



## MID-TERM TEST

### READING - PRE IELTS 2

#### Reading passage 1

#### Our Vanish Night

*Most city skies have become virtually empty of stars  
by Verlyn Klinkenborg*

If humans were truly at home under the light of the moon and stars, it would make no difference to us whether we were out and about at night or during the day, the midnight world as visible to us as it is to the vast number of nocturnal species on this planet. Instead, we are diurnal creatures, meaning our eyes are adapted to living in the sun's light. This is a basic evolutionary fact, even though most of us don't think of ourselves as diurnal beings any more than as primates or mammals or Earthlings. Yet it's the only way to explain what we've done to the night: we've engineered it to meet our needs by filling it with light.

This kind of engineering is no different from damming a river. Its benefits come with consequences - called light pollution - whose effects scientists are only now beginning to study. Light pollution is largely the result of bad lighting design, which allows artificial light to shine outward and upward into the sky, where it is not wanted, instead of focusing it downward, where it is. Wherever human light spills into the natural world, some aspect of life - migration, reproduction, feeding - is affected.

For most of human history, the phrase 'light pollution' would have made no sense. Imagine walking toward London on a moonlit night around 1800, when it was one of Earth's most populous cities. Nearly a million people lived there, making do, as they always had, with candles and lanterns. There would be no gaslights in the streets or squares for another seven years.

Now most of humanity lives under reflected, refracted light from overlit cities and suburbs, from light-flooded roads and factories. Nearly all of night-time Europe is a bright patch of light, as is most of the United States and much of Japan. In the South Atlantic the glow from a single fishing fleet - squid fishermen luring their prey with metal halide lamps - can be seen from space, burning brighter on occasions

than Buenos Aires. In most cities the sky looks as though it has been emptied of stars and taking their place is a constant orange glow. We've become so used to this that the glory of an unlit night — dark enough for the planet Venus to throw shadows on Earth — is wholly beyond our experience, beyond memory almost. And yet above the city's pale ceiling lies the rest of the universe, utterly undiminished by the light we waste.

We've lit up the night as if it were an unoccupied country, when nothing could be further from the truth. Among mammals alone, the number of nocturnal species is astonishing. Light is a powerful biological force, and on many species it acts as a magnet. The effect is so powerful that scientists speak of songbirds and seabirds being 'captured' by searchlights on land or by the light from gas flares on marine oil platforms, circling and circling in the thousands until they drop. Migrating at night, birds are apt to collide with brightly lit buildings; immature birds suffer in much higher numbers than adults.

Insects, of course, cluster around streetlights, and feeding on those insects is a crucial means of survival for many bat species. In some Swiss valleys the European lesser horseshoe bat began to vanish after streetlights were installed, perhaps because those valleys were suddenly filled with light-feeding pipistrelle bats. Other nocturnal mammals, like desert rodents and badgers, are more cautious about searching for food under the permanent full moon of light pollution because they've become easier targets for the predators who are hunting them.

Some birds - blackbirds and nightingales, among others - sing at unnatural hours in the presence of artificial light. Scientists have determined that long artificial days — and artificially short nights - induce early breeding in a wide range of birds. And because a longer day allows for longer feeding, it can also affect migration schedules. The problem, of course, is that migration, like most other aspects of bird behavior, is a precisely timed biological behavior. Leaving prematurely may mean reaching a destination too soon for nesting conditions to be right. Nesting sea turtles, which seek out dark beaches, find fewer and fewer of them to bury their eggs on. When the baby sea turtles emerge from the eggs, they gravitate toward the brighter, more reflective sea horizon but find themselves confused by artificial lighting behind the beach. In Florida alone, hatchling losses number in the hundreds of thousands every year. Frogs and toads living on the side of major highways suffer nocturnal light levels that are as much, as a million times brighter than normal, disturbing nearly every aspect of their behavior, including their night-time breeding choruses.

It was once thought that light pollution only affected astronomers, who need to see the night sky in all its glorious clarity. And, in fact, some of the earliest civic efforts to control light pollution were made half a century ago to protect the view from Lowell Observatory in Flagstaff, Arizona. In 2001 Flagstaff was declared the first International Dark Sky City. By now the effort to control light pollution has spread around the globe. More and more cities and even entire countries have committed themselves to reducing unwanted glare.

### **Questions 1-7**

*Do the following statements agree with the information given in Reading Passage 1*

**True** if the statement agrees with the information

**False** if the statement contradicts the information

**Not given** if there is no information on this

1. Few people recognise nowadays that human beings are designed to function best in daylight.
2. Most light pollution is caused by the direction of artificial lights rather than their intensity.
3. By 1800 the city of London had such a large population, it was already causing light pollution.
4. The fishermen of the South Atlantic are unaware of the light pollution they are causing.
5. Shadows from the planet Venus are more difficult to see at certain times of year. .
6. In some Swiss valleys, the total number of bats declined rapidly after the introduction of streetlights.
7. The first attempts to limit light pollution were carried out to help those studying the stars.

### Questions 8-13

Complete the table below

Choose **NO MORE THAN THREE WORDS** from the passage for each answer.

CREATURE	EFFECTS OF LIGHT
<b><i>Songbirds and seabirds</i></b>	The worst-affected birds are those which are 8..... They bump into 9..... which stand out at night.
<b><i>Desert rodents and badgers</i></b>	They are more at risk from 10.....
<b><i>Migrating birds</i></b>	Early migration may mean the 11 ..... are not suitable on arrival.
<b><i>Sea turtles</i></b>	They suffer from the decreasing number of 12.....
<b><i>Frogs and toads</i></b>	If they are near 13 ..... their routines will be upset.

### Reading Passage 2

#### **Is there a psychologist in the building?**

— CHRISTIANJARRETT reports on psychology's place in new architectural development —

**A.** The space around us affects us profoundly - emotionally, behaviourally, cognitively. In Britain that space is changing at a pace not seen for a generation. Surely psychology has something to say about all this change. But is anyone listening? There is a huge amount of psychology research that is relevant, but at the moment we're talking to ourselves,' says Chris Spencer, professor of environmental psychology at the University of Sheffield. Spencer recalls a recent talk he gave in which he called on fellow researchers to make a greater effort to communicate their findings to architects and planners. 'I was amazed at the response of many of the senior researchers; who would say: "I'm doing my research for pure science, the industry can take it or leave it".' But there are models of how to apply environmental psychology to real problems, if you know where to look. Professor Frances Kuo is an example.

**B.** Kuo's website provides pictures and plain English summaries of research conducted by her Human Environment Research Laboratory. Among these is a study using police records that found inner-city Chicago apartment buildings surrounded by more vegetation suffered 52 per cent fewer crimes than apartment blocks with little or no greenery. Frances Kuo and her co-researcher William Sullivan believe that greenery reduces crime - so long as visibility is preserved - because it reduces aggression, brings local residents together outdoors, and the conspicuous presence of people deters criminals.

**C.** Environmental psychologists are increasingly in demand,' says David Uzzell, professor of environmental psychology. 'We're asked to contribute to the planning, design and management of many different environments, ranging from neighbourhoods, offices, schools, health, transport, traffic and leisure environments for the purpose of improving quality of life and creating a better people-environment fit.' Uzzell points to the rebuilding of one south London school as a striking example of how building design can affect human behaviour positively. Before its redesign, it was ranked as the worst school in the area - now it is recognised as one of the country's twenty most improved schools.

**D.** Uzzell has been involved in a pioneering project between MSc students in England and Scotland. Architecture students in Scotland acted as designers while environmental psychology students in England acted as consultants, as together they worked on a community project in a run-down area of Glasgow, 'The psychology students encouraged the architecture students to think about who their client group was, to consider issues of crowding and social cohesion, and they introduced them to psychological methodologies, for example observation and interviewing local residents about their needs.' The collaborative project currently stands as a one-off experiment. 'Hopefully these trainee architects will now go away with some understanding of the psychological issues involved in design and will take into account people's needs,' says Uzzell.

**E.** Hilary Barker, a recent graduate in psychology, now works for a design consultancy. She's part of a four- person research team that contributes to the overall work of the company in helping clients use their office space more productively. Her team all have backgrounds in psychology or social science, but the rest of the firm consists mainly of architects and interior designers. 'What I do is pretty rare to be honest,' Barker says, 'I feel very privileged to be able to use my degree in such a way.' Barker explains that the team carries out observational

studies on behalf of companies, to identify exactly how occupants are using their building. The companies are often surprised by the findings, for example that staff use meeting rooms for quiet, individual work.

**F.** One area where the findings from environment- behaviour research have certainly influenced | building is in hospital design. The government has a checklist of criteria that must be met in the design of new hospitals, and these are derived largely from I the work of the behavioural scientist Professor Roger Ulrich, Chris Spencer says. Ulrich's work has shown, for example, how the view from a patient's window can affect their recovery. Even a hospital's layout can impact on people's health, according to Dr John Zeisel. 'If people get lost in hospitals, they get stressed, which lowers their immune system and means their medication works less well. You I might think that way-finding round the hospital is I the responsibility of the person who puts all the signs up, but the truth is that the basic layout of a building is what helps people find their way around,' he says.

**G.** Zeisel also points to the need for a better balance between private and shared rooms in hospitals. 'Falls are reduced and fewer medication errors occur' in private rooms, he says. There's also research showing how important it is that patients have access to the outdoors and that gardens in hospitals are a major contributor to well-being. However, more generally, Zeisel shares Chris Spencer's concerns that the lessons from environmental psychology research are not getting through. There is certainly a gap between what we in social science know and the world of designers and architects,' says Zeisel. He believes that most industries, from sports to film-making, have now recognised the importance of an evidence-based approach, and that the building trade needs to formulate itself more in that vein, and to recognise that there is relevant research out there. 'It would be outrageous, silly, to go ahead with huge building projects without learning the lessons from the new towns established between 30 and 40 years ago,' he warns.

### Questions 14-20

Reading Passage 2 has seven paragraphs, A-G.

Choose the correct heading for **A-G** from the list of headings below.

Write the correct number, i-x, in boxes 14-20 on your answer sheet.

#### List of Headings

- i A comparison between similar buildings
- ii The negative reaction of local residents
- iii An unusual job for a psychologist
- iv A type of building benefiting from prescribed guidelines
- v The need for government action
- vi A failure to use available information in practical ways
- vii Academics with an unhelpful attitude
- viii A refusal by architects to accept criticism
- ix A unique co-operative scheme
- x The expanding scope of environmental psychology

- 14 Paragraph A
- 15 Paragraph B
- 16 Paragraph C
- 17 Paragraph D
- 18 Paragraph E
- 19 Paragraph F
- 20 Paragraph G

### Questions 21 and 22

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

Write the correct letters in boxes 21 and 22 on your answer sheet.

Which TWO of the following benefits are said to arise from the use of environmental psychology when planning buildings?

- A. better relationships between staff
- B. improved educational performance
- C. reduction of environmental pollution
- D. fewer mistakes made by medical staff
- E. easier detection of crime

### **Questions 23 and 24**

Choose **TWO** letters, A—E.

Write the correct letters in boxes 23 and 24 on your answer sheet

Which TWO of the following research methods are mentioned in the passage?

- A. the use of existing data relating to a geographical area
- B. measuring the space given to a variety of activities
- C. watching what people do in different parts of a building
- D. analysing decisions made during the planning of a building
- E. observing patients' reactions to each other

### **Questions 25-26**

Complete the sentences below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer. Write your answers in boxes 25 and 26 on your answer sheet.

25 The students from England suggested that the Scottish students should identify their.....

26 John Zeisel believes that if the ..... of a building is dear, patient outcomes will improve.