IELTSFever Academic IELTS Reading Test 121

Reading Passage 1

You should spend about 20 minutes on Questions 1-13, which are based on the IELTSFever Academic IELTS Reading Test 121 Reading Passage Giants Fall in Americas below.

Giants Fall in Americas

{A} Before humans arrived, THE AMERICAS were home to woolly mammoths, saber-toothed cats, giant ground sloths and other behemoths, an array of megafauna , more impressive than even Africa boasts today. Researchers have advanced several theories to explain what did them in and when the event occurred.

{B} One prominent theory pegs humans as the cause of the demise, often pointing to the Clovis people, who left the earliest clear signs of humans entering the New World roughly 13,500 years ago. The timing coincides with the disappearance of megafauna, suggesting the Clovis hunted the animals to extinction or infected them with deadly disease. Another hypothesis supposes that climate was the culprit: it had swung from cold to warm twice, including a 1,300-year-long chill known as the Younger Dryas; such abrupt shifts might have overwhelmed the creatures' abilities to adapt.

{C} To pin down when the megafauna vanished, paleoecologist Jacquelyn Gill of the University of Wisconsin-Madison and her colleagues analyzed fossil dung, pollen and charcoal from ancient lake sediments in Indiana. The dung of large herbivores harbors a fungus known as Sporormiella, and its amounts in the dung gives an estimate of how many mammoths and other megafauna were alive at different points in history. Pollen indicates vegetation levels, and charcoal signals how many fires burned; the extent of flora and wildfires is related to the presence of herbivores. Without megaherbivores to keep them in check, broad-leaved tree species such as black ash, elm and ironwood claimed the landscape; soon after, buildups of woody debris sparked a dramatic increase in wildfires. Putting these data together, Gill and her team conclude that the giant animals disappeared 14,800 to 13,700 years ago-up to 1,300 years before Clovis.

{D} A different study, however, suggests that this mass extinction happened during Clovis. Zooarchaeologist J. Tyler Faith of George Washington University and archaeologist Todd Surovell of the University of Wyoming carbon-dated prehistoric North American mammal bones from 31 different genera (groups of species). They found that all of them seemed to meet their end simultaneously between 13,800 to 11,400 years ago.

{E} But if ancient DNA recovered from permafrost is any sign, megafauna survived in the New World millennia after humanity arrived. As the permafrost in central Alaska cracked during springtime thaws, water that held DNA from life in the region leaked in, only to freeze again

during the winter. As such, these genes can serve as markers of "ghost ranges" -remnant populations not preserved as fossil bones. Looking at mitochondrial DNA, evolutionary biologist Eske Willerslev of the University of Copenhagen and his colleagues suggest mammoths lasted until at least 10,500 years ago (as did horses, which actually originated in the Americas only to vanish there until the Europeans reintroduced them). (IELTS test papers offered by ks.ipredicting.com, copyright)

{F} Although the three papers appear to conflict with one another, they could be snapshots from the beginning, middle and end of a mass extinction. “If they seem to disagree, it is for the same reason as in chat fable about the three blind men trying to describe an elephant-or mammoth? - by touching different parts of it," says ecologist Christopher Johnson of James Cook University in Australia, who did not take part in any of the studies.

{G} Johnson suggests the fungus research is superb evidence for when the decline began, but it is not as good at confirming exactly when the extinction was completed, especially over larger areas, populations might have persisted. The DNA finds, on the other hand, can detect late survivors, he says, “maybe very close to the actual time that the last individuals were alive, at least in Alaska.” The bones analyzed from the period roughly in between show that the extinction process afflicted many species simultaneously. Those fossils came from the contiguous U.S., which back then was separated from Alaska by the massive Laurentide and Cordilleran ice sheets and so, Faith notes, could explain why the pattern of extinction differed up there.

{H} So what caused the decline? The jury's still out, says Willerslev's collaborator Ross MacPhee of the American Museum of Natural History in New York City. Johnson notes that archaeologists are turning up evidence of humans in the New World before Clovis, and he suggests they overhunted the megafauna. The beautifully crafted fluted spear points linked with the Clovis might reflect strategies developed once the giants became rare and harder to hunt, Johnson adds.

{I} Even if scientists cannot definitively finger the killer, research into the megafauna disappearance "is directly relevant today because we are in the middle of a mass extinction and one for which we know the cause us, " Gill says. “Large animals are among the most threatened today," she points out, and no one wants Africa to follow the ancient experience of the Americas.

Questions 1-3

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

Write your answers in boxes 1-3 on your answer sheet.

Question 1 Mammoths are animals that

(A) still exist recently in the Americas

(B) sometimes consumed fleshes, for example horses

(C) faced extinction at least 10,000 years ago.

(D) nobody has found their DNAs yet

Question 2 Clovis people is a group of people who

(A) are regarded as the earliest existence of humans.

(B) may be the main cause of extinction of mammoths.

(C) lived somewhere in Africa.

(D) appeared before the humans of the New World.

Question 3 Christopher Johnson suggested that

(A) Clovis people over hunted mammoths in his study.

(B) mammoths lived in the Americas.

(C) megafauna faced extinction before the New World by DNA testing.

(D) researchers in the passage may not be contradictory to each other.

Questions 4-10

Use the information in the passage to match the people (listed A-D) with opinions or deeds below. Write the appropriate letters A-D in boxes 4-10 on your answer sheet.

NB you may use any letter more than once

(A) Jacquelyn Gill

(B) J. Tyler Faith

(C) Eske Willerslev

(D) Christopher Johnson

(E) Ross MacPhee

(4) Human came before Clovis might have over hunted mammoths already.

(5) Clovis was excluded from the cause of mammoths' extinction.

(6) Fossils of fungi could not prove when exactly the extinction was finished.

(7) Genes could be used to show when the extinction happened.

(8) Big animal eating plants in the area pose a competition to large pieces of forest, with big leaves trees.

(9) Extinction estimation could be done by tracking the carbon particles inside the dead bodies of mammoths.

(10) Humans are playing a role of major culprit of giant loss globally.

Questions 11-13

Answer the questions below.

*Choose **NO MORE THAN THREE WORDS AND/OR A NUMBER** from the passage for each answer.*

(11) Where did giant ground sloth once live?

(12) Which fossils could be regarded as evidence of vegetables consumed in a fire?

(13) What kind of tools did the Clovis develop to hunt vanishing mammoths?

Reading Passage 2

You should spend about 20 minutes on Questions 14-26, which are based on the IELTSFever Academic IELTS Reading Test 121 Reading Passage LONGAEVA: Ancient Bristlecone Pine below.

LONGAEVA: Ancient Bristlecone Pine

{A} To understand more about the earth's history, humans have often looked to the natural environment for insight into the past. The bristlecone pine (Pinus longaeva), of the White Mountains in California , has served this purpose greater than any other species of tree on the planet. Conditions here are brutal: scant precipitation and low average temperatures mean a short growing season, only intensified by ferocious wind and mal-nutritious rocky. Nevertheless, bristlecone pines have claimed these barren slopes as their permanent home. Evolving here in this harsh environment, super-adapted and without much competition, bristlecones have earned their seat on the longevity throne by becoming the oldest living trees on the planet. Results of extensive studies on bristlecone pine stands have shown that in fact such environmental limitations are positively associated with the attainment of great age. This intriguing phenomenon will be discussed further on.

{B} But exactly how old is old? Sprouted before the invention of Egyptian hieroglyphs and long before the teachings of Jesus of Nazareth, Dethuselah is the oldest bristlecone alive at roughly 4,700 years. Although specimens of this age do not represent the species' average, there are 200 trees more than 3,000 years old, and two dozen more than 4,000. Considering that these

high ages are obtained in the face of such remarkable environmental adversity, the bristlecone pines have become the focus of much scientific examination over the past half century.

{C} Perhaps most interested in the bristlecone pine are dendochronologists, or tree-ring daters. With every strenuous year that passes in the White Mountains, each bristlecone grows and forms a new outer layer of cambium that reflects a season's particular ease or hardship. So while growing seasons may expand or shrink, the trees carry on, their growth rings faithfully recording the bad years alongside the goods . Through examining the annual growth rings of both living and dead specimens, taking thousands of core samples, and by processes of cross-dating between trees and other qualitative records, scientists have compiled a continuous tree-ring record that dates back to the last Ice Age between eight and ten thousand years ago. Among other linked accomplishments, this record has enhanced the dating process, helping to double-check and correct the radiocarbon-14 method to more accurately estimate the age of organic material.

{D} Now more than ever the importance of monitoring the bristlecone is being realized. As our global climate continues to undergo its most recent and abrupt atmospheric change, these ancient scribes continue to respond. Since the rings of wood formed each year reveal the trees' response to climatic conditions during a particular growing season, in their persistence they have left us natural recordings of the past, markers of the present, and clues to the future.

{E} The species' name originates from the appearance of its unusual cones and needles. The bristlecone's short, pale needles are also trademarks, bunching together to form foxtail-like bundles. As is the case of most conifer needles, these specialized leaves cluster together to shelter the stomata so very little moisture is lost through them. This adaptation helps the bristlecone photosynthesize during particularly brutal months, Saving the energy of constant needle replacement and providing a stable supply of chlorophyll. For a plant trying to store so much energy, bristlecone seeds are relatively large in size. They are first reproduced when trees reach ages between thirty and seventy-five years old. Germination rates are generally high, in part require little to no initial stratification. Perhaps the most intriguing physical characteristic of a mature bristlecone, however, is its ratio of living to dead wood on harsh sites and how this relates to old age. In older trees, however, especially in individuals over 1,500 years, a strip-bark trait is adaptive. This condition occurs as a result of cambium dieback, which erodes and thereby exposes certain areas of the bole, leaving only narrow bands of bark intact.

{F} The technique of cambial edge retreat has help promote old age in bristlecone pine, but that certainly is not the only reason. Most crucial to these trees' longevity is their compact size and slow rates of growth. By remaining in most cases under ten meters tall, bristlecones stay close to the limited water supply and can hence support more branches and photosynthesizing. Combined with the dry, windy, and often freezing mountain air, slow growth guarantees the bristlecones tight, fibrous rings with a high resin content and structural strength. The absence of natural disaster has also safeguarded the bristlecone's lengthy lifespan. Due to a lack of ground cover vegetation and an evenly spaced layout, bristlecone stands on the White Mountain peaks have been practically unaffected by fire. This lack of vegetation also means a lack of competition for the bristlecones.

{G} Bristlecone pine restricted to numerous, rather isolated stands at higher altitudes in the southwestern United States . Stands occur from the Rocky Mountains, through the Colorado Plateau, to the western margin of the Great Basin. Within this natural range, the oldest and most widely researched stands of bristlecones occur in California 's White Mountains . Even just 200 miles away from the Pacific Ocean, the White Mountains are home to one of this country's few high-elevation deserts. Located in the extreme eastern rain shadow of the Sierra Nevada , this region receives only 12.54 inches of precipitation per year and experiences temperatures between -20F and +50F .The peaks south of the Owens Valley, are higher up than they might appear from a distance. Although most summits exist somewhere around 11,000 feet, snow-capped White Mountain Peak , for which the range is named, stands at 14,246 feet above sea level. That said, to reach areas of pure bristlecone is an intense journey all to itself..

{H} With seemingly endless areas of wonder and interest, the bristlecone pines have become subject to much research over the past half-century. Since the annual growth of these ancient organisms directly reflects the climatic conditions of a particular time period, bristlecones are of greatest significance to dendrochronologists, or tree-ring specialists. Dating any tree is simple and can be done within reasonable accuracy just by counting out the rings made each year by the plant's natural means of growth. By carefully compiling a nearly 10,000-year-old bristlecone pine record, these patient scientists have accurately corrected the carbon-14 dating method and estimated ages of past periods of global climate change. What makes this record so special to dendrochronologists, too, is that nowhere, throughout time, is precisely the same long-term sequence of wide and narrow rings repeated, because year-to-year variations in climate are never exactly the same.

{I} Historically the bristlecone's remote location and gnarled wood have deterred commercial extraction, but nothing on earth will go unaffected by global warming. If temperatures rise by only 6 degrees F, which many experts say is likely this century, about two-thirds of the bristlecones' ideal habitat in the White Mountains effectively will be gone. Almost 30,000 acres of National Forest now preserves the ancient bristlecone, but paved roads, campsites, and self-guided trails have led only to more human impact. In 1966, the U.S.F.S reported over 20,000 visitors to the Ancient Bristlecone Pine Forest, a figure which could exceed 40,000 today. Over the past hundreds of thousands of years, this species has endured in one of earth's most trying environments; "they deserve our respect and reverence. As global climate change slowly alters their environment, we as humans must do our part to raise awareness and lower our impact.

Questions14-17

The reading Passage has nine paragraphs A-I.

Which paragraph contains the following information?

Write the correct letter A-1, in boxes 14-17 on your answer sheet.

(14) Human activity threats bristlecone pines habitat

(15) Explanations for ring of bristlecone pines

(16) An accountable survey provided from the past till now

(17) Survived in hostile environment

Questions 18-20

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

Write your answers in boxes 18-20 on your answer sheet.

Question 18 According to passage A, what aspect of bristlecone pines attracts author's attention?

(A) Brutal environment they live

(B) Remarkable long age

(C) They only live in California

(D) Outstanding height

Question 19 Why do we investigate Bristlecone pines in higher altitudes of California 's White Mountains?

(A) Because oldest ones researched in this region

(B) Because most bizarre ones are in this region

(C) Because precipitation is rich in this region

(D) Because sea level is comparatively high in this region

Question 20 Why are there repeated patterns of wide and narrow rings?

(A) Because sea level rises which affects tree ring

(B) Because tree ring pattern is completely random

(C) Because ancient organisms affect its growth

(D) Because variation of climate change is different

Questions 21-26

Summary

*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 21-26 on your answer sheet.*

The bristlecone's special adaptation is beneficial for photosynthesizing, and reserving the_____**21**_____ of leave replacement and providing sufficient chlorophyll. Probably because seeds do not rely on primar_____**22**_____ Germination rate. Because of cambium dieback, only narrow_____**23**_____remain complete. Due to multiple factors such as windy, cold climate an_____**24**_____bristlecones' rings have tight and solid structure full of resin. Moreover, bristlecone stands are safe from fire because of little _____**25**_____plants spread in this place. The summits of Owens Valley is higher than they emerge if you observe from a_____**26**_____

Reading Passage 3

You should spend about 20 minutes on Questions 27-40, which are based on the IELTSFever Academic IELTS Reading Test 121 Reading Passage Honey bees in trouble below.

Honey bees in trouble

Can native pollinators fill the gap?

{A} Recently, ominous headlines have described a mysterious ailment, colony collapse disorder(CCD), that is wiping out the honey bees that pollinate many crops. Without honeybees, the story goes, fields will be sterile, economies will collapse, and food will be scarce.

{B} But what few accounts acknowledge is that what's at risk is not itself a natural state of affairs. For one thing, in the United States, where CCD was first reported and has had its

greatest impacts, honeybees are not a native species. Pollination in modern agriculture isn't alchemy, it's industry. The total number of hives involved in the U.S. pollination industry has been somewhere between 2.5 million and 3 million in recent years. Meanwhile, American farmers began using large quantities of organophosphate insecticides, planted large-scale crop monocultures, and adopted "clean farming" practices that scrubbed native vegetation from field margins and roadsides. These practices killed many native bees outright--they're as vulnerable to insecticides as any agricultural pest--and made the agricultural landscape inhospitable to those that remained. Concern about these practices and their effects on pollinators isn't new--in her 1962 ecological alarm cry Silent Spring, Rachel Carson warned of a ‘Fruitless Fall' that could result from the disappearance of insect pollinators.

{C} If that ‘Fruitless Fall' has not--yet--occurred, it may be largely thanks to the honeybee, which farmers turned to as the ability of wild pollinators to service crops declined. The honeybee has been semi-domesticated since the time of the ancient Egyptians, but it wasn't just familiarity that determined this choice: the bees' biology is in many ways suited to the kind of agricultural system that was emerging. For example, honeybee hives can be closed up and moved out of the way when pesticides are applied to a field. The bees are generalist pollinators, so they can be used to pollinate many different crops. And although they are not the most efficient pollinator of every crop, honeybees have strength in numbers, with 20,000 to 100,000 bees living in a single hive. "Without a doubt, if there was one bee you wanted for agriculture, it would be the honeybee," says Jim Cane, of the U.S. Department of Agriculture. The honeybee, in other words, has become a crucial cog in the modern system of industrial agriculture. That system delivers more food, and more kinds of it, to more places, more cheaply than ever before. But that system is also vulnerable, because making a farm field into the photosynthetic equivalent of a factory floor, and pollination into a series of continent-long assembly lines, also leaches out some of the resilience characteristic of natural ecosystems.

{D} Breno Freitas, an agronomist, pointed out that in nature such a high degree of specialization usually is a very dangerous game: it works well while all the rest is in equilibrium, but runs quickly to extinction at the least disbalance. In effect, by developing an agricultural system that is heavily reliant on a single pollinator species, we humans have become riskily overspecialized. And when the human-honeybee relationship is disrupted, as it has been by colony collapse disorder, the vulnerability of that agricultural system begins to become clear.

{E} In fact, a few wild bees are already being successfully managed for crop pollination. "The problem is trying to provide native bees in adequate numbers on a reliable basis in a fairly short number of years in order to service the crop," Jim Cane says. "You're talking millions of flowers per acre in a two-to three-week time frame, or less, for a lot of crops." On the other hand, native bees can be much more efficient pollinators of certain crops than honeybees, so you don't need as many to do the job. For example, about 750 blue orchard bees (Osmia lignaria) can pollinate a hectare of apples or almonds, a task that would require roughly 50,000 to 150,000 honeybees. There are bee tinkerers engaged in similar work in many corners of the world. In Brazil, Breno Freitas has found that Centris tarsata, the native pollinator of wild cashew, can survive in commercial cashew orchards if growers provide a source of floral oils, such as by interplanting their cashew trees with Caribbean cherry.

{F} In certain places, native bees may already be doing more than they're getting credit for. Ecologist Rachael Winfree recently led a team that looked at pollination of four summer crops (tomato, watermelon, peppers, and muskmelon) at 29 farms in the region of New Jersey and Pennsylvania. Winfree's team identified 54 species of wild bees that visited these crops, and found that wild bees were the most important pollinators in the system: even though managed honeybees were present on many of the farms, wild bees were responsible for 62 percent of flower visits in the study. In another study focusing specifically on watermelon, Winfree and her colleagues calculated that native bees alone could provide sufficient pollination at 90 percent of the 23 farms studied. By contrast, honeybees alone could provide sufficient pollination at only 78 percent of farms.

{G} "The region I work in is not typical of the way most food is produced," Winfree admits. In the Delaware Valley, most farms and farm fields are relatively small, each farmer typically grows a variety of crops, and farms are interspersed with suburbs and other types of land use which means there are opportunities for homeowners to get involved in bee conservation, too. The landscape is a bee-friendly patchwork that provides a variety of nesting habitat and floral resources distributed among different kinds of crops, weedy field margins, fallow fields, suburban neighborhoods, and semi natural habitat like old woodlots, all at a relatively small scale. In other words, "pollinator-friendly" farming practices would not only aid pollination of agricultural crops, but also serve as a key element in the over all conservation strategy for wild pollinators, and often aid other wild species as well.

{H} Of course, not all farmers will be able to implement all of these practices. And researchers are suggesting a shift to a kind of polyglot agricultural system. For some small-scale farms, native bees may indeed be all that's needed. For larger operations, a suite of managed bees--with honeybees filling the generalist role and other, native bees pollinating specific crops--could be augmented by free pollination services from resurgent wild pollinators. In other words, they're saying, we still have an opportunity to replace a risky monoculture with something diverse, resilient, and robust.

Questions 27-30

Do the following statements agree with the claims of the writer in Reading Passage 3? In boxes 27-30 on your answer sheet, write

YES	if the statement agrees with the writer
NO	if the statement does not agree with the writer
NOT GIVEN	if there is no information about this in the passage

(27). In the United States, farmers use honeybees in a large scale over the past few years.

(28) Cleaning farming practices would be harmful to farmers' health.

(29) The blue orchard bee is the most efficient pollinator among native bees for every crop.

(30) It is beneficial to other local creatures to protect native bees.

Questions 31-35

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

Write your answers in boxes 31-35 on your answer sheet.

Question 31 The example of the ‘Fruitless Fall' underlines the writer's point about

(A) needs for using pesticides.

(B) impacts of losing insect pollinators.

(C) vulnerabilities of native bees.

(D) benefits in building more pollination industries.

Question 32 Why can honeybees adapt to the modern agricultural system?

(A) the honeybees can pollinated more crops efficiently

(B) The bees are semi-domesticated since ancient times.

(C) Honeybee hives can be protected away from pesticides.

(D) The ability of wild pollinators using to serve crops declines.

Question 33 The writer mentions factories and assembly lines to illustrate

(A) one drawback of the industrialised agricultural system.

(B) a low cost in modern agriculture.

(C) the role of honevbees in pollination.

(D) what a high yield of industrial agriculture.

Question 34 In the 6th paragraph , Winfree's experiment proves that

(A) honeybee can pollinate various crops.

(B) there are many types of wild bees as the pollinators.

(C) the wild bees can increase the yield to a higher percentage

(D) wild bees work more efficiently as a pollinator than honey bees in certain cases

Question 35 What does the writer want to suggest in the last paragraph?

(A) the importance of honey bees in pollination

(B) adoption of different bees in various sizes of agricultural system

(C) the comparison between the intensive and the rarefied agricultural system

(D) the reason why farmers can rely on native pollinators

Questions 36-40

Complete each sentence with the correct ending, A-F, below.

Write the correct letter, A-F, in boxes 36-40 on your answer sheet

(36) Headline of colony collapse disorder states that

(37) Viewpoints of Freitas manifest that

(38) Examples of blue orchard bees have shown that

(39) Centris tarsata is mentioned to exemplify that

Question 40 One finding of the research in Delaware Valley is that

(A). native pollinators can survive when a specific plant is supplied.

(B). it would cause severe consequences both to commerce and agriculture.

(C). honey bees can not be bred.

(D). some agricultural landscapes are favorable in supporting wild bees.

(E). a large scale of honey bees are needed to pollinate.

(F). an agricultural system is fragile when relying on a single pollinator