

BURLINGTON IELTS ACADEMIC VOLUME 2 TEST 3

READING PASSAGE 1

You should spend about 20 minutes on **Questions 1–13**, which are based on Reading Passage 1 below.

Questions 1–4

Reading Passage 1 has four sections **A–D**.

Choose the best 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 | A new way of discovering your stress levels |
| ii | Stress interferes with one of the brain's natural processes |
| iii | Stress levels among young people in education |
| iv | The positive and negative effects of stress |
| v | The reasons stress damages appetite |
| vi | The difficulties of diagnosing stress |
| vii | The importance of reducing stress in society |
| viii | How computer use affects stress levels |

1 Section **A**

3 Section **C**

2 Section **B**

4 Section **D**

New findings on stress

- A** In today's highly pressured world, most people are familiar with the physical symptoms of stress. Stress is a natural physical and mental reaction to life experiences, which very few people can avoid completely. Anything from everyday responsibilities like work and family to serious life events such as illness, divorce, or the death of a loved one can trigger stress. For immediate, short-term situations, stress can be beneficial to your health. Your body responds to stress by releasing hormones that increase your heart and breathing rates and ready your muscles to respond. However, if your stress levels stay elevated for longer period, it can be extremely bad for your health. Chronic stress can cause a variety of symptoms including anxiety, depression, headaches, and an inability to sleep.
- B** In addition to these symptoms, stress can cause a craving for 'comfort food', which is usually high in calories. Researchers at Garvan Institute of Medical Research in Sydney have found that stress can cancel out the brain's natural response to feeling full, leading to non-stop reward signals that lead us to eat more tasty but unhealthy food. This occurs in a part of the brain called the lateral habenula, which when activated usually lessens these reward signals.

What normally happens is that when we have eaten enough, the pleasure gained from eating diminishes. When stress cancels out the brain signals telling us we are full, the brain is continuously rewarded for eating. The Garvan team have demonstrated that chronic stress can lead to increased food intake as well as a preference for sweet, high calorie food, causing weight gain and even obesity. This research highlights how crucial a healthy diet is during times of stress.

In stressful situations it is usual to be hyperactive and the feeling of reward has a calming effect. On such occasions, a boost of energy through food is useful. However, when stress is experienced over a long period of time, it tends to lead to excess calorie intake, which is bad for the body. These findings clearly identify stress as a cause of eating habits that can override the brain's natural ability to balance energy. The researchers emphasise the importance of avoiding a stressful lifestyle, and if you are dealing with long-term stress the absolute necessity of eating a healthy diet.

- C** It may seem strange, but some people who are suffering from stress are not aware that this is what is happening to them. The physical and mental damage stress causes will be affecting them without their knowledge, which means they do not take steps to manage their stress. Most stress is work-related. In the UK, for example, 79% of working people say they frequently feel stressed, and it helps them to mitigate stress more effectively than those who do not recognise it. Researchers at ETH Zurich are taking a novel approach to diagnosing stress in the workplace. They have used machine learning to develop a model that can tell how stressed an employee is from the way they type and use their mouse.

They have found that the way someone types on their keyboard and moves their mouse seems to be a better way of assessing stress levels than heart rate. These findings could potentially be used to predict and prevent stress in the workplace early on. The study shows that people who are stressed move the cursor more often and less precisely and cover longer distances on the screen. Relaxed people, on the other hand, take shorter, more direct routes to reach their destination and take more time doing so. Moreover, people who feel stressed in the office make more mistakes when typing. They write quickly but with many brief pauses. Relaxed people take fewer but longer pauses when typing on a keyboard.

The researchers are aware of potential problems with the app they are developing to monitor stress levels. Although their aim is to help employees check their stress levels and take appropriate action, the technology could potentially be used by companies to spy on their staff. Users would need to be completely confident that their data were protected. If this private data were to get into the wrong hands, it could actually contribute further to stress levels, which the developers agree would be unacceptable.

- D** Many experts believe that chronic stress is not given the attention it deserves. There are calls for it to be prioritised in education and workplaces. Both students and employees should be taught to monitor and deal with stress, and society as a whole should continually look for ways to make life less stressful. For example, teachers' unions and headteachers should consider whether the large number of examinations students take are all necessary. Employers should be aware that increasing stress on their staff is likely to result in higher staff turnover and more days lost due to sickness. Stress is the curse of the modern world but at least some of it is avoidable. Creating a less stressful life is not only possible but essential for a healthy, happy population.

Questions 5–9

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

In boxes 5–9 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

- 5** It is only long-term stress that causes health problems.
- 6** The lateral habenula is less effective when a person is stressed.

- 7 After a period of comfort eating, the body craves healthy food.
- 8 Unconscious stress does less harm than stress we acknowledge.
- 9 The app developed in Zurich is for workers who use computers.

Questions 10–13

Complete the notes below.

Choose **NO MORE THAN TWO WORDS** for each answer.

Write your answers in boxes 10–13 on your answer sheet.

Garvan Institute of medical research	ETH Zurich
Stress causes the brain to receive continuous 10, causing people to overeat.	The technology employed in this research is called 12
The findings of this study recommend a 11 for people with chronic stress.	The established way of measuring stress levels through 13 is less effective than monitoring stress by looking at the way workers use computers.

READING PASSAGE 2

You should spend about 20 minutes on **Questions 14–27**, which are based on Reading Passage 2 below.

Droughts in Europe

- A** In the summer of 2022, Europe suffered its worst drought in 500 years. All across the continent, rivers and reservoirs ran dry. The winter had seen inadequate rainfall, and then there were a series of heatwaves through the summer months. Simon Parry of the UK Centre of Ecology and Hydrology called it a perfect storm of conditions. The dry weather caused millions of trees to go into survival mode, shedding leaves to conserve water and energy. In many parts of Europe, summer looked more like autumn. Crops withered with farmers reporting a fall of around 16% in the yield of maize, soya beans and sunflower seeds.
- B** Energy supplies across the continent were also affected. In France, nuclear power plants had to reduce their output because there wasn't enough water to cool their reactors. Water levels on the river Rhine in Germany and the Netherlands made it challenging to transport coal and petrol by boat. Many barges, which carry both fuel and vital raw materials for industrial giants such as steelmaker Thyssen and chemical company BASF, are already operating at about 25% capacity, raising shipping costs up to fivefold. Norway had to stop exporting power due to its reduced ability to generate hydropower. The river Danube passes through at least ten countries and provides them with both power and drinking water, and the drought has caused hardship in many of these places.
- C** Many of the areas the iconic rivers of Europe pass through, depend heavily on tourism, particularly in the summer months. The Loire river, for example passes through several important cities in France like Nantes, Orleans, and Tours. The river serves a well-known wine-producing region and offers river boat cruises for tourists who come from all over the globe to enjoy the beautiful scenery.

The river Rhine is also a popular destination for river cruises, but at one key location, Kaub in Germany, water levels dropped to just 36 centimetres, making it impossible for ships to pass. This resulted in passengers being transported by bus to their next location. Clare Weedon of Brighton University points out that just as European river cruises are increasing in popularity, they are being threatened by drought. She predicts this may have a detrimental effect on this form of tourism.

- D** The drought is also catastrophic for fish and other species which live in Europe's rivers. Jean Philippe Couasn , of the local Federation for Fishing and Protection of the Aquatic Environment in France's Burgundy region, reports that many species of fish have died in the river Tille. Normally, an average of about 8,000 litres of water per second, flow in this river, but currently it is almost zero. He added that, without significant rain, the river would continue to empty, and all the fish would die. Couasn  explained that the fish are trapped upstream and downstream. As there is no water coming in, the oxygen level will keep decreasing as the water volume goes down, leaving fish unable to survive.
- E** Restrictions on water use are regularly put in place across Europe. The French minister for ecological transition, Christophe B chu, warned that France would have to cope with up to 40% less water in coming years, adding that the country was already on a 'state of alert' and restrictions in some areas were fully justified. In the summer of 2023, people in four southern regions have been barred from filling swimming pools or washing their cars, while farmers must cut their water consumption by up to half.
- F** Spain's environment minister, Teresa Ribera, warned of the inescapable reality of the climate emergency, saying the country had to be prepared for longer periods of drought, which are typically followed by flooding. She pointed out that the average amount of available water had fallen by 12% since 1980 with a further drop of between 14% and 40% predicted by 2050. On a more positive note, Simon Parry notes that many countries, including the UK are much more resilient to drought than in 1976, when the worst drought of the 20th century occurred. This means that although water restrictions are unlikely to be as harsh as they were then, they can still cause considerably inconvenience to consumers.
- G** Niko Wanders of the University of Utrecht, too, suggests that Europeans will have to become more aware of drought and ways to cope with it. His work in other parts of the world reveals a different mindset in countries which have always experienced drought. In agriculture as well as domestic settings, people in such regions collect rainwater as a routine activity, rather than allowing it to be wasted as usually happens in Europe. He also suggests that changes to the infrastructure might be needed, such as building massive reservoirs like those found in traditionally drought-prone areas. Clearly, education in water conservation is urgently needed as droughts and long periods of recovery from them are likely to be the new normal.

Questions 14–19

Reading Passage 2 has 7 paragraphs **A–G**.

Which paragraph contains the following information?

*Write the correct letter **A–G**, in boxes 14–19 on your answer sheet.*

NB You may use any letter more than once.

- 14** How limitations on water use have changed
- 15** How the drought is affecting manufacturing
- 16** A prediction of an ecological disaster

- 17 The need to change attitudes and behaviour
- 18 Present and future impact on the leisure industry
- 19 What often happens after a drought

Questions 20–23

Complete the summary of paragraphs B and C using the list of words below.

Write the correct letter **A–H**, in boxes 20–23 on your answer sheet.

The droughts have affected the transportation of fuel **20** which is a common means of moving it across the continent. Low water levels mean that vessels cannot be loaded to their normal capacity, which has caused a dramatic increase in the **21** of moving goods. Countries that rely on **22** are badly affected, including one country that has had to cease exports. Cruise ships have also had difficulty navigating the most picturesque waterways of Europe, which has had a negative impact on **23** One expert points out that the drought has come at the worst possible time for the owners of cruise ships.

A coal	B tourism	C transportation	D impossibility
E hydropower	F waterways	G by river	H cost

Questions 24–27

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

Write the correct letter in boxes 24–27, on your answer sheet.

- 24** 'A perfect storm of conditions' refers to:
- A** trees losing their leaves at the wrong time of year.
 - B** the windy and wet weather of the previous winter.
 - C** insufficient rain in winter and high summer temperatures.
 - D** the fact that both rivers and reservoirs had no water.
- 25** Jean-Philippe Couasné suggests that:
- A** there is hope for some species of fish.
 - B** the lack of oxygen is killing the fish.
 - C** even heavy rainfall will not save the fish.
 - D** the river Tille is a slow-flowing river.
- 26** Christophe Béchu:
- A** disagrees that farmers should use less water.
 - B** wants to extend the restrictions on water use.
 - C** plans to ban the use of swimming pools.
 - D** outlines actions taken by the government.

27 Niko Wanders describes:

- A Europeans' habit of water conservation.
- B differences in water use in homes and on farms.
- C the need for a change in attitude.
- D how Europe can help drought-prone regions.

READING PASSAGE 3

You should spend about 20 minutes on **Questions 28–40**, which are based on Reading Passage 3 below.

Gem mining in Sri Lanka

Sri Lanka rivals Brazil and Russia for the honour of being the most prolific provider of coloured gemstones in the world. Sapphires, rubies, and garnets are among the precious and semi-precious stones found on this island in the Indian Ocean. When you compare this tiny nation with the huge area covered by the other two countries, it seems amazing that it produces so many high-quality gemstones. Sri Lanka used to be known as '*Rathna Dweepa*', which means 'Island of Gems'. Situated off the southern coast of India, this unique island was mentioned in legends and stories across the ancient world including those of Marco Polo, who tells of a ruby as big as the palm of your hand owned by the king.

There has been gem mining in Sri Lanka for at least 2000 years, so there is a wealth of local information and tradition available to local miners. Locating the best place to mine for gems is largely done based on prior experience, folklore and tradition. The rivers and streams are a good place to start, as gemstones that have broken free from rocks are washed there by the rain. Many mines are established informally after farmers discover a gem accidentally when turning over the lush fertile soil. The land will then temporarily become a series of mines. As Sri Lankan gem mining does not use toxic chemicals or heavy machinery, the land will soon be returned to arable use.

Casual gem mining is almost routine in the Ratnapura district, where most of Sri Lanka's gems are found. The mining methods used in Sri Lanka are specifically developed and suited to the terrain. Compared to other gem producing countries, some of the techniques are simple and no longer used elsewhere. However, they are also safe, effective and relatively inexpensive, which permits the greater involvement of less well-off rural communities. The Sri Lankan government has in fact banned the use of heavy, mechanised mining methods in gem mining. This not only prevents the rapid loss of an irreplaceable resource, but also maintains an alternative source of revenue for much of the rural population who otherwise would be dependent almost entirely on agriculture.

One of the simplest ways of extracting gems is river dredging. This involves raking up the river gravel or '*illam*' into a shallow pile using a long-handled iron rake-like tool known as a '*mammoty*'. Fine particles are washed away by the river, leaving the coarser gravel to be picked through manually by workers. There is also widespread illegal dredging of rivers, where locals use a gravel bar, an artificial construction, which can damage riverbanks and affect water supply.

Where it is suspected that gems are under the land rather than in water, shallow gem pits are constructed by simply digging down until the '*illam*' is reached. The '*illam*' is then extracted and washed before being handed to an experienced sorter who picks out the gem minerals. All the labour is carried out by hand, using hand tools and woven baskets, and the '*illam*' is washed as soon as it is extracted. Washing is usually carried out using water extracted from the pit or, more rarely, from nearby streams and rivers. When it is a legal, licensed operation then the pit is usually filled back up once mining has

finished, particularly when pitting is taking place on agricultural land. This rarely happens if the mining is unlicensed and illegal.

If the 'illam' is found at a depth greater than about 3 metres then the use of open pits is impractical, and deep, vertical shafts are constructed. Wood, bamboo, and leaves support the walls and numerous cross beams are placed to brace the wall supports and to provide access for the workers. Due to the greater depth, manual extraction of water is not practical and usually an old diesel engine from a truck or bus is used to power a pump. Furthermore, a ventilation pipe, which doubles as a means of communication with those working underground, is used to ensure an adequate air flow to the miners. Lighting is provided by oil lamps or wax candles although this does lead to additional ventilation problems. Usually, a manual winch is used to haul the gem bearing 'illam' to the surface.

Almost all the processing of the 'illam' (washing and cleaning), gem picking and sorting is carried out by hand. Large wicker baskets with a particular lipped design are used. A portion of the gem gravel is placed in the basket which is then dipped in and out of the water with a gentle swirling action which washes the fine clay, silt, and sand away from the heavier gem minerals which tend to sink towards the base of the sediment. Eventually a skilled washer will reduce the initial 'illam' down to a heavy mineral concentrate which should contain any gems that are present.

Gemstones are worth millions of rupees to the Sri Lankan economy every year. Perhaps the most famous stone to have come out of this island nation is the iconic sapphire in UK Princess Diana's engagement ring, currently owned by Catherine of Wales, King Charles III's daughter-in-law. The marvel of the Sri Lanka gem industry is that it yields so many colourful stones with minimal damage to the environment and that ordinary people also benefit from opportunities for casual mining.

Questions 28–31

Look at the mining-related activities and the list of statements below.

Match each activity with the correct statement.

Write the correct letter **A–H** in boxes 28–31 on your answer sheet.

- 28 River dredging
- 29 Extraction (shallow pits)
- 30 Extraction (deep pits)
- 31 Processing

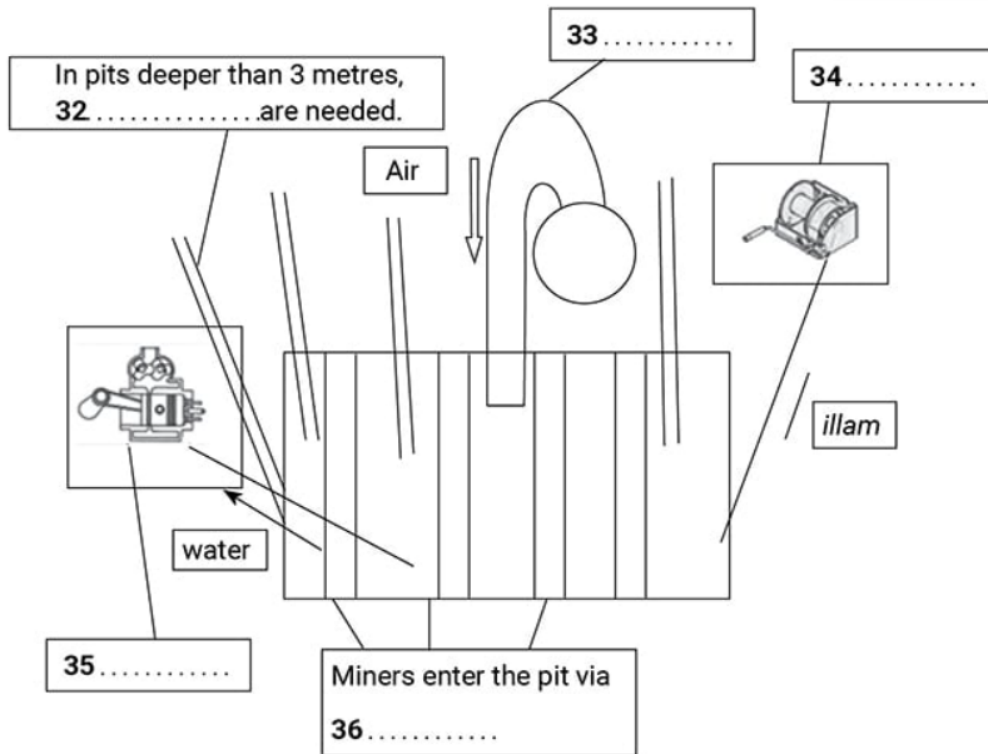
- A Special equipment is needed to bring the 'illam' up
- B Vehicles are required to carry out this activity
- C Washing and separating can be done by any worker
- D Causes problems for locals when not done lawfully
- E Only water from rivers is used for washing
- F Washing the 'illam' takes place without delay
- G This uses a special container and hand movement
- H The water extracted is returned to the source

Questions 32–36

Complete the diagram.

Choose **NO MORE THAN TWO WORDS** for each answer.

Write your answers in boxes 32–36 on your answer sheet.



Questions 37–40

Answer the Questions below.

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

Write your answers in boxes 37–40 on your answer sheet.

- 37 What was the former name of Sri Lanka?
- 38 Which group of people sometimes find gems by chance?
- 39 What is the local name for the piece of equipment used in legal river dredging?
- 40 Who does the best-known blue sapphire from Sri Lanka belong to now?