

IELTS Academic Reading Sample 113

Question 27-33

Reading Passage 63 has nine paragraphs, labelled A–I.

Which paragraphs contain the following information?

27. an example of a food which particularly benefits from the addition of spices.

a)

28. a range of methods for making food safer to eat.

a)

29. a comparison between countries with different climate types.

a)

30. an explanation of how people first learned to select appropriate spices.

a)

31. a method of enhancing the effectiveness of individual spices.

a)

32. the relative effectiveness of certain spices against harmful organisms.

a)

33. the possible origins of a dislike for unspiced foods.

a)

Question 34-39

Answer the questions below with words taken from Reading Passage 63.

Use **NO MORE THAN TWO WORDS** for each answer

34. According to the writers, what might the use of spices in cooking help people to avoid?

a)

35. What proportion of bacteria in food do four of the spices tested destroy?

a)

36. Which food often contains a spice known as 'quatre epices'?

a)

37. Which types of country use the fewest number of spices in cooking?

a)

38. What might food aversions often be associated with?

a)

39. Apart from spices, which substance is used in all countries to preserve food?

a)

Question 40

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

40. Which is the best title for Reading Passage 63?

- A. The function of spices in food preparation
- B. A history of food preservation techniques
- C. Traditional recipes from around the world
- D. An analysis of the chemical properties of spice plants

A. Spice plants, such as coriander, cardamom or ginger, contain compounds which, when added to food, give it a distinctive flavour. Spices have been used for centuries in the preparation of both meat dishes for consumption and meat dishes for long-term storage. However, an initial analysis of traditional meat-based recipes indicated that spices are not used equally in different countries and regions, so we set about investigating global patterns of spice use.

B. We hypothesized initially that the benefit of spices might lie in their anti-microbial properties. Those compounds in spice plants which give them their distinctive flavours probably first evolved to fight enemies such as plant-eating insects, fungi, and bacteria. Many of the organisms which afflict spice plants attack humans too, in particular the bacteria and fungi that live on and in dead plant and animal matter. So if spices kill these organisms, or inhibit their production of toxins¹, spice use in food might reduce our own chances of contracting food poisoning.

C. The results of our investigation supported this hypothesis. In common with other researchers, we found that all spices for which we could locate appropriate information have some antibacterial effects: half inhibit more than 75% of bacteria, and four (garlic, onion, allspice and oregano) inhibit 100% of those bacteria tested. In addition, many spices are powerful fungicides.

D. Studies also show that when combined, spices exhibit even greater anti-bacterial properties than when each is used alone. This is interesting because the food recipes we used in our sample specify an average of four different spices. Some spices are so frequently combined that the blends have acquired special names, such as 'chili powder' (typically a mixture of red pepper, onion, paprika, garlic, cumin and oregano) and 'oriental

five spice' (pepper, cinnamon, anise, fennel and cloves). One intriguing example is the French 'quatre epices' (pepper, cloves, ginger and nutmeg) which is often used in making sausages. Sausages are a rich medium for bacterial growth, and have frequently been implicated as the source of death from the botulism toxin, so the value of the anti-bacterial compounds in spices used for sausage preparation is obvious.

E. A second hypothesis we made was that spice use would be heaviest in areas where foods spoil most quickly. Studies indicate that rates of bacterial growth increase dramatically with air temperature. Meat dishes that are prepared in advance and stored at room temperatures for more than a few hours, especially in tropical climates, typically show massive increases in bacterial counts. Of course temperatures within houses, particularly in areas where food is prepared and stored, may differ from those of the outside air, but usually it is even hotter in the kitchen.

F. Our survey of recipes from around the world confirmed this hypothesis: we found that countries with higher than average temperatures used more spices. Indeed, in hot countries nearly every meat-based recipe calls for at least one spice, and most include many spices, whereas in cooler ones, substantial proportions of dishes are prepared without spices, or with just a few. In other words, there is a significant positive correlation between mean temperature and the average quantity of spices used in cooking.

G. But if the main function of spices is to make food safer to eat, how did our ancestors know which ones to use in the first place? It seems likely that people who happened to add spice plants to meat during preparation, especially in hot climates, would have been less likely to suffer from food poisoning than those who did not. Spice users may also have been able to store foods for longer before they spoiled, enabling them to tolerate longer periods of scarcity. Observation and imitation of the eating habits of these healthier individuals by others could spread spice use rapidly through a society. Also, families that used appropriate spices would rear a greater number of more healthy offspring, to whom spice-use traditions had been demonstrated, and who possessed appropriate taste receptors.

H. Another question which arises is why did people develop a taste for spicy foods? One possibility involves learned taste aversions. It is known that when people eat something that makes them ill, they tend to avoid that taste subsequently. The adaptive value of such learning is obvious. Adding a spice to a food that caused sickness might alter its taste enough to make it palatable again (i.e. it tastes like a different food), as well as kill the micro-organisms that caused the illness, thus rendering it safe for consumption. By this process, food aversions would more often be associated with unspiced (and therefore unsafe) foods, and food likings would be associated with spicy foods, especially in places where foods spoil rapidly. Over time people would have developed a natural preference for spicy food.

I. course, spice use is not the only way to avoid food poisoning. Cooking, and completely consuming wild game immediately after slaughter reduces opportunities for the growth of micro-organisms. However, this is practical only where fresh meat is abundant year-round. In areas where fresh meat is not consistently available, preservation may be accomplished by thoroughly cooking, salting, smoking, drying, and spicing meats. Indeed, salt has been used worldwide for centuries to preserve food. We suggest that all these practices have been adopted for essentially the same reason: to minimize the effects of harmful, food-borne organisms.

Answer:

27...D 28...I 29...F 30...G 31...D 32...C 33...H 34...food poisoning 35...100 / one hundred % / percent 36...sausage(s) 37...cooler ones 38...unspiced foods 39...salt 40...A

IELTS Academic Reading Sample 114 - Numeration

Numeration

One of the first great intellectual feats of a young child is learning how to talk, closely followed by learning how to count. From earliest childhood we are so bound up with our system of numeration that it is a feat of imagination to consider the problems faced by early humans who had not yet developed this facility. Careful consideration of our system of numeration leads to the conviction that, rather than being a facility that comes naturally to a person, it is one of the great and remarkable achievements of the human race.

It is impossible to learn the sequence of events that led to our developing the concept of number. Even the earliest of tribes had a system of numeration that, if not advanced, was sufficient for the tasks that they had to perform. Our ancestors had little use for actual numbers; instead their considerations would have been more of the kind *Is this enough?* rather than *He many?* when they were engaged in food gathering, for example. However, when early humans first began to reflect on the nature of things around them, they discovered that they needed an idea of number simply to keep their thoughts in order. As they began to settle, grow plants and herd animals, the need for a sophisticated number system became paramount. It will never be known how and when this numeration ability developed, but it is certain that numeration was well developed by the time humans had formed even semipermanent settlements.

Evidence of early stages of arithmetic and numeration can be readily found. The indigenous peoples of Tasmania were only able to count one, two, many; those of South Africa counted one, two, two and one, two twos, two twos and one, and so on. But in real situations the number and words are often accompanied by gestures to help resolve any confusion. For example, when using the one, two, many type of system, the word many would mean, *Look my hands and see how many fingers I am showing you.* This basic approach is limited in the range of numbers that it can express, but this range will generally suffice when dealing with the simpler aspects of human existence.

The lack of ability of some cultures to deal with large numbers is not really surprising. European languages, when traced back to their earlier version, are very poor in number words and expressions. The ancient Gothic word for ten, *tachund*, is used to express the number 100 as *tachund tachund*. By the seventh century, the word *teon* had become interchangeable with the *tachund* or *hund* of the Anglo-Saxon language, and so 100 was denoted as *hund teontig*, or ten times ten. The average person in the seventh century in Europe was not as familiar with numbers as we are today. In fact, to qualify as a witness in a court law a man had to be able to count to nine!

Perhaps the most fundamental step in developing a sense of number is not the ability to count, but rather to see that a number is really an abstract idea instead of a simple attachment to a group of particular objects. It must have been within the grasp of the earliest humans to conceive that four birds are distinct from two birds; however, it is not an elementary step to associate the number 4, as connected with four birds, to the number 4, as connected with four rocks. Associating a number as one of the qualities of a specific object is a great hindrance to the development of a true number sense. When the number 4 can be registered in the mind as a specific word, independent of the object being referenced, the individual is ready to take the first step toward the development of a notational system for numbers and, from there, to arithmetic.

Traces of the very first stages in the development of numeration can be seen in several living languages today. The numeration system of the Tsimshian language in British Columbia contains seven distinct sets of words for numbers according to the class of the item being counted: for counting flat objects and animals, for round objects and time, for people, for long objects and trees, for canoes, for measures, and for counting when no particular object is being numerated. It seems that the last is a later development while the first six groups show the relics of an older system. This diversity of number names can also be found in some widely used languages such as Japanese.

Intermixed with the development of a number sense is the development of an ability to count. Counting is not directly related to the formation of a number concept because it is possible to count by matching the items being counted, against a group of pebbles, grains of corn, or the counter's fingers. These aids would have been indispensable to very early people who would have found the process impossible without some form of mechanical aid. Such aids, while different, are still used even by the most educated in today's society due to their convenience. All counting ultimately involves reference to something other than the things being counted. At first it may have been grains or pebbles but now it is a memorised sequence of words that happen to be the names of the numbers.

Questions 27-31

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

Write the correct letter, **A-G**, in boxes **27-31** on your answer sheet.

27 A developed system of numbering

28 An additional hand signal

29 In seventh-century Europe, the ability to count to a certain number

30 Thinking about numbers as concepts separate from physical objects

31 Expressing number differently according to class of item

Questions 32-40

Do the following statements agree with the information given in Reading Passage 62?

In boxes 32-40 on your answer sheet, write:

TRUE if the statement agrees with the information

FALSE if the statement contradicts the information

NOT GIVEN if there is no information on this

- 32** For the earliest tribes, the concept of sufficiency was more important than the concept of quantity.
- 33** Indigenous Tasmanians used only four terms to indicate numbers of objects.
- 34** Some peoples with simple number systems use body language to prevent misunderstanding of expressions of number.
- 35** All cultures have been able to express large numbers clearly.
- 36** The word 'thousand' has Anglo-Saxon origins.
- 37** In general, people in seventh-century Europe had poor counting ability.
- 38** In the Tsimshian language, the number for long objects and canoes is expressed with the same word.
- 39** The Tsimshian language contains both older and newer systems of counting.
- 40** Early peoples found it easier to count by using their fingers rather than a group of pebbles.

Answer:

27. B 28. E 29. A 30. C 31. G 32. TRUE 33. FALSE 34. TRUE 35. FALSE 36. NOT GIVEN 37.
TRUE 38. FALSE 39. TRUE 40. NOT GIVEN

IELTS Academic Reading Sample 115 - The coral reefs of Agatti Island

Question 1-9

Reading Passage 61 has nine paragraphs **A–I**.

Choose the correct heading for each paragraph from the list of headings below.

List of Headings

- i. Island legends
 - ii. Resources for exchange
 - iii. Competition for fishing rights
 - iv. The low cost of equipment
 - v. Agatti's favourable location
 - vi. Rising income levels
 - vii. The social nature of reef occupations
 - viii. Resources for islanders' own use
 - ix. High levels of expertise
 - x. Alternative sources of employment
 - xi. Resources for earning money
 - xii. Social rights and obligations
- 1. Paragraph A
 - 2. Paragraph B
 - 3. Paragraph C
 - 4. Paragraph D
 - 5. Paragraph E
 - 6. Paragraph F
 - 7. Paragraph G
 - 8. Paragraph H
 - 9. Paragraph I

The coral reefs of Agatti Island

A. Agatti is one of the Lakshadweep Islands off the southwest coast of India. These islands are surrounded by lagoons and coral reefs which are in turn surrounded by the open ocean. Coral reefs, which are formed from the skeletons of minute sea creatures, give shelter to a variety of plants and animals, and therefore have the potential to provide a stream of diverse benefits to the inhabitants of Agatti Island.

B. In the first place, the reefs provide food and other products for consumption by the islanders themselves. Foods include different types of fish, octopus and molluscs, and in the case of poorer families these constitute as much as 90% of the protein they consume. Reef resources are also used for medicinal purposes. For example, the money cowrie, a shell known locally as Vallakavadi, is commonly made into a paste and used as a home remedy to treat cysts in the eye.

C. In addition, the reef contributes to income generation. According to a recent survey, 20% of the households on Agatti report lagoon fishing, or shingle, mollusc, octopus and cowrie collection as their main occupation (Hoon et al, 2002). For poor households, the direct contribution of the reef to their financial resources is significant: 12% of poor households are completely dependent on the reef for their household income, while 59% of poor households rely on the reef for 70% of their household income, and the remaining 29% for 50% of their household income.

D. Bartering of reef resources also commonly takes place, both between islanders and between islands. For example, Agatti Island is known for its abundance of octopus, and this is often used to obtain products from nearby Androth Island. Locally, reef products may be given by islanders in return for favours, such as help in constructing a house or net mending, or for other products such as rice, coconuts or fish.

E. The investment required to exploit the reefs is minimal. It involves simple, locally available tools and equipment, some of which can be used without a boat, such as the fishing practice known as Kat moodsal. This is carried out in the shallow eastern lagoon of Agatti by children and adults, close to shore at low tide, throughout the year. A small cast net, a leaf bag, and plastic slippers are all that are required, and the activity can yield 10–12 small fish (approximately 1 kg) for household consumption. Cast nets are not expensive, and all the households in Agatti own at least one. Even the boats, which operate in the lagoon and near-shore reef, are constructed locally and have low running costs. They are either small, non-mechanised, traditional wooden rowing boats, known as Thonis, or rafts, known as Tharappam.

F. During more than 400 years of occupation and survival, the Agatti islanders have developed an intimate knowledge of the reefs. They have knowledge of numerous different types of fish and where they can be found according to the tide or lunar cycle. They have also developed a local naming system or folk taxonomy, naming fish according to their shape. Sometimes the same species is given different names depending on its size and age. For example, a full grown Emperor fish is called Metti and a juvenile is called Killokam. The abundance of each species at different fishing grounds is also well known. Along with this knowledge of reef resources, the islanders have developed a wide range of skills and techniques for exploiting them. A multitude of different

fishing techniques are still used by the islanders, each targeting different areas of the reef and particular species.

G. The reef plays an important role in the social lives of the islanders too, being an integral part of traditions and rituals. Most of the island's folklore revolves around the reef and sea. There is hardly any tale or song which does not mention the traditional sailing crafts, known as Odams, the journeys of enterprising 'heroes', the adventures of sea fishing and encounters with sea creatures. Songs that women sing recollect women looking for returning Odams, and requesting the waves to be gentler and the breeze just right for the sails. There are stories of the benevolent sea ghost baluvam, whose coming to shore is considered a harbinger of prosperity for that year, bringing more coconuts, more fish and general well-being.

H. The reef is regarded by the islanders as common property, and all the islanders are entitled to use the lagoon and reef resources. In the past, fishing groups would obtain permission from the Amin (island head person) and go fishing in the grounds allotted by him. On their return, the Amin would be given a share of the catch, normally one of the best or biggest fish. This practice no longer exists, but there is still a code of conduct or etiquette for exploiting the reef, and common respect for this is an effective way of avoiding conflict or disputes.

I. Exploitation of such vast and diverse resources as the reefs and lagoon surrounding the island has encouraged collaborative efforts, mainly for purposes of safety, but also as a necessity in the operation of many fishing techniques. For example, an indigenous gear and operation known as Bala fadal involves 25–30 men. Reef gleaning for cowrie collection by groups of 6–10 women is also a common activity, and even today, although its economic significance is marginal, it continues as a recreational activity.

Answer:

1...v 2...viii 3...xi 4...ii 5...iv 6...ix 7...i 8...xii 9...vii

IELTS Academic Reading Sample 116 - Let's Go Bats

You should spend about 20 minutes on Questions 1-13 which are based on Reading Passage below:

Let's Go Bats

A Bats have a problem: how to find their way around in the dark they hunt at flight, and cannot use light to help them find prey and avoid obstacles. You might say that this is a problem of their own making one that they could avoid simply by changing their habits and hunting by day. But the daytime economy is already heavily exploited by other creatures such as birds. Given that there is a living to be made at night, and given that alternative day time trades are thoroughly occupied, natural selection has_ favored bats that make a go of the night-hunting trade. It is probable that the nocturnal trades go way back in the ancestry of all mammals. In the time when the dinosaurs. dominated the daytime economy, our mammalian ancestors probably only managed to survive at all because they found ways of scraping a living at night Only after the my stenos mass extinction of the dinosaurs about 65 million years ago were our ancestors able to emerge into the day light in any substantial numbers.

B Bats have an engineering problem: how to find their way and find their prey in the absence of light Bats are not the only creatures to face this difficulty today. Obviously the night-flying insects that they prey on must find their way about somehow. Deep-sea fish and whales have little or no light by day or by night. Fish and dolphins that live in extremely muddy water cannot see because, although there is light, it is obstructed and scattered by the dirt in the water Plenty" of other modern animals make their living in conditions where seeing is difficult or impossible.

C Given the questions of how to manoeuvre in the dark, what solutions might an engineer consider? The first one that might occur to him is to manufacture light, to use a lantern or a searchlight Fireflies and some fish (usually with the help of bacteria) have the power to - manufacture their own light but the process seems to consume a large amount of energy. Fireflies use their light for attracting mates. This doesn't require a prohibitive amount of energy: a male's tiny pinprick of light can be seen by a female from some distance on a dark night since her eyes are exposed directly to the light source itself. However, using light to find one's own way around requires vastly more energy, since the eyes have to detect the tiny fraction of the light that bounces off each part of the scene. The light source must therefore be immensely brighter if it is to be used as a headlight to illuminate the path, than if it is to be used as a signal to others. In any event, whether or not the reason is the energy expense, it seems to be the case that with the possible exception of some weird deep-sea fish, no animal apart from man uses manufactured light to find its way about

D What else might the engineer think off Well, blind humans sometimes seem to have an uncanny sense of obstacles in their path, ft has been given the name' facial vision', because blind people have reported that Ft

feels a bit like the sense of touch, on the face. One report tells of a totally blind boy who could and his tricycle at good speed round the block near his home, using facial vision. Experiments showed that, in fact, facial vision is nothing to do with touch or the front of the face, although the sensation may be referred to the front of the face, like the referred pain in a phantom limb The sensation of facial vision, it turns out really goes in through the ears. Blind people, without even being aware of the fact are actually using echoes of their own footsteps and of other sounds, to sense the presence of obstacles. Before this was discovered, engineers had already built instruments to exploit the principle, for example to measure the depth of the sea under a ship. After this technique had been invented, it was only a matter of time before weapons designers adapted it for the detection of submarines. Both sides in the Second World War relied heavily on these devices, under such codenames as Asdic (British) and Sonar (American), as well as Radar (American) or RDF (British), which uses radio echoes rather than sound echoes.

E The Sonar and Radar pioneers Didn't know it then, but all the world now knows that bats, or rather natural selection working on bats, had perfected the system tens of millions of years earlier, and their radar" achieves feats of detection and navigation that would strike an engineer dumb with admiration It is technically incorrect to talk about bat'radar, since they do not use radio waves. It is sonar. But the underlying mathematical the ones of radar and sonar are very similar, and much of our scientific understanding of the details of what bats are doing has' come from applying radar theory to them. The American zoologist Donald Griffin, who was largely responsible for the discovery of sonar in bats, coined the term 'echolocation' to cover both sonar and radar, whether used' by animals or by human instruments.

Questions 1-5

Reading Passage 1 has five paragraphs, **A-E**.

Which paragraph contains the following information?

Write the correct letter. **A-E**, in boxes **1-5** on your answer sheet.

NB You may use any letter more than once.

1. examples of wildlife other than bats which do not rely on vision to navigate by
2. how early mammals avoided dying out
3. why bats hunt in the dark
4. how a particular discovery has helped our understanding of bats
5. early military uses of echolocation

Questions 6-9

Complete the summary below.

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

Write your answers in boxes 6-9 on your answer sheet.

Facial Vision

Blind people report that so-called 'facial vision' is comparable to the sensation of touch on the face. In fact, the sensation is more similar to the way in which pain from a **6**.....arm or leg might be felt. The ability actually comes from perceiving **7**through the ears. However, even before this was understood, the principle had been applied in the design of instruments which calculated the **8**.....of the seabed. This was followed by a wartime application in devices for finding **9**..... .

Question 10-13

Complete the sentences below.

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

Write your answers in boxes **10-13** on your answer sheet.

- 10** Long before the invention of radar,..... had resulted in a sophisticated radar-like system in bats.
- 11** Radar is an inaccurate term when referring to bats because are not used in their navigation system.
- 12** Radar and sonar are based on similar..... .
- 13** The word 'echolocation' was first used by someone working as a..... .

Answer:

1 B

2 A

3 A

4 E

5 D

6 phantom

7 echoes/obstacles

8 depth

9 submarines

10 natural selection

11 radio waves/echoes

12 mathematical theories

13 zoologist