PROGRESS TEST 2 (UNIT 5-6)

Phần	Dạng bài	Số câu	Thời gian
Reading 1	Matching Headings	4	15 phút
Reading 2	True/False/Not Given	6	15 phút
Reading 3	Summary Completion	6	15 phút
Listening 1	Multiple Choice	4	5 phút
Listening 2	Map Labelling	6	10 phút
Tổng		26 câu	60 phút

PART 1 – READING

Time: 45 minutes

Passage 1 – Matching Headings

Questions 1–4

*Reading Passage 1 has five sections, **A-E**.*
Choose the correct heading for each section from the list of headings below.
Write the correct number, i-viii, in boxes 1-4 on your answer sheet.

List of Headings

i Dramatic effects can result from small changes in traffic just as in nature
ii How a maths experiment actually reduced traffic congestion
iii How a concept from one field of study was applied in another
iv A lack of investment in driver training
v Areas of doubt and disagreement between experts
vi How different countries have dealt with traffic congestion
vii The impact of driver behaviour on traffic speed
viii A proposal to take control away from the driver

Example
Section **B** **i**

1. Section **A** .....
2. Section **C** .....
3. Section **D** .....
4. Section **E** .....

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The Physics of Traffic Behavior

A Some years ago, when several theoretical physicists, principally Dirk Helbing and Boris Kerner of Stuttgart, Germany, began publishing papers on traffic flow in publications normally read by traffic engineers, they were clearly working outside their usual sphere of investigation. They had noticed that if they simulated the movement of vehicles on a highway, using the equations that describe how the molecules of a gas move, some very strange results emerged. Of course, vehicles do not behave exactly like gas molecules: for example, drivers try to avoid collisions by slowing down when they get too near another vehicle, whereas gas molecules have no such concern. However, the physicists modified the equations to take the differences into account and the overall description of traffic as a flowing gas has proved to be a very good one; the moving-gas model of traffic reproduces many phenomena seen in real-world traffic.

The strangest thing that came out of these equations, however, was the implication that congestion can arise completely spontaneously; no external causes are necessary. Vehicles can be flowing freely along, at a density still well below what the road can handle, and then suddenly gel into a slow-moving ooze. Under the right conditions a brief and local fluctuation in the speed or the distance between vehicles is all it takes to trigger a system-wide breakdown that persists for hours. In fact, the physicists' analysis suggested such spontaneous breakdowns in traffic flow probably occur quite frequently on highways.

B Though a decidedly unsettling discovery, this showed striking similarities to the phenomena popularized as 'chaos theory'. This theory has arisen from the understanding that in any complex interacting system which is made of many parts, each part affects the others. Consequently, tiny variations in one part of a complex system can grow in huge but unpredictable ways. This type of dramatic change from one state to another is similar to what happens when a chemical substance changes from a vapor to a liquid. It often happens that water in a cloud remains as a gas even after its temperature and density have reached the point where it could condense into water droplets. However, if the vapor encounters a solid surface, even something as small as a speck of dust, condensation can take place and the transition from vapor to liquid finally occurs. Helbing and Kerner see traffic as a complex interacting system. They found that a small fluctuation in traffic density can act as the 'speck of dust' causing a sudden change from freely moving traffic to synchronized traffic, when vehicles in all lanes abruptly slow down and start moving at the same speed, making passing impossible.

C he physicists have challenged proposals to set a maximum capacity for vehicles on highways. They argue that it may not be enough simply to limit the rate at which vehicles are allowed to enter a

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highway, rather, it may be necessary to time each vehicle's entry onto a highway precisely to coincide with a temporary drop in the density of vehicles along the road. The aim of doing this would be to smooth out any possible fluctuations in the road conditions that can trigger a change in traffic behavior and result in congestion. They further suggest that preventing breakdowns in the flow of traffic could ultimately require implementing the radical idea that has been suggested from time to time: directly regulating the speed and spacing of individual cars along a highway with central computers and sensors that communicate with each car's engine and brake controls.

D However, research into traffic control is generally centered in civil engineering departments and here the theories of the physicists have been greeted with some skepticism. Civil engineers favor a practical approach to problems and believe traffic congestion is the result of poor road construction (two lanes becoming one lane or dangerous curves), which constricts the flow of traffic. Engineers questioned how well the physicists' theoretical results relate to traffic in the real world. Indeed, some engineering researchers questioned whether elaborate chaos-theory interpretations are needed at all, since at least some of the traffic phenomena the physicists' theories predicted seemed to be similar to observations that had been appearing in traffic engineering literature under other names for years; observations which had straightforward cause-and-effect explanations.

E James Banks, a professor of civil and environmental engineering at San Diego State University in the US, suggested that a sudden slowdown in traffic may have less to do with chaos theory than with driver psychology. As traffic gets heavier and the passing lane gets more crowded, aggressive drivers move to other lanes to try to pass, which also tends to even out the speed between lanes. He also felt that another leveling force is that when a driver in a fast lane brakes a little to maintain a safe distance between vehicles, the shock wave travels back much more rapidly than it would in the other slower lanes, because each following driver has to react more quickly. Consequently, as a road becomes congested, the faster moving traffic is the first to slow down.

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Passage 2 - True/False/Not Given

Urban farming

In Paris, urban farmers are trying a soil-free approach to agriculture that uses less space and fewer resources. Could it help cities face the threats to our food supplies?

On top of a striking new exhibition hall in southern Paris, the world's largest urban rooftop farm has started to bear fruit. Strawberries that are small, intensely flavoured and resplendently red sprout abundantly from large plastic tubes. Peer inside and you see the tubes are completely hollow, the roots of dozens of strawberry plants dangling down inside them. From identical vertical tubes nearby burst row upon row of lettuces; near those are aromatic herbs, such as basil, sage and peppermint. Opposite, in narrow, horizontal trays packed not with soil but with coconut fibre, grow cherry tomatoes, shiny aubergines and brightly coloured chards.

Pascal Hardy, an engineer and sustainable development consultant, began experimenting with vertical farming and aeroponic growing towers – as the soil-free plastic tubes are known – on his Paris apartment block roof five years ago. The urban rooftop space above the exhibition hall is somewhat bigger: 14,000 square metres and almost exactly the size of a couple of football pitches. Already, the team of young urban farmers who tend it have picked, in one day, 3,000 lettuces and 150 punnets of strawberries. When the remaining two thirds of the vast open area are in production, 20 staff will harvest up to 1,000 kg of perhaps 35 different varieties of fruit and vegetables, every day. ‘We're not ever, obviously, going to feed the whole city this way,’ cautions Hardy. 'In the urban environment you're working with very significant practical constraints, clearly, on what you can do and where. But if enough unused space can be developed like this, there's no reason why you shouldn't eventually target maybe between 5% and 10% of consumption.'

Perhaps most significantly, however, this is a real-life showcase for the work of Hardy's flourishing urban agriculture consultancy, Agripolis, which is currently fielding enquiries from around the world to design, build and equip a new breed of soil-free inner-city farm. 'The method's advantages are many,' he says. First, I don't much like the fact that most of the fruit and vegetables we eat have been treated with something like 17 different pesticides, or that the intensive farming techniques that produced them are such huge generators of greenhouse I gases. I don't much like the fact, either, that they've travelled an average of 2,000 refrigerated kilometres to my plate, that their quality is so poor, because the varieties are selected for their capacity to withstand such substantial journeys, or that 80% of the price I pay goes to wholesalers and transport companies, not the producers.'

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Produce grown using this soil-free method, on the other hand – which relies solely on a small quantity of water, enriched with organic nutrients, pumped around a closed circuit of pipes, towers and trays – is produced up here, and sold locally, just down there. It barely travels at all,' Hardy says. 'You can select crop varieties for their flavour, not their resistance to the transport and storage chain, and you can pick them when they're really at their best, and not before.' No soil is exhausted, and the water that gently showers the plants' roots every 12 minutes is recycled, SO the method uses 90% less water than a classic intensive farm for the same yield.

Urban farming is not, of course, a new phenomenon. Inner-city agriculture is booming from Shanghai to Detroit and Tokyo to Bangkok. Strawberries are being grown in disused shipping containers, mushrooms in underground carparks. Aeroponic farming, he says, is 'virtuous'. The equipment weighs little, can be installed on almost any flat surface and is cheap to buy: roughly €100 to €150 per square metre. It is cheap to run, too, consuming a tiny fraction of the electricity used by some techniques.

Produce grown this way typically sells at prices that, while generally higher than those of classic intensive agriculture, are lower than soil-based organic growers. There are limits to what farmers can grow this way, of course, and much of the produce is suited to the summer months. 'Root vegetables we cannot do, at least not yet,' he says. 'Radishes are OK, but carrots, potatoes, that kind of thing – the roots are simply too long. Fruit trees are obviously not an option. And beans tend to take up a lot of space for not much return.' Nevertheless, urban farming of the kind being practised in Paris is one part of a bigger and fast-changing picture that is bringing food production closer to our lives.

Questions 8-13

In boxes 8-13 on your answer sheet, write

TRUE if the statement agrees with the information

FALSE if the statement contradicts the information

NOT GIVEN if there is no information on this

8. Urban farming can take place above or below ground.
9. Some of the equipment used in aeroponic farming can be made by hand.
10. Urban farming relies more on electricity than some other types of farming.
11. Fruit and vegetables grown on an aeroponic urban farm are cheaper than traditionally grown organic produce.
12. Most produce can be grown on an aeroponic urban farm at any time of the year.
13. Beans take longer to grow on an urban farm than other vegetables.

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Passage 3 - Summary Completion

You should spend about 20 minutes on Questions 14-26, which are based on Reading Passage 2 below.

How could multilingualism benefit India's poorest schoolchildren?

The crowded and bustling streets of Delhi teem with life. Stop to listen and, above the din of rickshaws and buses, you'll hear a multitude of languages, as more than 20 million people go about their daily lives. Many were born and raised here, and many millions more have recently made India's capital their home, having moved from surrounding neighbourhoods, cities and states or across the country, often in the hope of gaining better jobs and a better life. Some arrive speaking fluent Hindi, the dominant language in Delhi (and the official language of government), but many arrive speaking any number of India's 22 officially recognised languages, let alone the hundreds of regional languages in a country of more than 1.3 billion people.

A team of researchers led by Professor Ianthi Tsimpli of Cambridge University is currently working on a project collecting data on 1,000 primary-age children in Delhi and the cities of Hyderabad and Bihar. The overriding aim of the four-year project, called 'Multilingualism and Multiliteracy', is to find out why in a country where multilingualism is so common (more than 255 million people in India speak at least two languages, and nearly 90 million speak three or more languages), the many benefits of speaking more than one language, observed in schools in Europe for instance, do not apply to many of India's schoolchildren.

'Each year across India, 600,000 children are tested, and year after year over 50% of children in Standard 5 [ten-year-olds] cannot read a Standard 2 [seven-year-olds] task fluently, and just under 50% of them cannot solve a Standard 2 subtraction task,' says Tsimpli. She explains that low educational achievement can lead to many of these students dropping out of school - a problem disproportionately affecting female students.

Tsimpli and her colleagues are investigating whether these low learning outcomes could be caused by an Indian school system where the language that children are taught in often differs from the language used at home. The research project, which focuses on 8 to 11-year-old schoolchildren in rural and urban areas, collects data on whether the schoolchildren live in slum* or non-slum areas. Many of the children have moved from remote, rural areas to urban areas. They are so poor they have to live in slums and, as a result of migration, they may speak languages that are different from the regional language.

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Having already tested 1,000 children, the researchers will now embark on retesting them. They intend to look not only at test results, but also at variables such as the standard of schooling, the environment and the teaching practices themselves. It's possible that one of the causes of low performance is the lack of pupil-centred teaching methods; in many Indian primary schools the teacher dominates and there is little room for independent learning.

Although the findings are at a preliminary stage, Tsimpli and her team have found that the medium of instruction used in schools, especially English, may hold back those children who have little familiarity with, or exposure to, the language before starting school and outside of school life. According to Tsimpli, most of the evidence from this and other projects shows that English instruction for children from low socio-economic areas might not be the best way for them to learn, at least in the first three years of primary education.

'What we would recommend for everyone, not just low socio-economic status children, would be to start learning in the language they feel comfortable learning in ... English can still be used, but perhaps not as the medium of instruction in primary schools. It could, for example, be one of the subjects that are being taught alongside other subjects. We are not suggesting that English be withdrawn - that ship has sailed - but we perhaps have to think more about learner needs. There is perhaps too much uniformity in teaching and less tailoring to the children's language abilities and needs,' says Tsimpli.

While the preliminary results show there is no difference in general intelligence among boys and girls from slum areas versus those from urban poor backgrounds, an unanticipated finding has been that children from slum backgrounds do not seem to lag behind children from other urban poor backgrounds - and in some cases outperform them (e.g. in numeracy and literacy tasks). According to the researchers, this unexpected finding may be down to the life experiences of children growing up in slums. They are likely to mature faster and come into closer contact with the numeracy skills essential for day-to-day survival.

The project has already caught the attention of government ministers, who are keen to use the findings of the study to inform and adjust school policy in Delhi and the wider state. 'They are as keen as us to understand how the challenging context of deprivation can be attenuated when focusing on the languages children learn and use while at school. Our findings don't mean you're doomed if you're poor. It may be that these low learning outcomes are because of the way education is provided in India, with a huge focus on Hindi and English as the mediums of instruction, to the potential detriment of children unfamiliar with those languages,' explains Tsimpli.

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'Language is central to the way knowledge is transferred - so the medium of instruction is obviously hugely influential. We hope to ... show that problem solving, numeracy and literacy can and do improve in children who are educated in a language of instruction they know. The trick may be to bridge school skills with life skills and make use of the richness of a child's life experience to help them learn in the most effective ways possible,' says Tsimpli.

** slum: a very densely populated area in which the infrastructure is incomplete and services inadequate or non-existent*

Questions 1-6

Complete the summary using the list of words, **A-J**, below.

Multilingualism in Delhi

The city of Delhi has a **1** _____ and as you walk through its streets you hear people speaking a variety of languages. Some of them have spent their entire life in Delhi, while others are **2** _____ . Whether they have come from a **3** _____ or have travelled from the other side of India, they have all come in search of things such as improved **4**_____ .

A team of researchers led by Professor Ianthi Tsimpli of Cambridge University is collecting data on primary-age schoolchildren in Delhi and other Indian cities. The **5** _____ of the research is to discover why multilingual Indian schoolchildren do not experience **6** _____ to those that multilingual schoolchildren in Europe experience.

A. basic outlook	B. employment opportunities	C. wealthy visitors	D. distant country	E. primary objective
F. similar advantages	G. thriving economy	H. nearby district	I. dense population	J. new immigrants

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PART 2 – LISTENING

Time: 15 minutes

Exercise 1 - Multiple Choice

Question 11-14

Choose the correct letter A, B or C.

11. Refreshments will be served
    - A. At the front counter
    - B. In the lobby
    - C. At the back of the hall

12. Nick Noble advertised
    - A. On the radio
    - B. On a billboard
    - C. In the newspaper

13. The original number of founding members was about
    - A. 12
    - B. 20
    - C. 200

14. The club provides activities primarily for reasonable fit
    - A. Males up to 75
    - B. Females with young children
    - C. Males and females of any age

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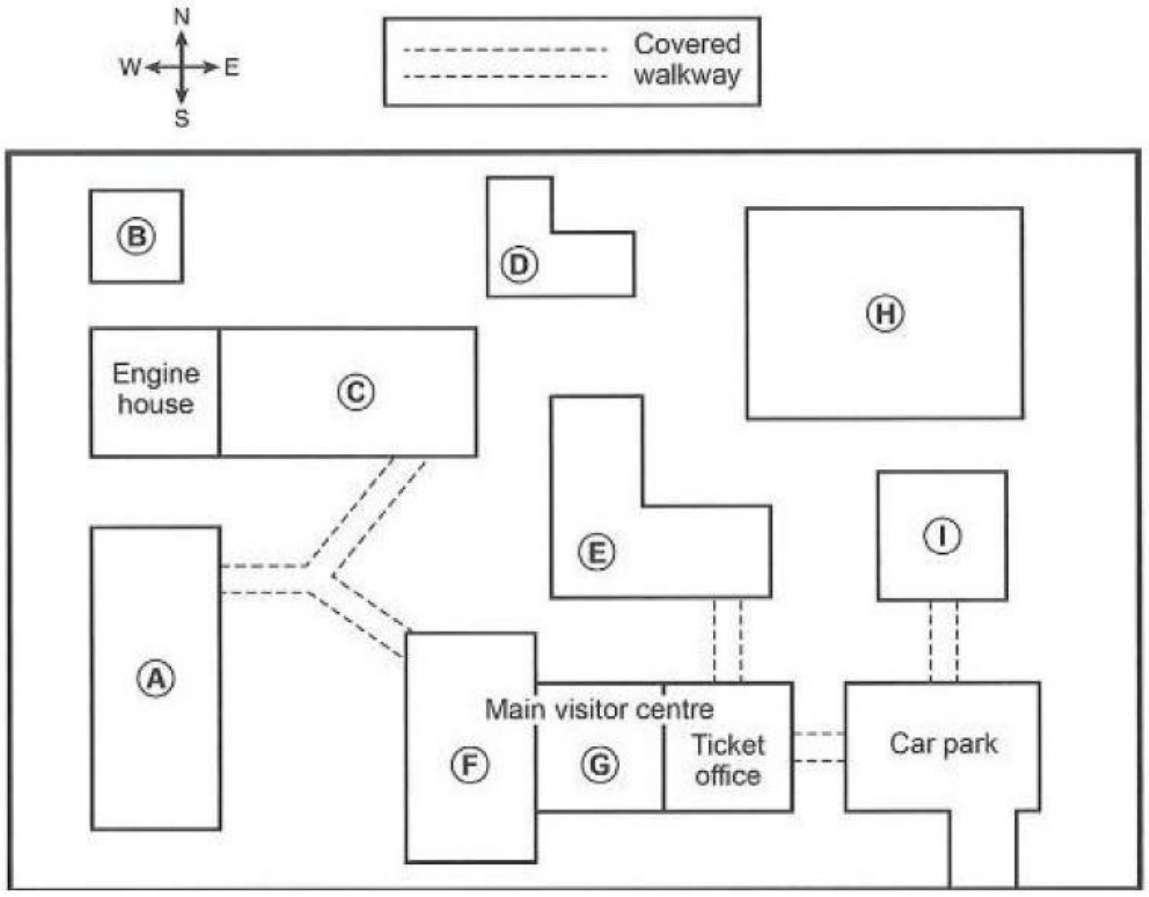
Exercise 2 - Map Labelling

Questions 15-20

Label the map below.

Write the correct letter, A-I, next to Questions 15-20.



1. Exhibition .....
2. Baths .....
3. Tools .....
4. Vehicles .....
5. Ponies .....
6. Education centre .....

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TRANSCRIPT - Dictation

Exercise 1:

I'd like to welcome you all to our (1)…… Outdoor Club. I'll start by telling you a little bit about the (2)…… of the club and all that it can offer and there will be a (3)…… for you to ask questions over tea and coffee in the lobby (4)…… . You'll also be able to pick up pamphlets from the table at the (5)…… of the hall and, if you wish to (6)…… any of our products, Bill will (7)…… you at the front (8)…… .

As most of you (9)…… know, the club was founded by Nick Noble about 30 years ago. He thought of placing an (10)…… in the local newspaper or erecting a (11)…… somewhere but it was the radio that he (12)…… on to reach the most people—you know, other people who might be interested in outdoor (13)…… , just basic activities like walking or tramping—anything active that could take place in some of the beautiful outdoor (14)…… that this country has to offer.

Nick was (15)…… by the response he got and the club soon grew from a (16)…… or so friends and (17)…… to around 200 members 20 years ago, and steadily since then to reach a (18)…… of over 2,500 now. You don't have to be a hardened athlete or (19)…… adventurer—on the (20)…… , it's a group that encourages friendship and (21)…… through social and (22)…… activities. The club tries to cater for all levels of (23)…… and both genders—in fact, anyone who has the (24)…… ability and a moderate level of health and fitness to (25)…… in open-air activity on a (26)…… basis. I think our youngest member is a 5-year-old boy and our oldest member is a 75-year-old man. Of course we have more challenging (27)…… for those who are up to it but all (28)…… are graded according to level of (29)…… and there will always be something for those (30)…… with small children. More about that later...

Exercise 2:

Now listen and answer questions 15 to 20.

Melby Coalmine has been open to the (1)…… for 20 years and has won awards for its visitor (2)…….

Many of the buildings around the (3)…… are still standing and have been converted into (4)…… areas.

Firstly there's an (5)…… showing the history of the mine with many (6)…… black and white photos.

To see that you go from the car park via a covered (7)…… to the main visitor centre.

Go through the (8)…… (9)…… to an area where there are lockers to leave heavy bags in and where you can borrow (10)…….

(11)…… that room is the exhibition.

There's a small bath house where (12)…… used to wash after their shift on the (13)…….

You can see that in the building (14)…… to the north of the (15)…… house.

The boiler has gone from there now but there are (16)…… of tin baths on the (17)…… floor.

There's a display of early mining tools from the days before (18)…….

You can find that in a small L-shaped building in the middle of the (19)…… (20)…… of the site.

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It's (21)…… to think how miners were able to use hand (22)…… to cut through rock.
The vehicle shed where you could find (23)…… of different sizes along with some of the high-tech cutting (24)……..
that were in use until the mine closed is in the (25)…… (26)…… of the site and can be accessed via a covered (27)……..
There is a field with ponies which are always popular with children on the (28)……
(29)…… of the site not approached via a covered walkway.
The other building to mention is the (30)…… (31)……..
This is where school groups go when they visit the mine but it's also (32)…… to the public as it contains a library and small (33)…… shop.
The centre is (34)…… to the ticket office (35)…… a short section of covered walkway.
That is the end of part two.

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