Full name:……………………………
Birthday:………………………….
Mobile/ Zalo:……………………………
Test date:…………………………………..

IELTS
READING TEST

READING PASSAGE 1

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

THE SEARCH FOR FRESHWATER

The assertion that water has always been the essence of life is nothing new. Water comes in many forms: spring water, sea and river water, rainwater, and fog and dew water. Yet water is becoming scarce and this scarcity is becoming a very real worry for governments all around the world. The reality is that one of the main obstacles to the economic development of a particular country is its lack of an adequate supply of fresh water. Current figures show that an inhabitant of a wealthy, modern town consumes 100-400 litres of water daily. In some developing countries the amount of water consumed does not exceed 20-30 litres per day. Rich or poor, annual water consumption has continued to grow, increasing fourfold over the last 50 years.

The world's fresh water supplies are drawn from a number of sources. The largest cache of the estimated 35 million km3 fresh water reserve is located in glaciers and snow. The amount contained in these 'storehouses' has been estimated to be around 24 million km3. Ground water is also a big contributor to the world's fresh water supplies amounting to an estimated 10.5 million km3. Considering that the total volume of water, salt and fresh, is estimated to be around 400 million km3 it can be clearly seen that the amount of fresh water available in the world is only the proverbial 'drop in the bucket'. Artesian wells, rivers and lakes only account for about 0.1 and 0.5 million km3 respectively, all of which include atmospheric precipitation such as rain and snow.

Since water is such an important commodity, various attempts to acquire stores of it have been tried with varying degrees of success. The question of what are the alternative water sources available to us today is not an easy one to answer but is certainly worthy of our best efforts to find one. One such area of interest has been desalination – the turning of salt water into drinkable water. As there is much more salt water on the earth than dry land, the idea of using desalinated seawater seems a logical one. However, some estimates put the annual quantity of desalinated water at only around ten cubic kilometres – a tiny amount given the amount of sea water available. In parts of Senegal, for example, the greenhouse effect has been one way to desalinate seawater whereby the salt in the water is separated from the water through a process of evaporation. As part of the process, water vapour forms on large panes of glass at outside air temperature and is transported via gravity into drums. This method yields only a few cubic meters per day of fresh water but is surprisingly energy efficient. In larger scale production however, the energy efficiency plummets. The best systems bum at least a tonne of fossil fuel to produce approximately one hundred cubic metres of fresh water. This amounts to almost $ 1 per cubic metre – a considerable cost.

Although there are several different areas from which water can be sourced, paradoxically the most extensive are the most difficult to tap. The atmosphere, for example, contains vast amounts of fresh water composed of 2% condensed water in the form of clouds and 98% water vapour. The vastness of

this water source is comparable to the renewable liquid water resources of all inhabited lands. The amounts are easy to calculate, but being able and knowing how to economically obtain this water in liquid form is most challenging. One approach in drawing water from the atmosphere is fog nets. Places such as the coastal desens of West Africa and areas of Chile and Peru have favourable condensation conditions. In these areas, ocean humidity condenses in the form of fog on the mid-range mountains (over 500m). This fog composed of droplets of suspended water can be collected in nets. In the 1960s, a University in Northern Chile conducted the first major experiments with fog nets. Drawing on the knowledge gained from these experiments, further testing was done which culminated in one village using fog nets to yield a healthy daily average of 11,000 litres of water. On a smaller scale, fog-collecting nets have recently been used in the Canary Islands and Namibia.

Unfortunately, due to its need for a combination of several factors, fog is not readily available. Dew however appears far more frequently and is less subject to the constraints of climate and geography. In order for dew to form there needs to be some humidity in the air and a reasonably clear sky. Many hot areas of countries that suffer from a lack of water such as the Sahel region of Northern Africa for example, experience significant quantities of dew. When the temperature is lowered over a short space of time by ten degrees or so, the water-harvesting possibilities from the air yield an amazing ten grams of water from each cubic meter of air – significant drops in air temperature make for greater yields. Unlike fog, dew formation can occur even in a relatively dry atmosphere, such as a desert. All it takes is for the right mix of temperatures between the earth and the air to combine and dew formation occurs.

Questions 1 – 3

Choose the correct letter, A, B. C or D
Write your answers in boxes 1-3 on your answer sheet.

1) **As a method of obtaining fresh water, fog**
A. forms best when the air is dry.
B. is easier to collect than dew.
C. is being tried in a large-scale way in Senegal.
D. is not easy to collect.

=> **Your answer:…………………..**

2) **Small-scale 'greenhouse effect' desalination**
A. uses a considerable amount of energy.
B. is the most effective way to obtain larger water reserves.
C. uses very little energy.
D. burns quite a lot of fossil fuel.

=> **Your answer:…………………..**

3) **One of the largest stores of fresh water in the world is**
A. rivers and lakes.
B. atmospheric rain and snow.
C. ground water.
D. artesian wells.

=> **Your answer:…………………..**

Questions 4 – 8

Complete each sentence with the correct ending A-F from the box below.
Write the correct letter A-F in boxes 4-8 on your answer sheet.

4) Turning salt water into drinking water => **Your answer:**…………………..
5) Large-scale fresh water production through evaporation => **Your answer:**………………….
6) Water available in the atmosphere => **Your answer:**…………………..
7) The use of dew as a water source => **Your answer:**…………………..
8) The amount of water collected from dew => **Your answer:**…………………..

A. is quite popular due to it not being too affected by temperature and location.
B. is being tried via an evaporation process.
C. is not energy efficient.
D. is best for poorer countries.
E. is made up of both clouds and water vapour.
F. is increased when temperatures fall rapidly.

Questions 9– 13

Do the following statements agree with the information given in Reading Passage?
In boxes 9-14 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*

9) The amount of water consumed by wealthier countries is just as much as in poorer countries.
10) Glaciers, rivers, artesian wells and groundwater are all sources of fresh water.
11) Large bodies of water, such as the sea, have yielded the most freshwater.
12) The collection of water through the use of fog nets is becoming increasingly more popular around the world.
13) If the sky is cloudy, dew will not form.

READING PASSAGE 2

You should spend about 20 minutes on **Questions 14-26** which are based on Reading Passage 2 below.
Reading Passage 2 has six paragraphs, A-F.
Choose the correct heading for each paragraph from the list of headings below.

A. The first sports game was televised in the USA more than fifty years ago. Over the following decades television provided sports coaches with a wealth of information to analyse. By viewing recordings, they could study the number of passes received, tackles avoided, distances covered, speeds achieved and a host of other factors relating to the performance of their teams or athletes. Most of this data, though, consisted of bare statistics without any meaningful context. However, the use of artificial intelligence (AI) is now enabling an alternative approach to coaching. AI means the

3

LIVEWORKSHEETS

development of computer systems that can perform tasks usually associated with human intelligence, such as decision making. Increasingly, computers are being trained to understand the rules and objectives of sports so they can coach more directly. Al can analyse not only a player's actions, but also relate those actions to the wider context, including the directives of the coach and the actions of other players. Sports scientists believe that Al is revolutionising sports coaching by analysing patterns of behaviour in ways simply not possible before.

B.There may be limitless ways in which Al technology can be developed, but certain practical applications are already apparent. Recently, a research experiment was conducted into the Spanish football league using an Al algorithm to analyse the passing strategies of 20 teams. The research revealed that two teams, Barcelona and Real Madrid, had more than 150 recurring passing patterns. However, the algorithm detected just 31 passing patterns used by Atletico Madrid. All of Atletico's other plays were one-offs that were never repeated, and the team won the league that season. One conclusion seems to be that teams with a less predictable style of play win more games. What's more, according to Dr Johann Muller, a sports scientist who has studied the Spanish research findings, the number of injuries a team suffers increases when they play in a style that prioritises offence.

C.Since then, there has been a great deal of interest in the potential of Al. Professor of sports education Rebecca Graves believes that Al can provide coaches with invaluable insights. 'Tactics were once closely guarded secrets,' says Professor Graves, 'but now a coach with access to Al can identify how a rival team is likely to play a match based on historic form. Once this was largely guesswork but now it can be achieved with some confidence.' The expense of Al technology means it will probably remain beyond the reach of all but elite teams, but among this group the implications are enormous. Professor Graves argues that Al allows preparations for a match to be tailored to individual players with much greater precision. She identifies fitness work, skills development, diet and numerous other factors that can be minutely customised, based on an individual's particular strengths and weaknesses.

D.Part of the appeal of Al lies in its versatility. Ice hockey coaches in Finland are using Al to analyse the success of different plays. An Indian company has employed wearable technology developed in other fields to analyse stride patterns. This analysis has allowed its technicians to develop sneakers in various styles aimed at both long- and short distance runners. Coaching practices in professional basketball, American football and tennis are also being transformed by Al. In addition, the technology has applications in highly technical sports such as car racing. Coaches involved in the National Association for Stock Car Auto Racing (NASCAR) believe that Al algorithms not only help drivers go faster but also enhance the safety of the sport because of their ability to monitor and predict potential problems.

E.Al doesn't get tired, has extraordinary powers of vision, particularly for objects moving at speed, and is capable of making complex calculations very quickly. For all these reasons Al is increasingly being used in the high-pressure world of judging gymnastics performances. Research has shown that, particularly over a whole day's worth of events, computers are just as reliable as human judges when it comes to giving gymnasts a score. However, computer scientist Henri Simeonson has been quick to warn about some potential difficulties. In particular, Simeonson is concerned that Al is vulnerable to hackers, who might be able to influence the outcome of a tournament.

F.It should not be forgotten, either, that many sports stars and sports teams are commercially dependent on their fans. If sufficient supporters do not buy tickets to games or pay to view a recording, the teams might struggle to survive. But now teams and stars are making increasing use of chatbots and other 'virtual assistants' to provide fans with statistics, news and background information about their favourite players. Another innovation is seen in Minor League Baseball in the USA, which is promoting the sport and seeking new fans with the use of Al-enhanced journalism. In this way baseball is keeping supporters informed with all the up-to the-minute developments in ways not possible with more traditional approaches. Analysts believe these sorts of initiatives are crucial to increasing a player or team's revenue stream. It's just one more way that sports stand to benefit from Al technologies, on and off the field.

Questions 14-19
Write the correct number, i-viii, in boxes 14-19 on your answer sheet.

List of Headings
       i Al can improve the profitability of sporting businesses
       ii Responses to criticisms of Al in sports coaching
       iii A contrast between coaching today and in the past
       iv An academic outlines some of the advantages of Al in sport
       v The businesses responsible for creating Al software
       vi The use of Al to decide the results of a competition
       vii An academic study into a team sport in one country
       viii The uses of Al in coaching a range of different sports

14. Paragraph A:..................…
15. Paragraph B: ....…
16. Paragraph C: ....…
17. Paragraph D: ....…
18. Paragraph E: ....…
19. Paragraph F: ....…

Questions 20-21
Choose **TWO** letters, A-E.
Which TWO of these are proposed by Professor Rebecca Graves?
The list below gives some ways coaches could use Al.

A speeding up analysis of data
B personalising training programmes
C improving mental toughness
D reducing cost of sports coaching
E identifying opponents' game plans

=> Your answers (Q20-21):…………………..

LIVEWORKSHEETS

Questions 22-26

Complete the sentences below.

Choose **ONE WORD ONLY** from the passage for each answer.

Write your answer in boxes 22 - 26 on your answer sheet.

22 Analysis of Al data by Dr Johann Muller suggests that teams which play defensively have fewer ....

23 An Indian company has designed new .... using Al technology.

24 The use of Al in NASCAR is believed to improve .... as well as driver performance.

25 Henri Simeonson says that .... might be able to disrupt Al and make competitions unfair.

26 In Minor League Baseball, a type of .... powered by Al is giving the sport greater publicity.

6

READING PASSAGE 3

You should spend about 20 minutes on **Questions 27-40** which are based on Reading Passage 3 below.

The History of Woodlands in Britain

A The climate in Britain has been arctic for the last several million years, punctuated by relatively warm timespans, or interglacials of thousands of years, one of which we are in as of now. Since the last glaciation, British woodland history is considered quite short in terms of geological time spans, and is also closely related to the human civilization developing.

B At the peak of the last glaciation (100,000 — 12,000 BC), the majority of Britain would have had no trees. Birch and willow scrub may have grown along the lower reaches of the ice, with pine in some areas. It's possible that remnants of pre-glacial flora were sheltered along the western bays of Great Britain and Ireland's coasts, but as far as the southern parts of England, the ice kept any land barren. Information regarding the development of Britain's flora following glaciation can be found by studying the deposits of pollen and seed in peat, as well as by the use of radiocarbon dating. Tundra and moorland followed the retreating ice, which lead to phases of different tree species spreading from the south. First came birch, aspen and sallow, followed by pine and hazel continuing to spread north as of 8500 BC, replacing birch to make it less commonly found for the next few thousand years. Oak and alder came after pine, then lime, elm, beech, and maple, all spreading northwards one after the other. From the moment lime arrived, in about 7300, to about 4500 BC the climate remained stable for a length of time known as the Atlantic Period, a time in which numerous species grew to form a series of wildwood or wilderness types.

C What did the wilderness or wildwood look like, before man started interfering with it? One theory holds that Britain and Western Europe in Palaeolithic times was covered from coast to coast in a wildwood of continuous trees. However, a modern theory proposed by Francis Vera holds that Western Europe wilderness was a combination of grassland, scrub, and clusters or groves of trees. It was not a dense, impassable wildwood, but instead, an area similar to a park, kept up by wild herbivores eating the plants and grass. Throughout earlier interglacial periods, this may also have been the case in Britain, as creatures of the Palaeolithic era needed to roam large areas of grassland to survive. A variety of grassland plants continued to live there in the last interglacial, as according to pollen records. However, since the last glaciation, the bison, elk and other large herbivores which persisted on mainland Europe were extinct in Britain, so Vera's theory may not apply so well to Britain.

D Meanwhile, throughout the period since it's spread northwards after the last glaciation, the sustained growth of oak in Britain demonstrates that the wildwood was not as continual as once believed. Oak is a pioneer species, which requires vacant space to generate more of itself. Grazing animals are also present to keep areas open, so Oak regenerates in the thorny brush as a protective measure from their grazing. Archaeological evidence indicates that red deer, who graze on grass as well as browse from trees, were essential to the economy in Mesolithic Britain, with people utilizing them for meat, skins, antlers and bones.

E As the Mesolithic (10,000-3000 BC) era ended, evidence of the beginnings of agriculture emerges. Agricultural weeds, such as plantain and stinging nettle, were also increasing in number. Nearly all the wildwood was cut down as the population increased rapidly. However, the falling elm population around 4,000 BC all across Europe has been attributed not to the clearing of trees, but to what's referred to as Elm disease.

LIVEWORKSHEETS

F Throughout the Bronze Age (2400-750 BC), people were cutting down trees more than ever before, until the prevalence of the practice "coppicing" peaked, likely at some point during the early Iron Age. Oliver Rackham (1990) theorizes that nearly 50% of land throughout England was no longer wildwood by 500 BC. The regrowth from a stump grows more readily than the original tree, and Neolithic man had discovered this practice, known as coppicing. Much of the remaining woods were maintained by way of this method during the Bronze Age.

G The Celtic peoples living in the Iron Age were able to master woodworking as an artform. Today, Celtic woodworking can be seen in houses, boats, wheels and other artifacts of the time. Coppicing as a means to manage woodland was of massive importance throughout two millennia that followed. Buildings, roads, fences, carts, and the fuel for heating, cooking, metalworking and pottery were all made possible due to wood materials gained from the vital practice of coppicing.

H A clear divide has existed between wooded and non-wooded regions of Britain since the time of the Romans. As evidenced by The Domesday Book (1086), all the wood in England had an economic value and was the property of either an individual or community owner. Woods were the territories, or 'exclaves' of communities who lived some miles away. Even though it had to be transported over long distances, the materials which woodlands produced were of obvious value, and their ownership was long before established. Merely around 15% of land in England was represented by woodland or wood-pasture in the year 1086.

I English woodlands produced mostly underwood used as fuel along with other things, with small oaks being used to construct buildings. The average wood-framed houses of the Medieval era mostly used oaks shorter than 18″ in diameter. Longer pieces of timber were hard to come by, and kept only for elaborate buildings intended for the Church. Imported boards of thin oak or wainscot from Central Europe were brought in for the purpose of domestic building. Woodland cover was as low as 15% in 1086, and continued to decline from as a result of an ever-growing population to 10% by 1350. This stopped suddenly with the plague of the Black Death of 1349 wiping out some of the human population. Woods which had persisted up to 1350 mostly prospered over the next 500 years.

Questions 27-35
Do the following statements agree with the information given in the reading passage? In boxes 27-35 on your answer sheet, write

YES   if the statement agrees with the information

NO   if the statement contradicts the information

NOT GIVEN   if there is no information on this.

27 An understanding of Britain's pre-glacial flora's development has been deduced from studies of pollen and seed deposits in peat.
28 Various species of wildwood types began growing in Britain in around the year 8500 BC.
29 Beech and lime did not spread beyond southern Britain.
30 The extinction of large herbivores in Europe adds to speculation that Vera's theory might not be as applicable to Britain.
31 The persistence of oak in Britain supports Francis Vera's theory.
32 The sharp decline in elm around 4000 BC is more likely to be the result of clearance than elm disease.
33 The first evidence of clearance of land for agriculture appears at the end of the Bronze Age.
34 The practice of coppicing is traceable back to the Neolithic period.
35 The Black Death negatively impacted growth of forests of Europe.

Questions 36-40

Look at the following items (Questions 10-14) and a list of periods of time below.

Match each item with the period of time it best corresponds with.

Write the correct number A-F in boxes Questions 36-40 on your answer sheet.

NB You may use any letter more than once.

A list of periods of time
A The Palaeolithic era
B The Bronze age
C The Iron age
D The Medieval era
E The Mesolithic age
F Roman times

36 Every type of wood in England belonged to some person or some community.
37 People used woodworking to create elaborate boats, houses, and wheels.
38 Animals kept expansive areas of land clear without human interference.
39 Coppicing was first used for woodland management.
40 Houses were made with short pieces of wood, and longer pieces were used for religious buildings.