朗阁雅思阅读考题预测

Passage 1

Origin of Species & Continent Formation

A

The fact that there was once a Pangean supercontinent, a Panthalassa Ocean, and a Tethys Ocean, has profound implications for the evolution of multicellular life on Earth. These considerations were unknown to the scientists of the 19th century — making their scientific deductions even more remarkable. Quite independently of each other, Charles Darwin and his young contemporary Alfred Russel Wallace reached the conclusion that life had evolved by natural selection. Wallace later wrote in My Life of his own inspiration:

B

Why do some species die and some live? The answer was clearly that on the whole the best fitted lived. From the effects of disease the most healthy escaped; from enemies the strongest, the swiftest or the most cunning from famine the best hunters... then it suddenly flashed on me that this self-acting process would improve the race, because in every generation the inferior would inevitably be killed off and the superior would remain, that is, the fittest would survive.

C

Both Darwin's and Wallace's ideas about natural selection had been influenced by the essays of Thomas Malthus in his Principles of Population. Their conclusions, however, had been the direct result of their personal observation of animals and plants in widely separated geographic locations: Darwin from his experiences during the voyage of the Beagle, and particularly during the ship's visit to the Galapagos Islands in the East Pacific in 1835; Wallace during his years of travel in the Amazon Basin and in the Indonesia-Australian Archipelago in the 1850s.

D

Darwin had been documenting his ideas on natural selection for many years when he received a paper on this selfsame subject from Wallace, who asked for Darwin's opinion and help in getting it published. In July 1858, Charles Lyell and J. D Hooker, close friends of Darwin, pressed Darwin to present his conclusions so that he would not lose priority to and unknown naturalist. Presiding over the hastily called but now historic meeting of the Linnean Society in London, Lyell and Hooker explained to the distinguished members how "these two gentlemen" (who were absent: Wallace was abroad and Darwin chose not to attend), had "independently and unknown to one another, conceived the same very ingenious theory".

E

Both Darwin and Wallace had realized that the anomalous distribution of species in particular regions had profound evolutionary significance. Subsequently, Darwin spent the rest of his days in almost total seclusion thinking and writing mainly about the origin of species. In contrast, Wallace applied himself to the science of biogeography, the study of the pattern and distribution of species, and its significance, resulting in the publication

of a massive two-volume work the *Geographical Distribution of Animals* in 1876.

F

Wallace was a gentle and modest man, but also persistent and quietly courageous. He spent years working in the most arduous possible climates and terrains, particularly in the Malay archipelago, he made patient and detailed zoological observations and collected huge number of specimens for museums and collectors — which is how he made a living. One result of his work was the conclusion that there is a distinct faunal boundary, called "Wallace's line," between an Asian realm of animals in Java, Borneo and the Philipiones and an Australian realm in New Guinea and Australia. In essence this boundary posed a difficult question: How on Earth did plants and animals with a clear affinity to the Northern Hemisphere meet with their Southern Hemispheric counterparts along such a distinct Malaysian demarcation zone? Wallace was uncertain about demarcation on one particular island — Celebes, a curiously shaped place that is midway between the two groups. Initially he assigned its flora-fauna to the Australian side of the line, but later he transferred it to the Asian side. Today we know the reason for his dilemma. 200 MYA East and West Celebes were islands with their own natural history lying on opposite sides of the Tethys Ocean. They did not collide until about 15 MYA. The answer to the main question is that Wallace's Line categorizes Laurasia-derived flora-fauna (the Asian) and Gondwana-derived flora-fauna (the Australian), fauna that had evolved on opposing shares of the Tethys. The closure of the Tethys Ocean today is manifested by the ongoing collision of Australia/New Guinea with Indochina/Indonesia and the continuing closure of the Mediterranean Sea — a remnant of the Western Tethys Ocean.

G

In his origin of continents and oceans, Wegener quoted at length from Wallace's Geographical Distribution of Animals. According to Wegener's reading, Wallace had identified three clear divisions of Australian animals, which supported his own theory of continental displacement. Wallace had shown that animals long established in southwestern Australia had an affinity with animals in South Africa, Madagascar, India, and Ceylon, but did not have an affinity with those in Asia. Wallace also showed that Australian marsupials and monotremes are clearly related to those in South America, the Moluccas, and various Pacific islands, and that none are found in neighboring Indonesia. From this and related data, Wegener concluded that the then broadly accepted "land bridge" theory could not account for this distribution of animals and that only his theory of continental drift could explain it.

H

The theory that Wegener dismissed in preference to his own proposed that plants and animals had once migrated across now-submerged intercontinental land bridges. In 1885, one of Europe's leading geologists, Eduard Suess, theorized that as the rigid Earth cools, its upper crust shrinks and wrinkles like the withering skin of an aging apple. He suggested that the planet's seas and oceans now fill the wrinkles between once-contiguous plateaus.

I

Today, we know that we live on a dynamic Earth with shifting, colliding and separating tectonic plates, not a “withering skin”, and the main debate in the field of biogeography has shifted. The discussion now concerns “dispersalism” versus “vicarianism”: unrestricted radiation of species on the one hand and the development of barriers to migration on the other. Dispersion is a short-term phenomenon — the daily or seasonal migration of species and their radiation to the limits of their natural environment on an extensive and continuous landmass. Vicarian evolution, however, depends upon the separation and isolation of a variety of species within the confines of natural barriers in the form of islands, lakes, or shallow seas — topographical features that take a long time to develop.

Questions 1-5

Use the information in the passage to match the people (listed A-E) with opinions or deeds below. Write the appropriate letters A-E in boxes 1-5 on your answer sheet.

A Suess
B Wallace
C Darwin and Wallace
D Wegener
E Lyell and Hooker

1 urged Darwin to publish his scientific findings
2 Depicted physical feature of earth's crust.
3 believed in continental drift theory while rejecting another one
4 Published works about wildlife distribution in different region.
5 Evolution of species is based on selection by nature.

Questions 6-8

The reading Passage has nine paragraphs A-I.
Which paragraph contains the following information?
Write the correct letter A-I, in boxes 6-8 on your answer sheet.

6 Best adaptable animal survived on the planet.
7 Boundary called Wallace's line found between Asia and Australia.
8 Animal relevance exists between Australia and Africa.

Questions 9-13

Complete the following summary of the paragraphs of Reading Passage, using ***no more than two words*** *from the Reading Passage for each answer. Write your answers in boxes 9-13 on your answer sheet.*

Wegener found that continental drift instead of "land bridge" theory could explain strange species' distribution phenomenon. In his theory, vegetation and wildlife 9…… intercontinentally. However, Eduard Suess compared the wrinkle of crust to 10…… of an old apple. Now it is well known that we are living on the planet where there are 11…… in constant mobile states instead of what Suess described Hot spot in biogeography are switched to concerns between two terms: "12……" and "13……"

Answer keys:

1 E
2 A
3 D
4 B
5 C
6 B
7 F
8 G
9 migrated
10 withering skin
11 (tectonic) plates
12 dispersalism
13 vicarianism

Food for thought

A

There are not enough classrooms at the Msekeni primary school, so half the lessons take place in the shade of yellow-blossomed acacia trees. Given this shortage, it might seem odd that one of the school's purpose-built classrooms has been emptied of pupils and turned into a storeroom for sacks of grain. But it makes sense. Food matters more than shelter.

B

Msekeni is in one of the poorer parts of Malawi, a landlocked southern African country of exceptional beauty and great poverty. No war lays waste Malawi, nor is the land unusually crowded or infertile, but Malawians still have trouble finding enough to eat. Half of the children under five are underfed to the point of stunting. Hunger blights most aspects of Malawian life, so the country is as good a place as any to investigate how nutrition affects development, and vice versa.

C

The headmaster at Msekeni, Bernard Kumanda, has strong views on the subject. He thinks food is a priceless teaching aid. Since 1999, his pupils have received free school lunches. Donors such as the World Food Programme (WFP) provide the food: those sacks of grain (mostly mixed maize and soyabean flour, enriched with vitamin A) in that converted classroom. Local volunteers do the cooking — turning the dry ingredients into a bland but nutritious slop, and spooning it out on to plastic plates.

D

When the school's feeding programme was introduced, enrolment at Msekeni doubled. Some of the new pupils had switched from nearby schools that did not give out free porridge, but most were children whose families had previously kept them at home to work. These families were so poor that the long-term benefits of education seemed unattractive when set against the short-term gain of sending children out to gather firewood or help in the fields. One plate of porridge a day completely altered the calculation. A child fed at school will not howl so plaintively for food at home. Girls, who are more likely than boys to be kept out of school, are given extra snacks to take home.

E

When a school takes in a horde of extra students from the poorest homes, you would expect standards to drop. Anywhere in the world, poor kids tend to perform worse than their better-off classmates. When the influx of new pupils is not accompanied by any increase in the number of teachers, as was the case at Msekeni, you would expect standards to fall even further. But they have not. Pass rates at Msekeni improved dramatically, from 30% to 85%. Although this was an exceptional example, the nationwide results of school feeding programmes were still pretty good. On average, after a Malawian school started handing out free food it attracted 38% more girls and 24% more boys. The pass rate for boys stayed about the same, while for girls it improved by 9.5%.

F

Better nutrition makes for brighter children. Most immediately, well-fed children find it easier to concentrate. It is hard to focus the mind on long division when your stomach is screaming for food. Mr Kumanda says that it used to be easy to spot the kids who were really undernourished. “They were the ones who stared into space and didn’t respond when you asked them questions,” he says. More crucially, though, more and better food helps brains grow and develop. Like any other organ in the body, the brain needs nutrition and exercise. But if it is starved of the necessary calories, proteins and micronutrients, it is stunted, perhaps not as severely as a muscle would be, but stunted nonetheless. That is why feeding children at schools works so well. And the fact that the effect of feeding was more pronounced on girls than on boys gives a clue to who eats first in rural Malawian households. It isn’t the girls.

G

On a global scale, the good news is that people are eating better than ever before. Homo sapiens has grown 50% bigger since the industrial revolution. Three centuries ago, chronic malnutrition was more or less universal. Now, it is extremely rare in rich countries. In developing countries, where most people live, plates and rice bowls are also fuller than ever before. The proportion of children under five in the developing world who are malnourished to the point of stunting fell from 39% in 1990 to 30% in 2000, says the World Health Organisation (WHO). In other places, the battle against hunger is steadily being won. Better nutrition is making people cleverer and more energetic, which will help them grow more prosperous. And when they eventually join the ranks of the well off, they can start fretting about growing too fat.

Questions 1-7

The reading passage has seven paragraphs, A-G.

Choose the correct heading for paragraphs A-G from the list below.

Write the correct number, i-xi, in boxes 1-7 on your answer sheet.

List of Headings	
i	Why better food helps students' learning
ii	A song for getting porridge
iii	Surprising use of school premises
iv	Global perspective
v	Brains can be starved
vi	Surprising academics outcome
vii	Girls are specially treated in the program
viii	How food program is operated
ix	How food program affects school attendance
x	None of the usual reasons
xi	How to maintain academic standard

1 Paragraph A
2 Paragraph B
3 Paragraph C
4 Paragraph D
5 Paragraph E
6 Paragraph F
7 Paragraph G

Questions 8-11

Complete the sentences below using ***NO MORE THAN TWO WORDS AND/OR A NUMBER*** *from the passage?*

Write your answers in boxes 8-11 on your answer sheet

8 ___ are exclusively offered to girls in the feeding programme.
9 Instead of going to school, many children in poverty are sent to collect ___ the fields.
10 The pass rate at Msekeni has risen to ___ with the help of the feeding programme.
11 Since the industrial revolution, the size of the modern human has grown by ___.

Questions 12-13

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

Write your answers in boxes 12 and 13 on your answer sheet.

Which **TWO** of the following statements are true?

A Some children are taught in the open air.
B Malawi have trouble to feed its large population.
C No new staffs were recruited when attendance rose.
D Girls enjoy a higher status than boys in the family
E Boys and girls experience the same improvement in the pass rate.
F WHO has cooperated with WFP to provide grain to the school at Msekeni.

Answer keys:

1 iii
2 x
3 viii
4 ix
5 vi
6 i
7 iv
8 extra snacks
9 firewood
10 85%
11 50%
12 A
13 C

Passage 2

The evolutional mystery: crocodile survives

A

Crocodiles have been around for 200 million years, but they're certainly not primitive. The early forms of crocodiles are known as Crocodilia. Since they spent most of their life beneath water, accordingly their body adapted to aquatic lifestyle. Due to the changes formed within their body shape and tendency to adapt according to the climate they were able to survive when most of the reptiles of their period are just a part of history. In their tenure on Earth, they've endured the impacts of meteors, planetary refrigeration, extreme upheavals of the Earth's tectonic surface and profound climate change. They were around for the rise and fall of the dinosaurs, and even 65 million years of supposed mammalian dominance has failed to loosen their grip on the environments they inhabit.

B

The first crocodile-like ancestors appeared about 230 million years ago, with many of the features that make crocs such successful stealth hunters already in place: streamlined body, long tail, protective armour and long jaws. They have long head and a long tail that helps them to change their direction in water while moving. They have four legs which are short and are webbed. Never underestimate their ability to move on ground. When they move they can move at such a speed that won't give you a second chance to make a mistake by going close to them especially when hungry. They can lift their whole body within seconds from ground.

C

Crocodilians have no lips. When submerged in their classic 'sit and wait' position, their mouths fill with water. The nostrils on the tip of the elongated snout lead into canals that run through bone to open behind the valve - allowing the crocodilian to breathe through its nostrils even though its mouth is under water. When the animal is totally submerged, another valve seals the nostrils, so the crocodilian can open its mouth to catch prey with no fear of drowning. The thin skin on the crocodilian head and face is covered with tiny pigmented domes, forming a network of neural pressure receptors that can detect barely perceptible vibrations in the water. This enables a crocodile lying in silent darkness to suddenly throw its head sideways and grasp with deadly accuracy small prey moving close by.

D

Like other reptiles, crocodiles are endothermic animals (cold-blooded, or whose body temperature varies with the temperature of the surrounding environment) and, therefore, need to sunbathe, to raise the temperature of the body. On the contrary, if it is too hot, they prefer being in water or in the shade. Being a cold-blooded species, the crocodilian heart is unique in having an actively controlled valve that can redirect, at will, blood flow away from the lungs and recirculate it around the body, taking oxygen to where it's needed most. In addition, their metabolism is a very slow one, so, they can survive for long periods without feeding. Crocodiles are capable of slowing their metabolism even further allowing them to survive for a full year without feeding.

E

Crocodiles use a very effective technique to catch the prey. The prey remains almost unaware of the fact that there can be any crocodile beneath water. The crocodile is successful because it switches its feeding methods. It hunts fish, grabs birds at the surface, hides among the water edge vegetation to wait for a gazelle to come by, and when there is a chance for an ambush, the crocodile lunges forward, knocks the animal with its powerful tail and then drags it to water where it quickly drowns. Another way is to wait motionless for an animal to come to the water's edge and grabs it by its nose where it is held to drown.

F

In many places inhabited by crocodilians, the hot season brings drought that dries up their hunting grounds and takes away the means to regulate their body temperature. They allowed reptiles to dominate the terrestrial environment. Furthermore, many crocs protect themselves from this by digging burrows and entombing themselves in mud, waiting for months without access to food or water, until the rains arrive. To do this, they sink into a quiescent state called aestivation.

G

Most of (At least nine species of) crocodilian are thought to aestivate during dry periods. Kennett and Christian's six-year study of Australian freshwater crocodiles — *Crocodylus johnstoni (the King Crocodiles)*. The crocodiles spent almost four months a year underground without access to water. Doubly labeled water was used to measure field metabolic rates and water flux, and plasma (and cloacal fluid samples were taken at approximately monthly intervals during some years to monitorthe effects of aestivation with respect to the accumulation of nitrogenous wastes and electrolyte concentrations. Doubly found that the crocodiles' metabolic engines tick over, producing waste and using up water and fat reserves. Waste products are stored in the urine, which gets increasingly concentrated as the months pass. However, the concentration of waste products in the blood changes very little, allowing the crocodiles to function normally. Furthermore, though the animals lost water and body mass (just over one-tenth of their initial mass) while underground, the losses were proportional: on emergence, the aestivating crocodiles were not dehydrated and exhibited no other detrimental effects such as a decreased growth rate. Kennett and Christian believe this ability of individuals to sit out the bad times and endure long periods of enforced starvation must surely be key to the survival of the crocodilian line through time.

Questions 14-20

Reading passage 2 has seven paragraphs, A-G; Choose the correct heading for paragraphs A-G from the list below.

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

List of Headings	
i	The competitors with the dinosaur
ii	A historical event for the Supreme survivors.
iii	What makes the crocodile the fastest running animal on land
iv	Regulated body temperature by the surrounding environment
v	Underwater aid in body structure offered to a successful predator
vi	The perfectly designed body for a great land roamer
vii	Slow metabolisms which makes crocodile a unique reptile
viii	The favorable features in the impact of a drought
ix	Shifting Eating habits and food intake
x	A project on a special mechanism
xi	A unique findings has been achieved recently

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

Questions 21-26

Complete the summary and write the correct answer with ***no more than two words or a number*** *in boxes 21-26 on your answer sheet.*

In many places inhabited by crocodilians, most types of the crocodile has evolved a successful scheme to survive in the drought brought by a 21..... . According to Kennett and Christian's six-year study of Australian freshwater crocodiles' aestivation, they found Aestivating crocodiles spent around 22..... a year without access to 23..... . The absolute size of body water pools declined proportionately with 24.....; thus there is no sign of 25..... and other health-damaging impact in the crocodiles even after an aestivation period. This super capacity helps crocodiles endure the tough drought without slowing their speed of 26..... significantly.

Answer keys:

14 ii
15 vi
16 v
17 iv
18 ix
19 viii
20 x
21 dry season/hot season/dry period
22 four months
23 water
24 body mass
25 dehydration
26 growth

Smell and Memory

Why does the scent of a fragrance or the mustiness of an old trunk trigger such powerful memories of childhood? New research has the answer, writes Alexandra Witze.

A

You probably pay more attention to a newspaper with your eyes than with your nose. But lift the paper to your nostrils and inhale. The smell of newsprint might carry you back to your childhood, when your parents perused the paper on Sunday mornings. Or maybe some other smell takes you back — the scent of your mother's perfume, the pungency of a driftwood campfire. Specific odours can spark a flood of reminiscences. Psychologists call it the "Proustian phenomenon", after French novelist Marcel Proust. Near the beginning of the masterpiece *In Search of Lost Time*, Proust's narrator dunks a madeleine cookie into a cup of tea — and the scent and taste unleash a torrent of childhood memories for 3000 pages.

B

Now, this phenomenon is getting the scientific treatment. Neuroscientists Rachel Herz, a cognitive neuroscientist at Brown University in Providence, Rhode Island, have discovered, for instance, how sensory memories are shared across the brain, with different brain regions remembering the sights, smells, tastes and sounds of a particular experience. Meanwhile, psychologists have demonstrated that memories triggered by smells can be more emotional, as well as more detailed, than memories not related to smells. When you inhale, odour molecules set brain cells dancing within a region known as the amygdala, a part of the brain that helps control emotion. In contrast, the other senses, such as taste or touch, get routed through other parts of the brain before reaching the amygdala. The direct link between odours and the amygdala may help explain the emotional potency of smells. "There is this unique connection between the sense of smell and the part of the brain that processes emotion," says Rachel Herz.

C

But the links don't stop there. Like an octopus reaching its tentacles outward, the memory of smells affects other brain regions as well. In recent experiments, neuroscientists at University College London (UCL) asked 15 volunteers to look at pictures while smelling unrelated odours. For instance, the subjects might see a photo of a duck paired with the scent of a rose, and then be asked to create a story linking the two. Brain scans taken at the time revealed that the volunteers' brains were particularly active in a region known as the olfactory cortex, which is known to be involved in processing smells. Five minutes later, the volunteers were shown the duck photo again, but without the rose smell. And in their brains, the olfactory cortex lit up again, the scientists reported recently. The fact that the olfactory cortex became active in the absence of the odour suggests that people's sensory memory of events is spread across different brain regions. Imagine going on a seaside holiday, says UCL team leader, Jay Gottfried. The sight of the waves becomes stored in one area, whereas the crash of the surf goes elsewhere, and the smell of seaweed in yet another place. There could be advantages to having memories spread around the brain. "You can reawaken that memory from any one of the sensory triggers,"

says Gottfried. “Maybe the smell of the sun lotion, or a particular sound from that day, or the sight of a rock formation.” Or — in the case of an early hunter and gatherer out on a plain — the sight of a lion might be enough to trigger the urge to flee, rather than having to wait for the sound of its roar and the stench of its hide to kick in as well.

D

Remembered smells may also carry extra emotional baggage, says Herz. Her research suggests that memories triggered by odours are more emotional than memories triggered by other cues. In one recent study, Herz recruited five volunteers who had vivid memories associated with a particular perfume, such as opium for Women and Juniper Breeze from Bath and Body Works. She took images of the volunteers’ brains as they sniffed that perfume and an unrelated perfume without knowing which was which. (They were also shown photos of each perfume bottle.) Smelling the specified perfume activated the volunteers brains the most, particularly in the amygdala, and in a region called the hippocampus, which helps in memory formation. Herz published the work earlier this year in the journal *Neuropsychologia.*

E

But she couldn’t be sure that the other senses wouldn’t also elicit a strong response. So in another study Herz compared smells with sounds and pictures. She had 70 people describe an emotional memory involving three items — popcorn, fresh-cut grass and a campfire. Then they compared the items through sights, sounds and smells. For instance, the person might see a picture of a lawnmower, then sniff the scent of grass and finally listen to the lawnmower’s sound. Memories triggered by smell were more evocative than memories triggered by cither sights or sounds.

F

Odour-evoked memories may be not only more emotional, but more detailed as well. Working with colleague John Downes, psychologist Simon Chu of the University of Liverpool started researching odour and memory partly because of his grandmother’s stories about Chinese culture. As generations gathered to share oral histories, they would pass a small pot of spice or incense around; later, when they wanted to remember the story in as much detail as possible, they would pass the same smell around again. “It’s kind of fits with a lot of anecdotal evidence on how smells can be really good reminders of past experiences,” Chu says. And scientific research seems to bear out the anecdotes. In one experiment, Chu and Downes asked 42 volunteers to tell a life story, then tested to see whether odours such as coffee and cinnamon could help them remember more detail in the story. They could.

G

Despite such studies, not everyone is convinced that Proust can be scientifically analysed. In the June issue of Chemical Senses, Chu and Downes exchanged critiques with renowned perfumer and chemist J. Stephan Jellinek. Jellinek chided the Liverpool researchers for, among other things, presenting the smells and asking the volunteers to think of memories, rather than seeing what memories were spontaneously evoked by the

odours. But there's only so much science can do to test a phenomenon that's inherently different for each person, Chu says. Meanwhile, Jellinek has also been collecting anecdotal accounts of Proustian experiences, hoping to find some common links between the experiences. "I think there is a case to be made that surprise may be a major aspect of the Proust phenomenon," he says. "That's why people are so struck by these memories." No one knows whether Proust ever experienced such a transcendental moment. But his notions of memory, written as fiction nearly a century ago, continue to inspire scientists of today.

Questions 14-18

Use the information in the passage to match the people (listed A-C) with opinions or deeds below. Write the appropriate letters A- C in boxes 14-18 on your answer sheet.

NB *You may use any letter more than once*

A Rachel Herz

B Simon Chu

C Jay Gottfried

14 Found pattern of different sensory memories stored in various zones of a brain.

15 Smell brings detailed event under a smell of certain substance.

16 Connection of smell and certain zones of brain is different with that of other senses.

17 Diverse locations of stored information help us keep away the hazard.

18 There is no necessary correlation between smell and processing zone of brain.

Questions 19-22

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

Write your answers in boxes 19-22 on your answer sheet.

19 In paragraph B, what do the experiments conducted by Herz and other scientists show?

A Women are more easily addicted to opium medicine

B Smell is superior to other senses in connection to the brain

C Smell is more important than other senses

D certain part of brain relates the emotion to the sense of smell

20 What does the second experiment conducted by Herz suggest?

A Result directly conflicts with the first one

B Result of her first experiment is correct

C Sights and sounds trigger memories at an equal level

D Lawnmower is a perfect example in the experiment

21 What is the outcome of experiment conducted by Chu and Downes?

A smell is the only functional under Chinese tradition

B half of volunteers told detailed stories

C smells of certain odours assist story tellers

D odours of cinnamon is stronger than that of coffee

22 What is the comment of Jellinek to Chu and Downers in the issue of Chemical Senses?

A Jellinek accused their experiment of being unscientific

B Jellinek thought Liverpool is not a suitable place for experiment

C Jellinek suggested that there was no further clue of what specific memories aroused

D Jellinek stated that experiment could be remedied

Questions 23-26

Complete the following summary of the paragraphs of Reading Passage, using ***no more than three words*** *from the Reading Passage for each answer. Write your answers in boxes 23-26 on your answer sheet.*

In the experiments conducted by UCL, participants were asked to look at a picture with a scent of a flower, then in the next stage, everyone would have to 23..... for a

connection. A method called 24..... suggested that specific area of brain named 25..... were quite active. Then in an another parallelled experiment about Chinese elders, storytellers could recall detailed anecdotes when smelling a bowl of 26..... or incense around.

Answer keys:

14 A
15 B
16 A
17 C
18 C
19 D
20 B
21 C
22 C
23 create a story
24 brain scans
25 olfactory cortex
26 spice

Passage 3

Communication in science

A

Science plays an increasingly significant role in people's lives, making the faithful communication of scientific developments more important than ever. Yet such communication is fraught with challenges that can easily distort discussions, leading to unnecessary confusion and misunderstandings.

B

Some problems stem from the esoteric nature of current research and the associated difficulty of finding sufficiently faithful terminology. Abstraction and complexity are not signs that a given scientific direction is wrong, as some commentators have suggested, but are instead a tribute to the success of human ingenuity in meeting the increasingly complex challenges that nature presents. They can, however, make communication more difficult. But many of the biggest challenges for science reporting arise because in areas of evolving research, scientists themselves often only partly understand the full implications of any particular advance or development. Since that dynamic applies to most of the scientific developments that directly affect people's lives global warming, cancer research, diet studies — learning how to overcome it is critical to spurring a more informed scientific debate among the broader public.

C

Ambiguous word choices are the source of some misunderstandings. Scientists often employ colloquial terminology, which they then assign a specific meaning that is impossible to fathom without proper training. The term "relativity", for example, is intrinsically misleading. Many interpret the theory to mean that everything is relative and there are no absolutes. Yet although the measurements any observer makes depend on his coordinates and reference frame, the physical phenomena he measures have an invariant description that transcends that observer's particular coordinates. Einstein's theory of relativity is really about finding an invariant description of physical phenomena. True, Einstein agreed with the idea that his theory would have been better named "Invarianten theorie". But the term "relativity" was already entrenched at the time for him to change.

D

" The uncertainty principle" is another frequently abused term. It is sometimes interpreted as a limitation on observers and their ability to make measurements.

E

But it is not about intrinsic limitations on any one particular measurement; it is about the inability to precisely measure particular pairs of quantities simultaneously? The first interpretation is perhaps more engaging from a philosophical or political perspective. It's just not what the science is about.

F

Even the word "theory" can be a problem. Unlike most people, who use the word to describe a passing conjecture that they often regard as suspect, physicists have very specific ideas in mind when they talk about theories. For physicists, theories entail a definite physical framework embodied in a set of fundamental assumptions about the world that lead to a specific set of equations and predictions — ones that are borne out by successful predictions. Theories aren't necessarily shown to be correct or complete immediately. Even Einstein took the better part of a decade to develop the correct version of his theory of general relativity. But eventually both the ideas and the measurements settle down and theories are either proven correct, abandoned or absorbed into other, more encompassing theories.

G

"Global warming" is another example of problematic terminology. Climatologists predict more drastic fluctuations in temperature and rainfall — not necessarily that every place will be warmer. The name sometimes subverts the debate, since it lets people argue that their winter was worse, so how could there be global warming? Clearly "global climate change" would have been a better name. But not all problems stem solely from poor word choices. Some stem from the intrinsically complex nature of much of modern science. Science sometimes transcends this limitation: remarkably, chemists were able to detail the precise chemical processes involved in the destruction of the ozone layer, making the evidence that chlorofluorocarbon gases (Freon, for example) were destroying the ozone layer indisputable.

H

A better understanding of the mathematical significance of results and less insistence on a simple story would help to clarify many scientific discussions. For several months, Harvard was tortured months, Harvard was tortured by empty debates over the relative intrinsic scientific abilities of men and women. One of the more amusing aspects of the discussion was that those who believed in the differences and those who didn't used the same evidence about gender-specific special ability. How could that be? The answer is that the data shows no substantial effects. Social factors might account for these tiny differences, which in any case have an unclear connection to scientific ability. Not much of a headline when phrased that way, is it? Each type of science has its own source of complexity and potential for miscommunication. Yet there are steps we can take to improve public understanding in all cases. The first would be to inculcate greater understanding and acceptance of indirect scientific evidence. The information from an unmanned space mission is no less legitimate than the information from one in which people are on board.

I

This doesn't mean never questioning an interpretation, but it also doesn't mean equating indirect evidence with blind belief, as people sometimes suggest. Second, we might need different standards for evaluating science with urgent policy implications than research with purely theoretical value. When scientists say they are not certain about their predictions, it doesn't necessarily mean they've found nothing substantial. It would be

better if scientists were more open about the mathematical significance of their results and if the public didn't treat math as quite so scary; statistics and errors, which tell us the uncertainty in a measurement, give us the tools to evaluate new developments fairly.

J

But most important, people have to recognize that science can be complex. If we accept only simple stories, the description will necessarily be distorted. When advances are subtle or complicated, scientists should be willing to go the extra distance to give proper explanations and the public should be more patient about the truth. Even so, some difficulties are unavoidable. Most developments reflect work in progress, so the story is complex because no one yet knows the big picture.

Questions 27-31

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

Write your answers in boxes 27-31 on your answer sheet.

27 Why the faithful science communication important?

A Science plays an increasingly significant role in people's lives.

B Science is fraught with challenges public are interested in.

C The nature of complexity in science communication leads to confusion.

D Scientific inventions are more important than ever before.

28 What is the reason that the author believe for the biggest challenges for science reporting?

A phenomenon such as global warming, cancer research, diet studies are too complex

B Scientists themselves often only partly understand the Theory of Evolution

C Scientists do not totally comprehend the meaning of certain scientific evolution

D Scientists themselves often partly understand the esoteric communication nature

29 According to the 3rd paragraph, the reference to the term and example of "theory of relativity" is to demonstrate

A theory of relativity is about an invariant physical phenomenon

B common people may be misled by the inaccurate choice of scientific phrase

C the term "relativity", is designed to be misleading public

D everything is relative and there is no absolutes existence

30 Which one is a good example of appropriate word choice?

A Scientific theory for uncertainty principle

B phenomenon of Global warming

C the importance of ozone layer

D Freon's destructive process on environmental

31 What is surprising finding of the Harvard debates in the passage?

A There are equal intrinsic scientific abilities of men and women.

B The proof applied by both sides seemed to be of no big difference.

C The scientific data usually shows no substantial figures to support a debated idea.

D Social factors might have a clear connection to scientific ability.

Questions 32-35

Do the following statements agree with the information given in Reading Passage 3?

In boxes 32-35 on your answer sheet, write

TRUE *if the statement is true*

FALSE *if the statement is false*

NOT GIVEN *if the information is not given in the passage*

32 "Global warming" scientifically refers to greater fluctuations in temperature and rainfall rather than a universal temperature rise.

33 More media coverage of "global warming" would help public to recognize the phenomenon.

34 Harvard debates should focus more on female scientist and male scientists.

35 Public understanding and acceptance of indirect scientific evidence in all cases would lead to confusion.

Questions 36-40

Complete the following summary of the paragraphs of Reading Passage, using no more than two words from the Reading Passage for each answer. Write your answers in boxes 36-40 on your answer sheet.

Science Communication is fraught with challenges that can easily distort discussions, leading to unnecessary confusion and misunderstandings. Firstly, Ambiguous 36..... are the source of some misunderstandings. Common people without proper training do not understand clearly or deeply a specific scientific meaning via the 37..... scientists often employed. Besides, the measurements any 38..... makes cannot be confined to describe in a constant 39..... yet the phenomenon can be. What's more, even the word "theory" can be a problem. Theories aren't necessarily shown to be correct or complete immediately since scientists often evolved better versions of specific theories, a good example can be the theory of 40..... . Thus, most importantly people have to recognize that science can be complex.

Answer keys:

27 A
28 C
29 B
30 D
31 B
32 YES
33 NOT GIVEN
34 NOT GIVEN
35 NO
36 word choices
37 colloquial terminology
38 observer
39 invariant description
40 general relativity

Mystery in Easter Island!

A

One of the world's most famous yet least visited archaeological sites, Easter Island is a small, hilly, now treeless island of volcanic origin. Located in the Pacific Ocean at 27 degrees south of the equator and some 2200 miles (3600 kilometers) off the coast of Chile, it is considered to be the world's most remote inhabited island. The island is, technically speaking, a single massive volcano rising over ten thousand feet from the Pacific Ocean floor. The island received its most well-known current name, Easter Island, from the Dutch sea captain Jacob Roggeveen who became the first European to visit Easter Sunday, April 5, 1722.

B

In the early 1950s, the Norwegian explorer Thor Heyerdahl popularized the idea that the island had been originally settled by advanced societies of Indians from the coast of South America. Extensive archaeological, ethnographic and linguistic research has conclusively shown this hypothesis to be inaccurate. It is now recognized that the original inhabitants of Easter Island are of Polynesian stock (DNA extracts from skeletons have confirmed this, that they most probably came from the Marquesas or Society islands, and that they arrived as early as 318 AD (carbon dating of reeds from a grave confirms this). At the time of their arrival, much of the island was forested, was teeming with land birds, and was perhaps the most productive breeding site for seabirds in the Polynesia region. Because of the plentiful bird, fish and plant food sources, the human population grew and gave rise to a rich religious and artistic culture.

C

That culture's most famous features are its enormous stone statues called moai, at least 288 of which once stood upon massive stone platforms called ahu. There are some 250 of these ahu platforms spaced approximately one half mile apart and creating an almost unbroken line around the perimeter of the island. Another 600 moai statues, in various stages of completion, are scattered around the island, either in quarries or along ancient roads between the quarries and the coastal areas where the statues were most often erected. Nearly all the moai are carved from the tough stone of the Rano Raraku volcano. The average statue is 14 feet and 6 inches tall and weighs 14 tons. Some moai were as large as 33 feet and weighed more than 80 tons. Depending upon the size of the statues, it has been estimated that between 50 and 150 people were needed to drag them across the countryside on sleds and rollers made from the island's trees.

D

Scholars are unable to definitively explain the function and use of the moai statues. It is assumed that their carving and erection derived from an idea rooted in similar practices found elsewhere in Polynesia but which evolved in a unique way on Easter Island. Archaeological and iconographic analysis indicates that the statue cult was based on an ideology of male, lineage-based authority incorporating anthropomorphic symbolism. The statues were thus symbols of authority and power, both religious and political. But they were not only symbols. To the people who erected and used them, they were actual

repositories of sacred spirit. Carved stone and wooden objects in ancient Polynesian religions, when properly fashioned and ritually prepared, were believed to be charged by a magical spiritual essence called mana. The ahu platforms of Easter Island were the sanctuaries of the people, and the moai statues were the ritually charged sacred objects of those sanctuaries.

E

Besides its more well-known name, Easter Island is also known as Te-Pito-O-Te-Henua, meaning 'The Navel of the World', and as Mata-Ki-Te-Rani, meaning 'Eyes Looking at Heaven'. These ancient name and a host of mythological details ignored by mainstream archaeologists, point to the possibility that the remote island may once have been a geodetic marker and the site of an astronomical observatory of a long forgotten civilization. In his book, Heaven's Mirror, Graham Hancock suggests that Easter Island may once have been a significant scientific outpost of this antediluvian civilization and that its location had extreme importance in a planet-spanning, mathematically precise grid of sacred sites. Two other alternative scholars, Christopher Knight and Robert Lomas, have extensively studied the location and possible function of these geodetic markers. In their fascinating book, Uriel's Machine, they suggest that one purpose of the geodetic markers was as part of global network of sophisticated astronomical observatories dedicated to predicting and preparing for future commentary impacts and crystal displacement cataclysms.

F

In the latter years of the 20th century and the first years of the 21st century various writers and scientists have advanced theories regarding the rapid decline of Easter Island's magnificent civilization around the time of the first European contact. Principal among these theories, and now shown to be inaccurate, is that postulated by Jared Diamond in his book Collapse: How Societies Choose to Fail or Survive. Basically these theories state that a few centuries after Easter Island's initial colonization the resource needs of the growing population had begun to outpace the island's capacity to renew itself ecologically. By the 1400s the forests had been entirely cut, the rich ground cover had eroded away, the springs had dried up, and the vast flocks of birds coming to roost on the island had disappeared. With no logs to build canoes for offshore fishing, with depleted bird and wildlife food sources, and with declining crop yields because of the erosion of good soil, the nutritional intake of the people plummeted. First famine, then cannibalism, set in. Because the island could no longer feed the chiefs, bureaucrats and priests who kept the complex society running, the resulting chaos triggered a social and cultural collapse. By 1700 the population dropped to between one-quarter and one-tenth of its former number, and many of the statues were toppled during supposed "clan wars" of the 1600 and 1700s.

G

The faulty notions presented in these theories began with the racist assumptions of Thor Heyerdahl and have been perpetuated by writers, such as Jared Diamond, who do not have sufficient archaeological and historical understanding of the actual events which

occurred on Easter Island. The real truth regarding the tremendous social devastation which occurred on Easter Island is that it was a direct consequence of the inhumane behavior of many of the first European visitors, particularly the slavers who raped and murdered the islanders, introduced small pox and other diseases, and brutally removed the natives to mainland South America.

Questions 27-30

Choose the correct heading for paragraphs A-G from the list below.
Write the correct number, i-xi, in boxes 27-30 on your answer sheet.

List of Headings

i The famous moai
ii The status represented symbols of combined purposes
iii The ancient spots which indicates scientific application
iv The story of the name
v Early immigrants, rise and prosperity
vi The geology of Easter Island
vii The begin of Thor Heyerdahl's discovery
viii The countering explanation to the misconceptions politically manipulated
ix Symbols of authority and power
x The Navel of the World
xi The norweigian Invaders' legacy

Example		***Answer***
	Paragraph A	iv
27	Paragraph B	
	Paragraph C	i
28	Paragraph D	
29	Paragraph E	
30	Paragraph F	

Questions 31-36

Do the following statements agree with the information given in Reading Passage 3?
In boxes 31-36 on your answer sheet write

TRUE *if the statement is true*
FALSE *if the statement is false*
NOT GIVEN *if the information is not given in the passage*

31 The first inhabitants of Easter Island are Polynesian, from the Marquesas or Society islands.
32 Construction of some moai statues on the island was not finished.
33 The Moai can be found not only on Easter Island but also elsewhere in Polynesia.
34 Most archeologists recognized the religious and astronomical functions for an ancient society.
35 The structures on Easter Island work as an astronomical outpost for extraterrestrial visitors.
36 The theory that depleted natural resources leading to the fail of Easter Island actual has a distorted perspective.

Questions 37-40

Complete the following summary of the paragraphs of Reading Passage, using ***NO MORE THAN THREE WORDS*** *from the Reading Passage for each answer. Write your*

answers in boxes 37-40 on your answer sheet.

Many theories speculated that Easter Island's fall around the era of the initial European contact. Some say the resources are depleted by a 37.....; The erroneous theories began with a root of the 38..... advanced by some scholars. Early writers did not have adequate 39..... understandings to comprehend the true nature of events on the island. The social devastation was in fact a direct result of 40..... of the first European settlers.

Answer keys:

27 v
28 ii
27 iii
30 viii
31 NOT GIVEN
32 TRUE
33 FALSE
34 FALSE
35 NOT GIVEN
36 TRUE
37 growing population
38 racist assumption
39 archeological and historical
40 inhuman behavior