IELTSFever Academic IELTS Reading Test 136

Reading Passage 1

You should spend about 20 minutes on Questions 1-13, which are based on the IELTSFever Academic IELTS Reading Test 136 Reading Passage The Dinosaurs Footprints and Extinction below.

The Dinosaurs Footprints and Extinction

{A} Everybody knows that the dinosaurs were killed by an asteroid. Something big hit the earth 65 million years ago and, when the dust had fallen, so had the great reptiles. There is thus a nice, if ironic, symmetry in the idea that a similar impact brought about the dinosaurs' rise. That is the thesis proposed by Paul Olsen, of Columbia University, and his colleagues in this week's Science.

{B} Dinosaurs first appear in the fossil record 230m years ago, during the Triassic period. But they were mostly small, and they shared the earth with lots of other sorts of reptiles. It was in the subsequent Jurassic, which began 202million years ago, that they overran the planet and turned into the monsters depicted in the book and movie "Jurassic Park". (Actually, though, the dinosaurs that appeared on screen were from the still more recent Cretaceous period.) Dr Olsen and his colleagues are not the first to suggest that the dinosaurs inherited the earth as the result of an asteroid strike. But they are the first to show that the takeover did, indeed, happen in a geological eyeblink.

{C} Dinosaur skeletons are rare. Dinosaur footprints are, however, surprisingly abundant. And the sizes of the prints are as good an indication of the sizes of the beasts as are the skeletons themselves. Dr Olsen and his colleagues therefore concentrated on prints, not bones.

{D} The prints in question were made in eastern North America, a part of the world then full of rift valleys similar to those in East Africa today. Like the modern African rift valleys, the Triassic /Jurassic American ones contained lakes, and these lakes grew and shrank at regular intervals because of climatic changes caused by periodic shifts in the earth's orbit. (A similar phenomenon is responsible for modern ice ages.) That regularity, combined with reversals in the earth's magnetic field, which are detectable in the tiny fields of certain magnetic minerals, means that rocks from this place and period can be dated to within a few thousand years. As a bonus, squishy lake-edge sediments are just the things for recording the tracks of passing animals. By dividing the labour between themselves, the ten authors of the paper were able to study such tracks at 80 sites.

{E} The researchers looked at 18 so-called ichnotaxa . These are recognisable types of footprint that cannot be matched precisely with the species of animal that left them. But they can be matched with a general sort of animal, and thus act as an indicator of the fate of that group,

even when there are no bones to tell the story. Five of the ichnotaxa disappear before the end of the Triassic, and four march confidently across the boundary into the Jurassic. Six, however, vanish at the boundary, or only just splutter across it; and three appear from nowhere, almost as soon as the Jurassic begins.

{F} That boundary itself is suggestive. The first geological indication of the impact that killed the dinosaurs was an unusually high level of iridium in rocks at the end of the Cretaceous, when the beasts disappear from the fossil record. Iridium is normally rare at the earth's surface, but it is more abundant in meteorites. When people began to believe the impact theory, they started looking for other Cretaceous-end anomalies. One that turned up was a surprising abundance of fern spores in rocks just above the boundary layer--a phenomenon known as a "fern spike".

{G} That matched the theory nicely. Many modern ferns are opportunists. They cannot compete against plants with leaves, but if a piece of land is cleared by, say, a volcanic eruption, they are often the first things to set up shop there. An asteroid strike would have scoured much of the earth of its vegetable cover, and provided a paradise for ferns. A fern spike in the rocks is thus a good indication that something terrible has happened.

{H} Both an iridium (n.) anomaly and a fern spike appear in rocks at the end of the Triassic, too. That accounts for the disappearing ichnotaxa: the creatures that made them did not survive the holocaust. The surprise is how rapidly the new ichnotaxa appear.

{i} Dr Olsen and his colleagues suggest that the explanation for this rapid increase in size may be a phenomenon called ecological release. This is seen today when reptiles (which, in modern times, tend to be small creatures) reach islands where they face no competitors. The most spectacular example is on the Indonesian island of Komodo, where local lizards have grown so large that they are often referred to as dragons. The dinosaurs, in other words, could flourish only when the competition had been knocked out.

{J} That leaves the question of where the impact happened. No large hole in the earth's crust seems to be 202m years old. It may, of course, have been overlooked. Old craters are eroded and buried, and not always easy to find Alternatively, it may have vanished. Although continental crust is more or less permanent, the ocean floor is constantly recycled by the tectonic processes that bring about continental drift. There is no ocean floor left that is more than 200m years old, so a crater that formed in the ocean would have been swallowed up by now.

{K} There is a third possibility, however. This is that the crater is known, but has been misdated. The Manicouagan "structure", a crater in Quebec, is thought to be 214m years old. It is huge-some 100km across-and seems to be the largest of between three and five craters that formed within a few hours of each other as the lumps of a disintegrated comet hit the earth one by one.

Questions 1-6

Do the following statements agree with the information given in Reading Passage 1? In boxes 1-6 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

(1) Dr Paul Olsen and his colleagues believe that an asteroid knock may also lead to dinosaurs' boom.

(2) Books and movies like Jurassic Park often exaggerate the size of the dinosaurs.

(3) Dinosaur footprints are more adequate than dinosaur skeletons.

(4) The prints were chosen by Dr Olsen to study because they are more detectable than earth magnetic fields to track a date of geological precision within thousands of years.

(5) Ichnotaxa showed that footprints of dinosaurs offer exact information of the trace left by an individual species.

(6) We can find more Iridium in the earth's surface than in meteorites.

Questions 7-13

*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 7-13 on your answer sheet.*

Dr Olsen and his colleagues applied a phenomenon named..... .**7**..... to explain the large size of the Eubrontes, which is a similar case to that nowadays reptiles invade a place where there are no .....**8**.....; for example, on an island called Komodo, indigenous huge lizards grow so big that people even regard them as .....**9**.....

However, were there no old impact traces being found? The answer may be that we have .....**10**..... the evidence. Old craters are difficult to spot or it probably .....**11**.... ... due to the effect of the earth moving. Even a crater formed in Ocean had been .....**12**..... under the impact of crust movement. Beside, the third hypothesis is the potential evidence. some craters may be .....**13**.....

Reading Passage 2

You should spend about 20 minutes on Questions 14-27, which are based on the IELTSFever Academic IELTS Reading Test 136 Reading Passage The Cacao. A Sweet History below.

The Cacao. A Sweet History

{A} Chapter 1 Most people today think of chocolate as something sweet to eat or drink that can be easily found in stores around the world. It might surprise you that chocolate was once highly treasured. The tasty secret of the cacao (Kah Kow) tree was discovered 2,000 years ago in the tropical rainforests of the Americas. The story of how chocolate grew from a local Mesoamerican beverage into a global sweet encompasses many cultures and continents.

{B} Chapter 2 Historians believe the Maya people of Central America first learned to farm cacao plants around two thousand years ago. The Maya took cacao trees from the rainforests and grew them in their gardens. They cooked cacao seeds, then crushed them into a soft paste. They mixed the paste with water and flavorful spices to make an unsweetened chocolate drink. The Maya poured the chocolate drink back and forth between two containers so that the liquid would have a layer of bubbles, or foam.

Cacao and chocolate were an important part of Maya culture. There are often images of cacao plants on Maya buildings and art objects. Ruling families drank chocolate at special ceremonies. And, even poorer members of the society could enjoy the drink once in a while. Historians believe that cacao seeds were also used in marriage ceremonies as a sign of the union between a husband and a wife.

The Aztec culture in current-day Mexico also prized chocolate. But, cacao plants could not grow in the area where the Aztecs lived. So, they traded to get cacao. They even used cacao seeds as a form of money to pay taxes. Chocolate also played a special role in both Maya and Aztec royal and religious events. Priests presented cacao seeds as offerings to the gods and served chocolate drinks during sacred ceremonies. Only the very wealthy in Aztec societies could afford to drink chocolate because cacao was so valuable. The Aztec ruler Montezuma was believed to drink fifty cups of chocolate every day. Some experts believe the word for chocolate came from the Aztec word "xocolatl" which in the Nahuatl language means "bitter water." Others believe the word "chocolate" was created by combining Mayan and Nahuatl words.

{C} Chapter 3 The explorer Christopher Columbus brought cacao seeds to Spain after his trip to Central America in 1502. But it was the Spanish explorer Hernando Cortes who understood that chocolate could be a valuable investment. In 1519, Cortes arrived in current-day Mexico. He believed the chocolate drink would become popular with Spaniards. After the Spanish soldiers defeated the Aztec empire, they were able to seize the supplies of cacao and send them home. Spain later began planting cacao in its colonies in the Americas in order to satisfy the large demand for chocolate. The wealthy people of Spain first enjoyed a sweetened version of chocolate drink. Later, the popularity of the drink spread throughout Europe. The English, Dutch and French began to plant cacao trees in their own colonies. Chocolate remained a drink that only wealthy people could afford to drink until the eighteenth century. During the period known as the Industrial Revolution, new technologies helped make chocolate less costly to produce.

{D} Chapter 4 Farmers grow cacao trees in many countries in Africa, Central and South America. The trees grow in the shady areas of the rainforests near the Earth's equator. But these trees can be difficult to grow. They require an exact amount of water, warmth, soil and protection. After about five years, cacao trees start producing large fruits called pods, which grow near the trunk of the tree. The seeds inside the pods are harvested to make chocolate. There are several kinds of cacao trees. Most of the world's chocolate is made from the seed of the forastero tree. But farmers can also grow criollo or trinitario cacao plants. Cacao trees grown on farms are much more easily threatened by diseases and insects than wild trees. Growing cacao is very hard work for farmers. They sell their harvest on a futures market. This means that economic conditions beyond their control can affect the amount of money they will earn. Today, chocolate industry officials, activists, and scientists are working with farmers. They are trying to make sure that cacao can be grown in a way that is fair to the timers and safe for the environment.

{E} Chapter 5 To become chocolate, cacao seeds go through a long production process in a factory. Workers must sort, clean and cook the seeds. Then they break off the covering of the seeds so that only the inside fruit, or nibs, remain. Workers crush the nibs into a soft substance called chocolate liquor. This gets separated into cocoa solids and a fat called cocoa butter. Chocolate makers have their own special recipes in which they combine chocolate liquor with exact amounts of sugar, milk and cocoa fat. They finely crush this "crumb" mixture in order to make it smooth. The mixture then goes through two more processes before it is shaped into a mold form.

Chocolate making is a big business. The market value of the yearly cacao crop around the world is more than five billion dollars. Chocolate is especially popular in Europe and the United States. For example, in 2005, the United States bought 1.4 billion dollars worth of cocoa products. Each year, Americans eat an average of more than five kilograms of chocolate per person. Specialty shops that sell costly chocolates are also very popular. Many offer chocolate lovers the chance to taste chocolates grown in different areas of the world

Questions 14-18

Reading passage 1 has 5 chapters. Which chapter contains the following information? Write your answers in boxes 14-18 on your answer sheet

(14) the part of cacao trees used to produce chocolate

(15) average chocolate consumption by people in the US per person per year

(16) risks faced by farmers in the cacao business

(17) where the first sweetened chocolate drink appeared

(18) how ancient American civilizations obtained cacao

Questions 19-23

Do the following statements agree with the information given in Reading Passage 1 ? In boxes 19-23 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

(19) use cacao and chocolate in ceremonies was restricted Maya royal families

(20) The Spanish explorer Hernando Cortes invested in chocolate and chocolate drinks.

(21) The forastero tree produces the best chocolate.

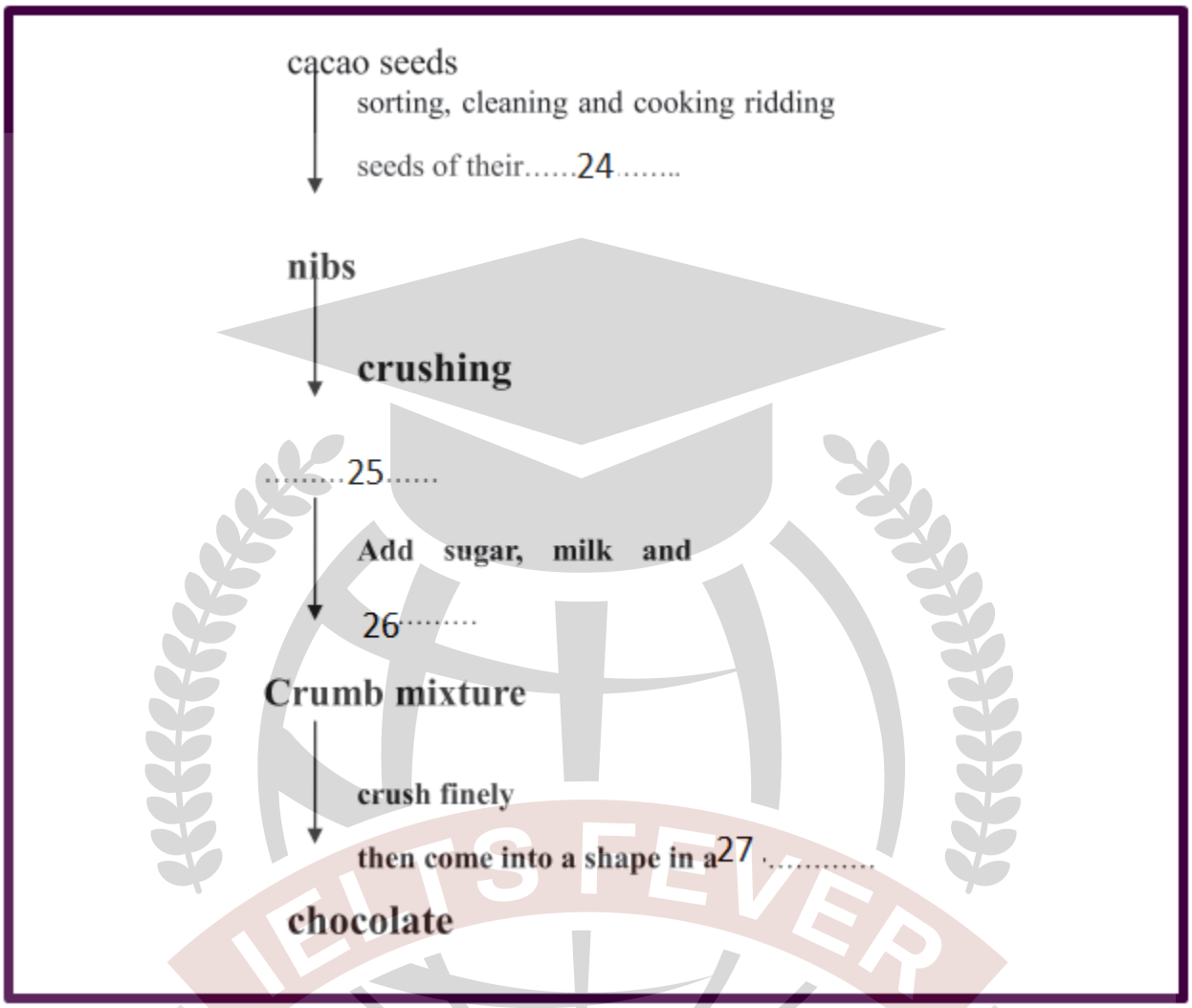
(22) Some parts in cacao seed are removed during the chocolate process.

(23) Chocolate is welcomed more in some countries or continents than other parts around the world.

Questions 24-27

The flow chart below shows the steps in chocolate making.

*Complete the flowchart using **NO MORE THAN THREE WORDS** from the passage for each blank Write your answers in boxes 24-27 on your answer sheet.*



Reading Passage 3

You should spend about 20 minutes on Questions 28-40, which are based on the IELTSFever Academic IELTS Reading Test 136 Reading PassageChinese Yellow Citrus Ant for BIOLOGICAL CONTROL below.

Chinese Yellow Citrus Ant for BIOLOGICAL CONTROL

{A} In 1476, the farmers of Berne in Switzerland decided, according to this story, there was only one way to rid their fields of the cutworms attacking their crops. They took the pests to court. The worms were tried, found guilty and excommunicated by the archbishop In China, farmers had a more practical approach to pest control. Rather than rely on divine intervention , they put their faith in frogs, ducks and ants Frogs and ducks were encouraged to snap up the pests in the paddies and the occasional plague of locusts . But the notion of biological control began with an ant. More specifically, the story says, it started with the predatory yellow citrus ant Oecophylla smaragdina, which has been polishing off pests in the orange groves of southern China for at least 1700 years. The yellow citrus ant is a type of weaver ant, which binds leaves and twigs with silk to form a neat, tent-like nest. In the beginning, farmers made do with the odd ants' nest here and there. But it wasn't long before growing demand led to the development of a thriving trade in nests and a new type of agriculture--ant farming.

{B} For an insect that bites, the yellow citrus ant is remarkably popular. Even by ant standards, Oecophylla smaragdina is a fearsome predator. It's big, runs fast and has a powerful nip - painful to humans but lethal to many of the insects that plague the orange groves of Guangdong and Guangxi in southern China. And for at least 17 centuries. Chinese orange growers have harnessed these six legged killing machines to keep their fruit groves healthy and productive. The story explains that citrus fruits evolved in the Far East and the Chinese discovered the delights of their flesh early on. As the ancestral home of oranges, lemons and pomelos, China also has the greatest diversity of citrus pests. And the trees that produce the sweetest fruits, the mandarins--or kan--attract a host of plant eating insects, from black ants and sap-sucking mealy bugs to leaf-devouring caterpillars With so many enemies, fruit growers clearly had to have some way of protecting their orchards.

{C} The West did not discover the Chinese orange growers' secret weapon until the early 20th century. At the time, Florida was suffering an epidemic of citrus canker and in 1915 Walter Swingle, a plant physiologist working for the US Department of Agriculture, was, the story says, sent to China in search of varieties of orange that were resistant to the disease. Swingle spent some time studying the citrus orchards around Guangzhou, and there he came across the story of the cultivated ant. These ants, he was told, were "grown" by the people of a small village nearby who sold them to the orange growers by the nestful

{D} The earliest report of citrus ants at work among the orange trees appears in a book on tropical and subtropical botany written by His Han in AD 304. "The people of ChiaoChih sell in their markets in bags of rush matting. The nests are like silk. The bags are all attached to twigs and leaves which, with the ants inside the nests, are for sale. The ants are reddish-yellow in

colour, bigger than ordinary ants. In the south if the kan trees do not have this kind of ant, the fruits will all be damaged by many harmful insects, and not a single fruit will be perfect."

{E} Initially, farmers relied on nests which they collected from the wild or bought in the market — where trade in nests was brisk. 'It is said that in the south orange trees which are free of ants will have wormy fruits. Therefore the people race to buy nests for their orange trees,' wrote Liu Hsun in Strange Things Noted in the South, written about AD 890. The business quickly became more sophisticated. From the 10th century, country people began to trap ants in artificial nests baited with fat. "Fruit growing families buy these ants from vendors who make a business of collecting and selling such creatures," wrote Chuang Chi-Yu in 1130. "They trap them by filling hogs' or sheep's bladders with fat and placing them with the cavities open next to the ants' nests. They wait until the ants have migrated into the bladders and take them away. This is known as 'rearing orange ants'." Farmers attached the bladders to their trees, and in time the ants spread to other trees and built new nests. By the 17th century, growers were building bamboo walkways between their trees to speed the colonization of their orchards. The ants ran along these narrow bridges from one tree to another and established nests "by the hundreds of thousands".

{F} Did it work? The orange growers clearly thought so. One authority, Chi Ta—Chun, writing in 1700, stressed how important it was to keep the fruit trees free of insect pests, especially caterpillars. "It is essential to eliminate them so that the trees are not injured. But hand labour is not nearly as efficient as ant power..." Swingle was just as impressed. Yet despite this reports, many Western biologists were skeptical. In the West, the idea of using one insect to destroy another was new and highly controversial. The first breakthrough had come in 1888, when the infant orange industry in California had been saved from extinction by the Australian vedalia beetle. This beetle was the only thing that had made any inroad into the explosion of cottony cushion scale that was threatening to destroy the state's citrus crops. But, as Swingle now knew, California's "first" was nothing of the sort. The Chinese had been expert in biocontrol for many centuries.

{G} The story goes on to say that the long tradition of ants in the Chinese orchards only began to waver in the 1950s and 1960s with the introduction of powerful organic (I guess the author means chemical insecticides. Although most fruit growers switched to chemicals, a few hung onto their ants. Those who abandoned ants in favour of chemicals quickly became disillusioned . As costs soared and pests began to develop resistance to the chemicals, growers began to revive the old ant patrols. They had good reason to have faith in their insect workforce. Research in the early 1960s showed that as long as there were enough ants in the trees, they did an excellent job of dispatching some pests--mainly the larger insects--and had modest success against others. Trees with yellow ants produced almost 20 per cent more healthy leaves than those without. More recent trials have shown that these trees yield just as big a crop as those protected by expensive chemical sprays.

{H} One apparent drawback of using ants-- and one of the main reasons for the early skepticism by Western scientists-- was that citrus ants do nothing to control mealy bugs, waxy-coated scale insects which can do considerable damage to fruit trees. In fact, the ants protect mealy bugs in

exchange for the sweet honeydew they secrete. The orange growers always denied this was a problem but Western scientists thought they knew better. Research in the 1980s suggests that the growers were right all along. Where mealy bugs proliferate under the ants' protection they are usually heavily parasitized and this limits the harm they can do. Orange growers who rely on carnivorous ants rather than poisonous chemicals maintain a better balance of species in their orchards. While the ants deal with the bigger insect pests, other predatory species keep down the numbers of smaller pests such as scale insects and aphids . In the long run, ants do a lot less damage than chemicals--and they're certainly more effective than excommunication.

Questions 28-32

Use the information in the passage to match the year (listed A-G) with correct description below. Write the appropriate letters A-G in boxes 28-32 on your answer sheet.

NB you may use any letter more than once

(A) 1888

(B) 1476

(C) 1915

(D) 1700

(E) 1130

(F) 304 AD

(G) 1950

(28) First record of ant against pests written.

(29) WS studied ant intervention methods in China.

(30) First case of orange crops rescued by insects in western world.

(31) Chinese farmers have started to choose chemical methods.

(32) A book mentioned ways to trap ants.

Questions 33-40

Do the following statements agree with the information given in Reading Passage 2? In boxes 33-40 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

(33) China has the most citrus pests counted in types in the world.

(34) Swingle came to China in order to search for an insect for the US government.

(35) Western people were impressed by Swingle's theory of pest prevention.

(36) Chinese farmers realised that the price of pesticides became expensive.

(37) Some Chinese farmers have started to abandon the use of pesticides.

(38) Trees without ants had grown more unhealthy leaves than those with.

(39) Yield of fields using ants is larger than that using chemical pesticides.

(40) Chinese orange farmers proposed that ant protection doesn't work outside of China.