with a club near my home. I strapped on some old trainers and turned up for my first session feeling apprehensive that I wouldn't be able to keep up. But we took it slowly, jogging or walking until we were able to build up to running for 15 minutes. In between the weekly classes, I tried to do one or two runs on my own.

B

I knew I'd begun to overcome my boredom barrier when I spent 20 minutes jogging in the park on a beautiful summer evening without thinking about when I could stop. The club definitely helped. It's more fun and it isn't as easy to give up. I also picked up some useful tips. The group leader stressed the importance of pacing to maintain energy for the end of a run, and I learnt to focus on pushing out my breath when I felt tired, to help me run more efficiently and in a more relaxed way.

After the first few weeks, I noticed my knees were aching a little, so I went to a specialist running shop and got fitted for shoes to suit my gait - I over-pronate, meaning my foot rolls inwards. The other must-have for me was a running jacket to keep out the wind and chill - essential, as I feel the cold and could easily be deterred by bad weather.

C

The final session of the running course was a 5km, race, and suddenly I turned competitive. To my surprise, I had become one of the faster runners in the group, so I was nurturing an ambition to win. I made sure I ate well that day, avoiding anything too heavy and drinking plenty of water, with a flapjack two hours beforehand to keep me going. Sadly, two other women streaked ahead of me, but I came in third with a pretty respectable time of 30 minutes 53 seconds. The end of the course coincided with a change in my working circumstances, which meant I could no longer go to the club. I tried to continue on my own, but found it hard to motivate myself.

D

My solution to this problem was to set myself a goal. I signed up for a 10km event and told friends and family about it, which put pressure on me, in a good way, to train. I began to fit running into my life, for example, running part of the way home from work, about 6km, every week. On race day, I began to feel nervous as, to my alarm, it turned out to be a proper event, with lots of people from running clubs coming with the intention of getting good times. However, I hadn't really allowed enough time to train, so was worried about getting round the course. The first part was uphill, so I struggled at around the 4km mark and had to slow down to a walk for a few minutes. But other than that, I kept going and even enjoyed some of it. I finished in one hour and 13 minutes, not too embarrassing, but my next goal is to run 10km in around an hour.

In which section does the writer:

explain why a friend's idea not to do something alone turned out to be a good one?	15
comment on how she helped herself to overcome a psychological barrier?	16
describe what she did to prepare herself physically immediately prior to an event?	17
explain why running is an appropriate activity for her?	18
mention how she solved a physical problem?	19

suggest that something was less daunting than she had anticipated?	20
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Test in Country Studies (9-11)

points: 20

time: 20 minutes

Participant's ID number

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Mark your answers on the separate answer sheet.

Part 1

There are a lot of outstanding British people. Match the columns. There are two extra letters.

A.	Alexander Fleming (1881-1955)	1.	One of the most influential singer-songwriters of the 20th century, known for songs that chronicle social and political issues.
B.	James Watt (1736-1819)	2.	During the time as Prime Minister he/she oversaw changes such as the introduction of neighborhood policing in every area, a legally-enforceable right to early cancer screening and treatment, and the world's first ever Climate Change Act, which was implemented in autumn 2008.
C.	Lyn Evans (1945)	3.	This person contributed his steam engine to the world. His invention was vital to start the Industrial Revolution which paved the way for large machinery and mechanical equipment used in manufacturing industries.
D.	Stephen Hawking (1942-2018)	4.	Irish playwright, novelist, poet, short story writer and Freemason. Known for his/her barbed and clever wit, one of the greatest celebrities of the day. Famous for outrageous behavior as well as literary output, the playwright was an iconoclastic personality.
E.	Bob Dylan (1941)	5.	After the Battle of Waterloo, he became Commander-in-Chief of the army in occupied France until November 1818. He then returned to England and Parliament, joined Lord Liverpool's government in 1819 as Master General of the Ordnance. He undertook a number of diplomatic visits overseas, including a trip to Russia.
F.	Duke of Wellington (1769-1852)	6.	Project leader of the Large Hadron Collider at CERN in Switzerland until 2008. He has been honoured with a number of science awards including the Glazebrook Medal, the 2012 Special Fundamental Physics Prize, and the IEEE Simon Ramo Medal.
G.	James Gordon Brown (1951)	7.	The person accidentally discovered the cure for certain diseases and disorders - the antibiotic. He/she found out a mold, identified as penicillin, which killed a number of disease-causing bacteria.
H.	Virginia Woolf (1882-1941)	8.	British computer scientist, knighted by the Queen Elizabeth II for his pioneering work. He is especially famous for his proposal to share information by using the technology of hypertext, the cornerstone of the world wide web. He also made the world's first website in 1991.

I.	Oscar Wilde (1854-1900)
J.	Tony Blair (1953)
K.	Margaret Hilda Thatcher (1925-2013)
L.	Timothy Berners-Lee (1955)

9.	British statesperson and Conservative politician who was Prime Minister of the United Kingdom and Leader of the Conservative Party. The only British prime minister in the 20 th century to win three consecutive terms and, at the time of resignation, Britain's longest continuously serving prime minister since 1827, who accelerated the evolution of the British economy.
10.	The person is known for his/her landmark contributions to general understanding of the big bang, black holes, and relativity; also renowned for some works as a science popularizer, writing the best-selling book A Brief History of Time.

Part 2

Match these dates with the events in British or American history.

11	The signing of the Magna Carta	A	1908
12	The start of the English Civil War	B	1871
13	The first modern Olympics held in London	C	1209
14	Chicago fire kills 300 and leaves 90,000 people homeless	D	1865
15	The U.S. capital is moved from Philadelphia to Washington, DC	E	1215
16	The University of Cambridge is established	F	1928
17	Channel Tunnel opens, linking London and Paris by rail	G	1790
18	Abolition of Slavery in America	H	1785
19	The Continental Congress of the U.S. authorizes the issuance of a new currency, the US dollar	I	1642
20	The Oxford English Dictionary is completed after 70 years' work	J	1994

11	12	13	14	15	16	17	18	19	20

Writing (9-11)

points: 20

time: 40 minutes

Participant's ID number

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Articles wanted

How do you think schools will be different in the future? In what ways do you think they will stay the same?

A student online magazine is running a writing competition. The prize is a notebook. Readers are invited to send in articles for a series entitled **‘Visions of the Future’**. You have decided to take part and submit your own article.

Use the following expressions and underline them in your work:

- to cram for
- academic research
- to play truant
- to make head or tail of something

Write 250-300 words.

Check your grammar, spelling and punctuation.