کنکور کارشناسی، ارشد و دکتری (مبحث زبان)

بسته های آموزشی متنوع با تخفیف های ویژه

با ارائه مدرک معتبر از آکادمی شریف زاده

با عرض تبریک فراوان

شما به باشگاه دانشجویان آکادمی شریف زاده پیوستید.
با استفاده از کد تخفیف زیر می توانید از بیشترین تخفیف های ما در دوره های آتی بهره مند شوید.
کد تخفیف:

SharifzadehAcademy

علاوه بر این، می توانید کد تخفیف را جهت بهره مندی از تخفیف ویژه در اختیار دوستان و عزیزان خود قرار دهید تا از آن بهره ببرند.

توضیح مهم

اگر قصد بهره مندی از تخفیف های استثنایی ما را دارید میتوانید از ما کد تخفیف منحصر بفرد خود را دریافت کنید و آن را در شبکه های اجتماعی خود منتشر کنید تا همه عزیزان همراه شما بتوانند از فرصت استثنایی بهره مند شوند.

تعدادی از بسته های آموزشی ما بصورت رایگان در یوتیوب قابل مشاهده است
https://www.youtube.com/channel/UChQBdBVgpEH3VzNi45IRL8Q

نمونه سوالات آیلتس

بخش 6

Academic IELTS Reading Sample 51 - The History of the Tortoise

If you go back far enough, everything lived in the sea. At various points in evolutionary history, enterprising individuals within many different animal groups moved out onto the land, sometimes even to the most parched deserts, taking their own private seawater with them in blood and cellular fluids. In addition to the reptiles, birds, mammals and insects which we see all around us, other groups that have succeeded out of water include scorpions, snails, crustaceans such as woodlice and land crabs, millipedes and centipedes, spiders and various worms. And we mustn't forget the plants, without whose prior invasion of the land none of the other migrations could have happened.

Moving from water to land involved a major redesign of every aspect of life, including breathing and reproduction. Nevertheless, a good number of thoroughgoing land animals later turned around, abandoned their hard-earned terrestrial re-tooling, and returned to the Water Seals have only gone part way back. They show us what the intermediates might have been like, on the way to extreme cases such as whales and dugongs. Whales (including the small whales we call dolphins) and dugongs, with their close cousins the manatees, ceased to be land creatures altogether and reverted to the full marine habits of their remote ancestors. They don't even come ashore to breed. They do, however, still breathe air, having never developed anything equivalent to the gills of their earlier marine incarnation. Turtles went back to the sea a very long time ago and, like all vertebrate returnees to the water, they breathe air. However, they are, in one respect, less fully given back to the water than whales or dugongs, for turtles still lay their eggs on beaches.

There is evidence that all modem turtles are descended from a terrestrial ancestor which lived before most of the dinosaurs. There are two key fossils called Progaochelys quenstedtiand Palaeochersis talampayensis dating from early dinosaur times, which appear to be close to the ancestry of all modem turtles and tortoises. You might wonder how we can tell whether fossil animals lived on land or in water, especially if only fragments are found. Sometimes it`s obvious. Ichthyosarus were reptilian contemporaries of the dinosaurs, with fins and streamlined bodies. The fossils look like dolphins and they surely lived like dolphins, in the water. With turtles it is a little less obvious. One way to tell is by measuring the bones of their forelimbs.

Walter Joyce and Jacques Gauthier, at Yale University, obtained three measurements in these particular bones of 71 species of living turtles and tortoises. They used a kind of triangular graph paper to plot the three measurements against one another. All the land tortoise species formed a tight cluster of points in the upper part of the triangle; all the water turtles cluster in the lower part of the triangular graph. There was no overlap, except when they added some species that spend time both in water and on land. Sure enough, these amphibious species show up on the triangular graph approximately half way between the 'wet cluster' of sea turtles and the 'dry cluster' of land tortoises. 'The next step was to determine where the fossil fell. The

bones of P quenstedti and P. talampayensis leave us in no doubt. Their points on the graph are right in the thick of the dry cluster. Both these fossils were dry-land tortoises. They come from the era before our turtles returned to the water.

You might think, therefore, that modem land tortoises have probably stayed on land ever since those early terrestrial times, as most mammals did after a few of them went back to the sea. But apparently not. If you draw out the family tree of all modern turtles and tortoises, nearly all the branches are aquatic. Today's land tortoises constitute a single branch, deeply nested among branches consisting of aquatic turtles. This suggests that modern land tortoises have not stayed on land continuously since the time of P. quenstedti and P. talampayensis. Rather, their ancestors were among those who went back to the water, and they then re-emerged back onto the land in (relatively) more recent times.

Tortoises therefore represent a remarkable double return. In common with all mammals, reptiles and binds, their remote ancestors were marine fish and before that various more or less worm-like creatures stretching back, still in the sea, to the primeval bacteria. Later ancestors lived on land and stayed there for a very large number of generations. Later ancestors still evolved back into the water and became sea turtles. And finally they returned yet again to the land as tortoises, some of which now live in the driest of deserts.

Questions 27-30
Answer the questions below
*Choose **NO MORE THAN TWO WORDS** from the passage for each answer*
*Write your answers in boxes **27-30** on your answer sheet.*

27. What had to transfer from sea to land before any animals could migrate?
28. Which TWO processes are mentioned as those in which animals had to make big changes as they moved onto land?
29. Which physical feature, possessed by their ancestors, do whales lack?
30. Which animals might ichthyosaurs have resembled?

Questions 31-33
Do the following statements agree with the information given in Reading Passage 3?
In boxes **31-33** 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 more than once.

31. Turtles were among the first group of animals to migrate back to the sea.
32. It is always difficult to determine where an animal lived when its fossilized remains are

incomplete.
33. The habitat of ichthyosaurs can be determined by the appearance of their fossilized remains.

Questions 34-39
Complete the flow-chart below

Choose **NO MORE THAN TWO WORDS AND/OR A NUMBER** from the passage for each answer
Write your answers in boxes 34-39 on your answer sheet.

Method of determining where the ancestors of turtles and tortoises come from

Step 1: 71 species of living turtles and tortoises were examined and a total of **34** ..... were taken from the bones of their forelimbs.
Step 2: The data was recorded on a **35** ..... (necessary for comparing the information). Outcome: Land tortoises were represented by a dense **36** ..... of points towards the top. Sea turtles were grouped together in the bottom part.
Step 3: The same data was collected from some living **37** ..... species and added to the other results. Outcome: The points for these species turned out to be positioned about **38** ..... up the triangle between the land tortoises and the sea turtles.
Step 4: Bones of R quenstedti and P talampayensis were examined in a similar way and the results added.
Outcome: The position of the points indicated that both these ancient creatures were **39** .....

Questions 40
*Choose the correct letter **A, B, C,** or **D**.*
*Write the correct letter in box **40** on your answer sheet.*
According to the writer, the most significant thing about tortoises is that

A. they are able to adapt to life in extremely dry environments.
B. their original life form was a kind of primeval bacteria,
C. they have so much in common with sea turtles.
D. they have made the transition from sea to land more than once.

Answers

27. plant
28. breathing reproduction (In Either Order)
29. gills
30. dolphin
31. NOT GIVEN
32. FALSE
33. TRUE
34. 3 measurements
35. (triangular) graph
36. cluster
37. amphibious
38. half way
39. dry-land tortoises
40. D

Academic IELTS Reading Sample 52

A
Hearing impairment or other auditory function deficit in young children can have a major impact on their development of speech and communication, resulting in a detrimental effect on their ability to learn at school. This is likely to have major consequences for the individual and the population as a whole. The New Zealand Ministry of Health has found from research carried out over two decades that 6-10% of children in that country are affected by hearing loss.

B
A preliminary study in New Zealand has shown that classroom noise presents a major concern for teachers and pupils. Modem treading practices, the organization of desks in the classroom. poor classroom acoustics, and mechanical means of ventilation such as air-conditioning units all contribute to the number of children unable to comprehend the teachers voice. Education researchers Nelson and Soli have also suggested that recent trends in learning often involve collaborative interaction of multiple minds and tools as much as individual possession of information. This all amounts to heightened activity and noise levels, which have the potential to be particularly serious for children experiencing auditory function deficit. Noise in classrooms can only exacerbate their difficulty in comprehending and processing verbal communication with other children and instructions from the teacher.

C
Children with auditory function deficit are potentially failing to learn to their maximum potential because of noise levels generated in classrooms. The effects of noise on the ability of children to team effectively in typical classroom environments are now the subject of increasing concern. The International Institute of Noise Control Engineering (I-INCE), on the advice of the World Health Organization, has established an international working party, which includes New Zealand, to evaluate noise and reverberation control for school rooms.

D
While the detrimental effects of noise in classroom situations are not limited to children experiencing disability, those with a disability that affects their processing of speech and verbal communication could be extremely vulnerable. The auditory function deficits in question include hearing impairment, autistic spectrum disorders (ASD) and attention deficit disorders MDD/ADHD).

E
Autism is considered a neurological and genetic life-long disorder that causes discrepancies in the way information is processed. This disorder is characterized by interlinking problems with social imaginations, social communication and social interaction. According to Jenzen, this affects the ability to understand and relate in typical ways to people, understand events and

objects in the environment, and understand or respond to sensory stimuli. Autism does not allow learning or thinking in the same ways as in children who are developing normally.

Autistic spectrum disorders often result in major difficulties in comprehending verbal information and speech processing. Those experiencing these disorders often find sounds such as crowd noise and the noise generated by machinery painful and distressing. This is difficult to scientifically quantify as such extra-sensory stimuli vary greatly from one autistic individual to another. But a child who finds any type of noise in their classroom or learning space intrusive is likely to be adversely affected in their ability to process information.

F

The attention deficit disorders are indicative of neurological and genetic disorders and are characterized by difficulties with sustaining attention, effort and persistence, organization skills and disinhibition. Children experiencing these disorders find it difficult to screen out unimportant information, and focus on everything in the environment rather than attending to a single activity. Background noise in the classroom becomes a major distraction, which can affect their ability to concentrate.

G

Children experiencing an auditory function deficit can often End speech and communication very difficult to isolate and process when set against high levels of background noise. These levels come from outside activities that penetrate the classroom structure, from teaching activities, and other noise generated inside, which can be exacerbated by room reverberation. Strategies are needed to obtain the optimum classroom construction and perhaps a change in classroom culture and methods of teaching. ln particular, the effects of noisy classrooms and activities on those experiencing disabilities in the form of auditory function deficit need thorough investigation. It is probable that many undiagnosed children exist in the education system with 'invisible' disabilities. Their needs are less likely to be met than those of children with known disabilities.

H

The New Zealand Government has developed a New Zealand Disability Strategy and has embarked on a wide-ranging consultation process. The strategy recognizes that people experiencing disability face significant barriers in achieving a full quality of life in areas such as attitude, education, employment and access to services. Objective 3 of the New Zealand Disability Strategy is to 'Provide the Best Education for Disabled People' by improving education so that all children, youth learners and adult learners will have equal opportunities to learn and develop within their already existing local school. For a successful education, the learning environment is vitally significant, so any effort to improve this is likely to be of great benefit to all children, but especially to those with auditory function disabilities.

I

A number of countries are already in the process of formulating their own standards for the control and reduction of classroom noise. New Zealand will probably follow their example. The literature to date on noise in school rooms appears to focus on the effects on schoolchildren in general, their teachers and the hearing impaired. Only limited attention appears to have been given to those students experiencing the other disabilities involving auditory function deficit. lt is imperative that the needs of these children are taken into account in the setting of appropriate international standards to be promulgated in future.

Questions 1-6
Reading Passage 52 has nine sections, ***A-I.***
Which section contains the following information?

Write the correct letter ***A-l,*** *in boxes* ***1-6*** *on your answer sheet.*

1. an account of a national policy initiative
2. a description of a global team effort
3. a hypothesis as to one reason behind the growth in classroom noise
4. a demand for suitable worldwide regulations
5. a list of medical conditions which place some children more at risk from noise than others
6. the estimated proportion of children in New Zealand with auditory problems.

Questions 7-10
Answer the questions below.

Choose **NO MORE THAN TWO WORDS AND/OR A NUMBER** from the passage for each answer.
Write your answers in boxes 7-10 on your answer sheet.

7. For what period of time has hearing loss in schoolchildren been studied in New Zealand?
8. In addition to machinery noise, what other type of noise can upset children with autism?
9. What term is used to describe the hearing problems of schoolchildren which have not been diagnosed?
10. What part of the New Zealand Disability Strategy aims to give schoolchildren equal opportunity?

Questions 11-12
Choose **TWO** letters, **A-E**

Write the correct letters in boxes 11 and 12 on your answer sheet**.** The list below includes factors contributing to classroom noise.
Which **TWO** are mentioned by the writer of the passage?
A current teaching methods

B echoing corridors
C cooling systems
D large class sizes
E loud-voiced teachers
F playground games

Questions 13
*Choose the correct letter **A, B. C** or **D.***
Write the correct letter in box 13 on your answer sheet.
What is the writer's overall purpose in writing this article?

A to compare different methods oi dealing with auditory problems
B to provide solutions for overly noisy learning environments
C to increase awareness of the situation oi children with auditory problems
D to promote New Zealand as a model for other countries to follow

Answers

1. H
2. C
3. B
4. I
5. D
6. A
7. two decades
8. crowd (noise)
9. invisible (disability/ disabilities)
10. Objective 3
11 & 12. A C (In Either Order)
13. C

Academic IELTS Reading Sample 53 - Venus in Transit

June 2004 saw the first passage., known as a 'transit` of the planet Venus across the face of the Sun in 122 years. Transits have helped shape our view of the whole Universe, as Heather Cooper and Nigel Henbest explain

A

On 8 June 2004, more than half the population of the world were treated to a rare astronomical event. For over six hours, the planet Venus steadily inched its way over the surface of the Sun. This “transit` of Venus was the first since 6 December l882. On that occasion, the American astronomer Professor Simon Newcomb led a party to South Africa to observe the event. They were based at a girls' school, where - if is alleged – the combined forces of three schoolmistresses outperformed the professionals with the accuracy of their observations.

B

For centuries, transits of Venus have drawn explorers and astronomers alike to the four corners of the globe. And you can put it all down to the extraordinary polymath Edmond Halley. In November 1677, Halley observed a transit of the innermost planet Mercury, from the desolate island of St Helena in the South Pacific. .He realized that from different latitudes, the passage of the planet across the Suns disc would appear to differ. By timing the transit from two widely-separated locations, teams of astronomers could calculate the parallax angle - the apparent difference in position of an astronomical body due to a difference in the observers position. Calculating this angle would allow astronomers to measure what was then the ultimate goal; the distance of the Earth from the Sun. This distance is known as the 'astronomical unit` or AU.

C

Halley was aware that the AU was one of the most fundamental of all astronomical measurements. Johannes Kepler, in the early 17*h century, had shown that the distances of the planets from the Sun governed their orbital speeds, which were easily measurable. But no-one had found a way to calculate accurate distances to the planets from the Earth. The goal was to measure the AU; then, knowing the orbital speeds of all the other planets round the Sun, the scale of the Solar System would fall into place. However, Halley realized that Mercury was so far away that its parallax angle would be very difficult to determine. As Venus was closer to the Earth, its parallax angle would be larger and Halley worked out that by using Venus it would be possible to measure the Sun`s distance to 1 part in 500. But there was as problem: transits of Venus, unlike those of Mercury; are rare. occurring in pairs roughly eight years apart every hundred or so years. Nevertheless, he accurately predicted that Venus would cross the face of the Sun in both 1761 and 1769 - though he didn`t survive to see either.

D

Inspired by Halley's suggestion of a way to pin down the scale of the Solar System, teams of British and French astronomers set out on expeditions to places as diverse as India and Siberia. But things weren't helped by Britain and France being at war. The person who deserves most sympathy is the French astronomer Guillaume Le Gentil. He was thwarted by the fact that the British were besieging his observation site at Pondicherry in India. Fleeing on a French warship crossing the Indian Ocean, Le Gentil saw a wonderful transit - but the ship`s pitching and rolling ruled out any attempt at making accurate observations. Undaunted, he remained south of the equator, keeping himself busy by studying the islands of Mauritius and Madagascar before setting off to observe the next transit in the Philippines. Ironically after travelling nearly 50,000 kilometres, his view was clouded out at the last moment, a very dispiriting experience.

E

While the early transit timings were as precise as instruments would allow the measurements were dogged by the 'black drop' effect. When Venus begins to cross the Sun's disc, it looks smeared not circular - which makes it difficult to establish timings. This is due to diffraction of light. The second problem is that Venus exhibits a halo of light when it is seen just outside the Sun's disc. While this showed astronomers that Venus was surrounded by a thick layer of gases refracting sunlight around it, both effects made it impossible to obtain accurate timings.

F

But astronomers labored hard to analyze the results of these expeditions to observe Venus transits. Jonathan Franz Encke, Director of the Belin Observatory, finally determined a value for the AU based on all these parallax measurements: 153340,000 km. Reasonably accurate for the time, that is quite close to todays value of 149,597,870 km, determined by radar, which has now superseded transits and all other methods in accuracy. The AU is a cosmic measuring rod, and the basis of how we scale the Universe today The parallax principle can be extended to measure the distances to the stars. If we look at a star in January - when Earth is at one point in its orbit - it will seem to be in a different position from where it appears six months later. Knowing the width of Earth`s orbit, the parallax shift lets astronomers calculate the distance.

G

June 2004's transit of Venus was thus more of an astronomical spectacle than a scientifically important event. But such transits have paved the way for what might prove to be one of the most vital breakthroughs in the cosmos - detecting Earth-sized planets orbiting other stars.

Questions 14-17
Reading Passage 2 has seven paragraphs, **A-G**.

Which paragraph contains the following information?
Write the correct letter A-G, in boxes 14-17 on your answer sheet.

14. examples of different ways in which the parallax principle has been applied
15. a description of an event which prevented a transit observation
16. a statement about potential future discoveries leading on from transit observations
17. a description of physical states connected with Venus which early astronomical instruments failed to overcome

Questions 18-21
Look at the following statements (Questions 18-21) and the list of people below
Match each statement with the correct person, A, B, C or D.
Write the correct letter A, B, C or D. in boxes 18-21 on your answer sheet.

18. He calculated the distance of the Sun from the Earth based on observations of Venus with a fair degree of accuracy.
19. He understood that the distance of the Sun from the Earth could be worked out by comparing observations of a transit.
20. He realized that the time taken by a planet to go round the Sun depends on its distance from the Sun.
21. He witnessed a Venus transit but was unable to make any calculations.

List of People
A Edmond Halley
B Johannes Kepler
C Guillaume Le Gentil
D Johann Franz Encke

Questions 22-26
Do the following statements agree with the information given in Reading Passage 2?
Write answers in boxes **22-26** 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

22. Halley observed one transit of the planet Venus.
23. Le Gentil managed to observe a second Venus transit.
24. The shape of Venus appears distorted when it starts to pass in front of the Sun.
25. Early astronomers suspected that the atmosphere on Venus was toxic.
26. The parallax principle allows astronomers to work out how far away distant stars are from the Earth.

Answers

14. F
15. D
16. G
17. E
18. D
19. A
20. B
21. C
22. FALSE
23. FALSE
24. TRUE
25. NOT GIVEN
26. TRUE

Academic IELTS Reading Sample 54: Attitude of Language

You should spend about 20 minutes on Questions **1-13**, which are based on Reading Passage 54 below:

It is not easy to be systematic and objective about language study. Popular linguistic debate regularly deteriorates into invective and polemic. Language belongs to everyone, so most people feel they have a right to hold an opinion about it. And when opinions differ, emotions can run high. Arguments can start as easily over minor points of usage as over major policies of linguistic education.

Language, more oven is a very public behavior so it is easy for different usages to be noted and criticized No part of society or social behavior is exempt: linguistic factors influence how we judge personality, intelligence, social status, educational standards, job aptitude, and many other areas of identity and social survival. As a result, it is easy to hurt, and to be hurt, when language use is unfeelingly attacked.

ln its most general sense. prescriptivism is the view that one variety of language has an inherently higher value than others, and that this ought to be imposed on the whole of the speech community. The view is propounded especially in relation to grammar and vocabulary, and frequently with reference to pronunciation. The variety which ls favoured, in this account, ls usually a version of the ‘standard’ written language, especially as encountered in literature, or in the formal spoken language which most closely reflects this style. Adherents to this variety are said to speak or write ‘correctly'; deviations from lt are said to be 'incorrect`.

All the main languages have been studied prescriptlvely, especially in the 18th century approach to the writing of grammars and dictionaries. The aims of these early grammarians were threefold: [a) they wanted to codify the principles of their languages, to show that there was a system beneath the apparent chaos of usage. (b] they wanted a means of settling disputes over usage, and (c] they wanted to point out what they felt to be common errors, in order to ‘improve' the language. The authoritarian nature of the approach is best characterized by its reliance on 'rules' of grammar Some usages are prescribed; to be learnt and followed accurately; others are proscribed to be avoided. ln this early period, there were no half-measures: usage was either right or wrong. and it was the task of the grammarian not simply to record alliterative but to pronounce judgement upon them.

These attitudes are still with us, and they motivate a widespread concern that linguistic standards should be maintained. Nevertheless, there is an alternative point of view that is

concerned less with standards than with the facts of linguistic usage. This approach ls summarized in the statement that it is the task of the grammarian to describe not prescribe to record the facts of linguistic diversity, and not to attempt the impossible tasks evaluating language variation or halting language change. In the second half of the 18th century, we already find advocates of this view, such as Joseph Priestley, whose Rudiments of English Grammar (1761) insists that 'the custom of speaking is the original and only just standard of any language. `Linguistic issues, it is argued, cannot be solved by logic and legislation. And this view has become the tenet of the modem linguistic approach to grammatical analysis.

In our own time, the opposition between 'descriptivists' and 'prescriptivists' has often become extreme. with both sides painting unreal pictures of the other. Descriptive grammarians have been presented as people who do not care about standards, because of the way they see all forms of usage as equally valid. Prescriptive grammarians have been presented as blind adherents to a historical tradition. The opposition has even been presented in quasi-political terms - of radical liberalism vs elitist conservatism.

Questions 1-8

Do the following statements agree with the claims of the writer in Reading Passage 54? In boxes **1-8** in your answer sheet, write:

YES	if the statement agrees with the claims of the writer
NO	if the statement contradicts the claims of the writer
NOT GIVEN	if it is impossible to say what the writer thinks about this

1. There are understandable reasons why arguments occur about language.
2. People feel more strongly about language education than about small differences in language usage.
3. Our assessment of a persons intelligence is affected by the way he or she uses language.
4. Prescriptive grammar books cost a lot of money to buy in the 18th century.
5. Prescriptivism still exists today.
6. According tc descriptivist it is pointless to try to stop language change.
7. Descriptivism only appeared alter the 18th century.
8. Both descriptivists and prescriptivists have been misrepresented.

Questions 9-12

Complete the summary using the list of words, A-l, below
Write the correct letter; A-l, in boxes 9-12 on your answer sheet.

The language debate

According to **9** ……., there is only one correct form of language. Linguists who take this approach to language place great importance on grammatical **10** ..... Conversely, the view of **11** ……., such as Joseph Priestley, is that grammar should be based on **12** ..... .

Questions 13
Choose the correct letter A. B, C or D.
Write the correct letter in box 13 on your answer sheet.
What is the writers purpose in Reading Passage?

A to argue in favour of a particular approach to writing dictionaries and grammar books
B to present a historical account of differing views of language
C to describe the differences between spoken and written language
D to show how a certain view of language has been discredited

Answers

1. YES
2. NO
3. YES
4. NOT GIVEN
5. YES
6. YES
7. NO
8. YES
9. H
10. F
11. A
12. C
13. B

Academic IELTS Reading Sample 55 - Tidal Power

Undersea turbines which produce electricity from the tides are set to become an important source of renewable energy for Dritain. lt is still too early to predict the extent of the impact they may have, but all the signs are that they will play a significant role in the future.

A

Operating on the same principle as wind turbines, the power in sea turbines comes from tidal currents which turn blades similar to ships' propellers, but unlike wind, the tides are predictable and the power input is constant. The technology raises the prospect of Britain becoming self-sufficient in renewable energy and drastically reducing its carbon dioxide emissions. If tide, wind and wave power are all developed. Britain would be able to close gas, coal and nuclear power plants and export renewable power to other parts of Europe. Unlike wind power which Britain originally developed and than abandoned for 20 years allowing the Dutch to make it a major industry. undersea turbines could become a big export earner to island nations such as Japan and New Zealand.

B

Tidal sites have already been identified that will produce one sixth or more of the UK's power - and at prices competitive with modern gas turbines and undercutting those of the already ailing nuclear industry. One site alone, the Pendand Firth. between Orkney and mainland Scotland, could produce 10% of the country's electricity with banks of turbines under the sea, and another at Alderney in the Channel islands three times the 1.200 megawatts of Britain's largest and newest nuclear plant, Sizewell B, in Suffolk. Other sites identified include the Bristol Channel and the west coast of Scotland, particularly the channel between Campbeltown and Northern Ireland.

C

Work on designs for the new turbine blades and sites are well advanced at the University of Southampton's sustainable energy research group. The first station is expected to be installed off Lynmouth in Devon shortly to test the technology in a venture jointly funded by the department of Trade and Industry and the European Union. AbuBakr Bahaj, in charge of the Southampton research. said: The prospects for energy from tidal currents are far better than from wind because the flows of water are predictable and constant. The technology for dealing with the hostile saline environment under the sea has been developed in the North Sea oil industry and much is already known about turbine blade design, because of wind power and

ship propellers. There are a few technical difficulties, but I believe in the next live to ten years we will be installing commercial marine turbine farms.' Southampton has been awarded £2'l5.U.`D over three years to develop the turbines and is working with Marine Current Turbines. a subsidiary of IT power; on the Lynmouth project. EU research has now identified 1GB potential sites for tidal powen BG% round the coasts of Britain. The best sites are between islands or around heavily indented coasts where there are strong tidal currents.

D

A marine turbine blade needs to be only one third of the size of a wind generator to produce three times as much power. The blades will be about 20 metres in diameter so around 30 metres of water is required. Unlike wind power there are unlikely to be environmental objections. Fish and other creatures are thought unlikely to be at risk from the relatively slow turning blades. Each turbine will be mounted on a tower which will connect to the national power supply grid via underwater cables. The towers will stick out of the water and be lit. to warn shipping, and also be designed to be lifted out of the water for maintenance and to clean seaweed from the blades.

E

Dr Baha has done most work on the Alderrney site, where there are powerful currents. The single undersea turbine farm would produce far more power than needed for the Channel Islands and most would be fed into the French Grid and be re-imported into Britain via the cable under the Channel.

F

One technical difficulty is cavitations, where low pressure behind a turning blade causes air bubbles. These can cause vibration and damage the blades of the turbines. Dr Bahaj said: 'We have to lest a number of blade types to avoid this happening or at least make sure it does not damage the turbines or reduce performance. Another slight concern is submerged debris floating into the blades. So far we do not know how much of a problem it might be. We will have to make the turbines robust because the sea is a hostile environment, but all the signs that we can do it are good.

Questions 14-17
Reading Passage 2 has six paragraphs, A-F.
Which paragraph contains the following information?
Write the correct letter; A-F in boxes 14-17 on your answer sheet.
NB You may use any letter more than once.

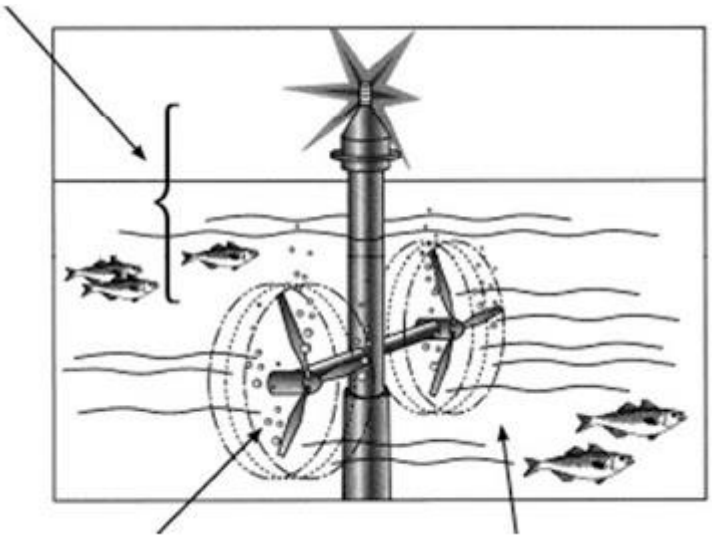
14. the location of the first test site
15. a way of bringing the power produced on one site back into Britain
16. a reference to a previous attempt by Britain to find an alternative source of energy
17. mention of the possibility of applying technology from another industry

Questions 18-22
CHOOSE FIVE Letters A-J
Write the correct letters in boxes 18-22 on your answer street.
Which FIVE of the following claims about tidal power are made by the writer?

A It is a more reliable source of energy than wind power.
B It would replace all other forms of energy in Britain.
C Its introduction has come as a result of public pressure.
D It would cut down on air pollution.
E It could contribute to the closure of many existing power stations in Britain.
F It could be a means of increasing national income.
G It could face a lot of resistance from other fuel industries.
H It could be sold more cheaply than any other type of fuel.
I It could compensate for the shortage of inland sites for energy production.
J It is best produced in the vicinity of coastlines with particular features.

Questions 23-26
Label the diagram below
Choose NO MORE THAN TWO WORDS from the passage for each answer
Write your answers in boxes 23-26 on your answer sheet,

An Undersea Turbine



Whole tower can be raised for **23** ..... and the extraction of seaweed from the blades. Sea life not in danger due to the fact that blades are comparatively **24** ..... Air bubble result from the **25** ....., behind blades. This is known as **26** .....

14. C
15. E
16. A
17. C
18. A
19. D
20. E
21. F
22. J
23. maintenance
24. slow (turning)
25. low pressure
26. Cavitation

Academic IELTS Reading Sample 56: Information Theory- the Big Data

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

Information theory lies at the heart of everything - from DVD players and the genetic code of DNA to the physics of the universe at its most fundamental. It has been central to the development of the science of communication, which enables data to be sent electronically and has therefore had a major impact on our lives.

A

In April 2002 an event took place which demonstrated one of the many applications of information theory. The space probe, Voyager I, launched in 1977, had sent back spectacular images of Jupiter and Satum and then soared out of the Solar System on a one-way mission to the stars. After 25 years of exposure to the freezing temperatures of deep space, the probe was beginning to show its age, Sensors and circuits were on the brink of failing and NASA experts realized that they had to do something or lose contact with their probe forever. The solution was to get a message to Voyager I to instruct it to use spares to change the failing parts. With the probe 12 billion kilometers from Earth, this was not an easy task. By means of a radio dish belonging to NASA's Deep Space Network, the message was sent out into the depths of space. Even travelling at the speed of light, it took over II hours to reach its target, far beyond the orbit of Pluto. Yet, incredibly, the little probe managed to hear the faint call from its home planet, and successfully made the switchover.

B

It was the I0ngest-distance repair job in history, and a triumph for the NASA engineers. But it also highlighted the astonishing power of the techniques developed by American communications engineer Claude Shannon, who had died just a year earlier. Born in 1916 in Petoskey, Michigart. Shannon showed an early talent for maths and for building gadgets, and made breakthroughs in the foundations of computer technology when still a student. While at Bell laboratories, Shannon developed information theory, but shunned the resulting acclaim. In the 1940s. he singlehandedly created an entire science of communication which has since inveigled its way into a host of applications, from DVDs to satellite communication to bar codes - any area, in short, where data has to be conveyed rapidly yet accurately.

C

This all seems light years away from the down to-earth uses Shannon originally had for his work, which began when he was a 22-year—old graduate engineering student at the prestigious Massachusetts Institute of Technology in 1939. He set out with an apparently simple aim: to pin down the precise meaning of the concept of ‘information'. The most basic form of information, Shannon argued, is whether something is true or false - which can be captured in the binary unit, or 'bit', of the form 1 or 0. Having identified this fundamental unit, Shannon set about defining otherwise vague ideas about information and how to transmit it from place to place. ln the process he discovered something surprising: it is always possible to guarantee information will gel through random interference - ‘noise' — intact.

D

Noise usually means unwanted sounds which interfere with genuine information. information theory generalizes this idea via theorems that capture the effects of noise with mathematical precision. In particular, Shannon showed that noise sets a limit on the rate at which information can pass along communication channels while remaining error-free. This rate depends on the relative strengths of the signal and noise travelling down the communication channel, and on its capacity (its' bandwidth'). The resulting limit, given in units of bits per second, is the absolute maximum rate of error-free communication given signal strength and noise level. The trick, Shannon showed, is to find ways of packaging up - ‘coding' - information to cope with the ravages of noise, while staying within the information carrying capacity ‘bandwidth' - of the communication system being used.

E

Over the years scientists have devised many such coding methods, and they have proved crucial in many technological feats. The Voyager spacecraft transmitted data using codes which added one extra bit for every single bit of information; the result was an error rate of just one bit in 10,000 — and stunningly clear pictures of the planets. Other codes have become part of everyday life - such as the Universal Product Code, or bar code, which uses a simple error-detecting system that ensures supermarket check-out lasers can read the price even on. say, a crumpled bag of crisps. As recently as 1993, engineers made a major breakthrough by discovering so-called turbo codes - which come very close to Shannon’s ultimate limit for the maximum rate that data can be transmitted reliably, and now play a key role in the mobile videophone revolution.

F

Shannon also laid the foundations of more efficient ways of storing information, by stripping out superfluous (‘redundant') bits from data which contributed little real information. As mobile phone text messages like 'l CN C U' show, it is often possible to leave out a lot of data without losing much meaning, As with error correction, however, there's a limit beyond which

messages become too ambiguous. Shannon showed how to calculate this limit, opening the way to the design of compression methods that cram maximum information into the minimum space.

Questions 27-32
Reading Passage 56 has six paragraphs, A-F.
Which paragraph contains the following information?

Write the correct letter A-E in boxes 27-32 on your answer sheet.
27. an explanation of the factors affecting the transmission of information
28. an example of how unnecessary information can be omitted
29. a reference to Shannon`s attitude to fame
30. details of a machine capable of interpreting incomplete information
31. a detailed account of an incident involving information theory
32. a reference to what Shannon initially intended to achieve in his research

Questions 33-37
Complete the notes below.
Choose **N0 MORE THAN TWO WORDS** from the passage for each answer
Write your answers in boxes **33—37** on your answer sheet.

The Voyager l Space Probe

The probe transmitted pictures of both **33** ....., and ....., then left the **34** ..... The freezing temperatures were found to have a negative effect on parts of the space probe. Scientists feared that both the **35** ..... and ..... were about to stop working. The only hope was lo tell the probe to replace them with **36** ..... - but distance made communication with the probe difficult. A **37** ..... was used to transmit the message at the speed of light.
The message was picked up by the probe and the switchover took place.

Questions 38-40
Do the following statements agree with the information given in Reading Passage 37 in boxes 38-40 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

38. The concept of describing something as true or false was the starting point for Shannon in

his attempts to send messages over distances.
39. The amount of information that can be sent in a given time period is determined with reference to the signal strength and noise level.
40. Products have now been developed which can convey more information than Shannon had anticipated as possible.

Answers

27. D
28. F
29. B
30. E
31. A
32. C
33. Jupiter Saturn
34. Solar System
35. sensors circuits
36. spares
37. radio dish
38. TRUE
39. TRUE
40. FALSE

Academic IELTS Reading Sample 57 - The Life & Work of Marie Curie

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

Marie Curie is probably the most famous woman scientist who has ever lived. Born Maria Sklodowska in Poland in 1867, she is famous for her work on radioactivity, and was twice a winner of the Nobel A Prize. With her husband, Pierre Curie. and Henri Raeqiierel, she was awarded the 1903 Nobel Prize for Physics, and was then sole winner of the 1911 Nobel Prize for Chemistry. She was the hist woman to win a ·Nobel Prize.

From childhood, Marie was remarkable for her prodigious memory, and at the age of 16 won a gold medal on completion of her secondary education. Because her father lost his savings through bad investment, she then had to take work as a teacher. From her earnings she was able to finance her sister Bronia's medical studies in Paris, on the understanding that Bronia would, in turn, later help her to get an education.

ln 1891 this promise was fulfilled and Marie went to Paris and began to study at the Sorbonne (the University of Paris). She often worked far into the night and lived on little more than bread and butter and tea. She came first in the examination in the physical sciences in 1893, and in 1894 was placed second in the examination in mathematical sciences. It was not until the spring of that year that she was introduced to Pierre Curie.

Their marriage in 1895 marked the start of a partnership that was soon to achieve results of world significance. Following Henri BecquereI‘s discovery in 1896 of a new phenomenon, which Marie later called 'radioactivity', Marie Curie decided to rind out if the radioactivity

discovered in uranium was to be found in other elements. She discovered that this was true for thorium.

Tuming her attention to minerals, she found her interest drawn to pitchblende, a mineral whose radioactivity, superior to that of pure uranium, could be explained only by the presence in thc orc of small quantities of an unknown substance of very high activity. Pierre Curie joined her in the work that she had undertaken to resolve this problem. and that led to the discovery of the new elements, polonium and radium. While Pierre Curie devoted himself chiefly to the physical study of the new radiations, Marie Curie struggled to obtain pure radium in the metallic state. This was achieved with the help of the chemist André-Louis Debierne, one of Pierre Curie's pupils. Based on the results of this research. Marie Curie received her Doctorate of Science, and in 1903 Marie and Pierre shared with Becquerel the Nobel Prize for Physics for the discovery of radioactivity.

The births of Marie's two daughters, Irene and Eve, in 1897 and 1904 failed to internrpt her scientific work. She was appointed lecturer in physics at the Ecole Nor-male Supérieure for girls in Sevres, France (1900), and introduced a method of teaching based on experimental demonstrations. In December 1904 she was appointed chief assistant in the laboratory directed by Pierre Curie.

The sudden death of her husband in 1906 was a bitter blow to Marie Curie. but was also a turning point in her career: henceforth she was to devote all her energy to completing alone the scientific work that they had undertaken. On May 19, 1906, she was appointed to the professorship that had been left vacant on her husband's death, becoming the first woman to teach at the Sorbonne. In 1911 she was awarded the Nobel Prize for Chemistry for the isolation of a pure form of radium.

During World War I, Marie Curie, with the help of her daughter Irene, devoted herself to the development of the use of X—radiography, including the mobile units which came to be known as 'little Curies', used for the treatment of wounded soldiers. ln 1918 the Radium Institute, whose staff Irene had joined, began to operate in earnest, and became a centre for nuclear physics and chemistry. Marie Curie, now at the highest point of her fame and, from 1922, a member of the Academy of Medicine, researched the chemistry of radioactive substances and their medical applications

ln 1921, accompanied by her two daughters, Marie Curie made a triumphant journey to the United States to raise funds for research on radium. Women there presented her with a gram of radium for her campaign. Marie also gave lectures in Belgium. Brazil, Spain and Czechoslovakia and, in addition, had the satisfaction of seeing the development of the Curie Foundation in Paris. and the inauguration in 1932 in Warsaw of the Radium Institute, where her sister Bronia became director.

One of Marie Curie's outstanding achievements was to have understood the need to accumulate intense radioactive sources. not only to treat illness but also to maintain an abundant supply for research. The existence in Paris at the Radium Institute of o stock of grams of radium made a decisive contribution to the success of the experiments undertaken in the years around 1930. This work prepared the way for the discovery of the neutron by Sir James Chadwick and, above all, for the discovery in 1934 by Irene and Frédéric Joliot- Curie of artificial radioactivity. A few months after this discovery, Marie Curie died as a result of leukaemia caused by exposure to radiation. She had often carried test tubes containing radioactive isotopes in her pocket, remarking on the pretty blue-green light they gave off.

Her contribution to physics had been immense, not only in her own work, the importance of which had been demonstrated by her two Nobel Prizes, but because of her influence on subsequent generations of nuclear physicists and chemists.

Questions 1-6
Do the following statements agree with the information given in Reading Passage 57?
In boxes 1-6 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

Marie Curie's husband was a joint winner of both Marla‘s Nobel Prizes.
Marie became interested in science when she was a child.
Marie was able to attend the Sorbonne because of her sister’s financial contribution.
Marie stopped doing research for several years when her children were born.
Marie took over the teaching position her husband had held.
Marie‘s sister Bronia studied the medical uses of radioactivity.

Question 7-13
Complete the notes below
Choose **ONE WORD** from the passage for each answer
Write your answers in boxes **7-13** on your answer sheet.

Marie Curie’s research on radioactivity

When uranium was discovered to be radioactive. Marie Curie found that the element called **7** …….. had the same property.

Marie and Pierre Curie‘s research into the radioactivity of the mineral known as **8**……..led to the discovery of two new elements.

In 1911, Marie Curie received recognition for her work on the element **9**.....

Marie and Irene Curie developed X-radiography which was used as a medical technique for **10** ..... .

Marie Curie saw the importance of collecting radioactive material both for research and for cases of **11** .....

The radioactive material stocked in Paris contributed to the discoveries in the 1930s of the **12** .....…… and of what was known as artificial radioactivity.

During her research. Marie Curio was exposed to radiation and as a result she suffered from **13** .....

Answers

1. FALSE
2. NOT GIVEN
3. TRUE
4. FALSE
5. TRUE
6. NOT GIVEN
7 thorium
8. pitchblende
9. radium
10. soldiers
11. illness
12. neutron
13. leukaemia/leukemia

Academic IELTS Reading Sample 58: Young Children`s Sense of Identity

You should spend about 20 minutes on Questions **14-26**, which are based on Reading Passage below:

A

A sense of self develops in young children by degrees. The process can usefully be thought of in terms of the gradual emergence of two somewhat separate features: the self as a subject, and the self as an object. William James introduced the distinction in 1892, and contemporaries of his, such as Charles Cooley, added to the developing debate. Ever since then psychologists have continued building on the theory.

B

According to James, a child's first step on the road to self-understanding can be seen as the recognition that he or she exists. This is an aspect of the self that he labeled 'self-as-subject', and he gave it various elements. These included an awareness of one's own agency (i.e. one's power to act), and an awareness of one's distinctiveness from other people. These features gradually emerge as infants explore their world and interact with caregivers. Cooley (1902) suggested that a of the self-as-subject was primarily concerned with being able to exercise power. He proposed that the earliest examples of this are an infants attempts to control physical objects, such as toys or his or her own limbs. This is followed by attempts to affect the behavior of other people. For example, infants learn that when they cry or smile someone responds to them.

C

Another powerful source of information for infants about the effects they can have on the world around them is provided when others mimic them. Many parents spend a lot of time, particularly in the early months, copying their infant's vocalizations and expressions in addition, young children enjoy looking in mirrors, where the movements they can see are dependent upon their own movements.This is not to say that infants recognize the reflection as their own image (a later development). However, Lewis and Brooks-Gunn (1979) suggest that infants' developing understanding that the movements they see in the mirror are contingent on their own, leads to a growing awareness that they are distinct from other people. This is because they, and only they can change the reflection in the mirror.

D

This understanding that children gain of themselves as active agents continues to develop in their attempts to co-operate with others in play. Drum (1988) points out that it is in such day-to-day relationships and interactions that the child's understanding of his· or herself emerges. Empirical investigations of the self-as- subject in young children are, however, rather scarce because of difficulties of communication: even if young infants can reflect on their experience, they certainly cannot express this aspect of the self directly.

E

Once Children have acquired a certain level of self-awareness, they begin to place themselves in a whole series of categories, which together play such an important part in defining them uniquely as 'themselves'. This second step in the development of a full sense of self is what lames called the 'self-as-object'. This has been seen by many to be the aspect of the self which is most influenced by social elements, since it is made up of social roles (such as student, brother; colleague) and characteristics which derive their meaning from comparison or interaction with other people (such as trust worthiness, shyness, sporting ability).

F

Cooley and other researchers suggested a close connection between a person's own understanding of their identity and other people's understanding of it. Cooley believed that people build up their sense of identity from the reactions of others to them, and from the view they believe others have of them He called the self- as-object the 'looking-glass self', since people come to sec themselves as they are reflected in others. Mead (1934) went even further, and saw the self and the social world as inextricably bound together 'The self is essentially a social structure, and it arises in social experience it is impossible to conceive of a self arising outside of social experience.'

G

Lewis and Brooks-Gunn argued that an important developmental milestone is reached when children become able to recognize themselves visually without the support of seeing contingent movement. This recognition occurs around their second birthday. In one experiment, Lewis and Brooks-Gunn (1979) dabbed some red powder on the noses of children who were playing in front of a mirror, and then observed how often they touched their noses. The psychologists reasoned that if the children knew what they usually looked like, they would be surprised by the unusual red mark and would start touching it. On the other hand, they found that children of 15 to 18 months are generally not able to recognize themselves unless other cues such as movement are present.

H

Finally perhaps the most graphic expressions of self-awareness in general can be seen in the displays of rage which are most common from 18 months to 3 years of age. In a longitudinal study of groups of three or four children, Bronson (1975) found that the intensity of the frustration and anger in their disagreements increased sharply between the ages of 1 and 2 years. Often, the children's disagreements involved a struggle over a toy that none of them had played with before or after the tug-of-war: the children seemed to be disputing ownership rather than wanting to play with it. Although it may be less marked in other societies, the link between the sense of 'self' and of 'ownership' is a notable feature of childhood in Western societies.

Questions 14-19
Reading Passage 58 has eight paragraphs, A-H.
Which paragraph contains the following information?
Write the correct letter A-H, in boxes 14-19 on your answer sheet.
NB You may use any letter more than once.

14. An account of the method used by researchers in a particular study
15. The role of imitation in developing a sense of identity
16. The age at which children can usually Identity a static image of themselves
17. A reason for the limitations of scientific research into 'self-as subject.
18. Reference to a possible link between culture and a particular form of behavior
19. Examples of the wide range of features that contribute to the sense of 'self-as-object'.

Questions 14-19
*Look at the following findings (Questions **20-23**) and the list oi researchers below.*
*Match each finding with the correct researcher or researchers, **A-E**.*
*Write the correct letter **A-E**, in boxes **20-23** on your answer sheet.*

20. A sense of identity can never be formed without relationships with other people.
21. A child's awareness of self is related to a sense of mastery over things and people.
22. At a certain age, children's sense of identity leads to aggressive behavior.
23. Observing their own reflection contributes to children's self awareness.

List of Researchers
A James
B Cooley
C Lewis and Brooks-Gunn
D Mead
E Bronson

Questions 24-26

Complete the summary below
Choose **ONE WORD ONLY** from the passage for each answer
Write your answers in boxes **24-26** on your answer sheet.

How children acquire a sense of identity

First, children come to realize that they can have an effect on the world around them, for example by handling objects or causing the image to move when they lace a **24** ..... This aspect of self-awareness is difficult to research directly, because of **25**..... problems.

Secondly, children start to become aware of how they are viewed by others. One important stage in this process is the visual recognition of themselves which usually occurs when they reach the age oi two. In Western societies at least, the development of self-awareness is often linked to a sense of **26** ....., and can lead to disputes.

Answers

14. G
15. C
16. G
17. D
18. H
19. E
20. D
21. B
22. E
23. C
24. mirror
25. communication
26. Ownership

Academic IELTS Reading Sample 59: The Development of Museums

You should spend about 20 minutes on Questions 31-40, which are based on Reading Passage 59:

A

The conviction that historical relics provide infallible testimony about the past is rooted in the nineteenth and early twentieth centuries, when science was regarded as objective and value free. As one writer observes: 'Although it is now evident that artifacts are as easily altered as chronicles, public faith in their veracity endures: a tangible relic seems ipso facto real! Such conviction was, until recently, reflected in museum displays. Museums used to look — and some still do — much like storage rooms of objects packed together in showcases: good for scholars who wanted to study the subtle differences in design, but not for the ordinary visitor. to whom lt all looked alike. Similarly, the information accompanying the objects often made little sense to the lay visitor. The content and format of explanations dated back to a time when the museum was the exclusive domain of the scientific researcher.

B

Recently, however, attitudes towards history and the way lt should be presented have altered. The key word in heritage display is now 'experience the more exciting the better and, if possible, involving all the senses. Good examples of this approach ln the UK are the Jorvik Centre in York; the National Museum of Photography, Elm and Television in Bradford; and the imperial War Museum in London. In the US the trend emerged much earlier. Williamsburg has been a prototype for many heritage developments in other parts of the world. No one can predict where the process will end. On so called heritage sites the re-enactment of historical events is increasingly popular, and computers will soon provide virtual reality experiences, which will present visitors with a vivid image of the period of their choice, in which they themselves can act as if part of the historical environment. Such developments have been criticised as an intolerable vulgarisation. but the success of many historical theme parks and similar locations suggests that the majority of the public does not share this opinion.

C

In a related development, the sharp distinction between museum and heritage sites on the one hand, and theme parks on the other. is gradually evaporating. They already borrow ideas and concepts from one another. For example, museums have adopted storylines for exhibitions,

sites have accepted 'theming' as a relevant tool, and theme parks are moving towards more authenticity and research-based presentations in zoos, animals are no longer kept in cages, but in great spaces, either ln the open air or in enormous greenhouses, such as the jungle and desert environments .In Burgers' Zoo In Holland. This particular trend is regarded as one of the major developments in the presentation of natural history in the twentieth century.

D

Theme parks are undergoing other changes, too, as they try to present more serious social and cultural issues, and move away from fantasy. This development is a response to market forces and, although museums and heritage sites have a special. rather distinct, role to fullfil, they are also operating in a very competitive environment, where visitors make choices on how and where to spend their free time. Heritage and museum experts do not have to invent stories and recreate historical environments to attract their visitors: their assets are already in place. However, exhibits must be both based on artefacts and facts as we know them, and attractively presented. Those who are professionally engaged in the art of interpreting history are thus ln a difficult position, as they must steer a narrow course between the demands of 'evidence' and 'attractiveness especially given the increasing need in the heritage industry for income generating activities.

E

It could be claimed that in order to make everything in heritage more `real` historical accuracy must be increasingly altered. For example, Pithecanthropus erectus is depicted in an Indonesian museum with Malay facial features, because this corresponds to public perceptions. Similarly, in the Museum of Natural History in Washington, Neanderthal man is shown making a dominant gesture to his wife. Such presentations tell us more about contemporary perceptions of the world than about our ancestors. There is one compensation, however, for the professionals who make these interpretations: If they did not provide the interpretation, visitors would do it for themselves. based on their own ideas. misconceptions and prejudices. And no matter how exciting the result, it would contain a lot more bias than the presentations provided by experts.

F

Human bias is inevitable, but another source of bias in the representation of history has to do with the transitory nature of the materials themselves. The simple fact is that not everything from history survives the historical process. Castles, palaces and cathedrals have a longer lifespan than the dwellings of ordinary people. The same applies to the famishing and other contents of the premises. In a town like Leyden in Holland, which in the seventeenth century was occupied by approximately the same number of inhabitants as today, people lived within the walled town, an area more than five times smaller than modern Leyden. In most of the

houses several families lived together in circumstances beyond our imagination. Yet In museums, line period rooms give only an image of the lifestyle of the upper class of that era. No wonder that people who stroll around exhibitions are filled with nostalgia; the evidence in museums indicates that life was so much better in the past. This notion is induced by the bias in its representation in museums and heritage centers.

Questions 31-36
Choose the correct letter A. B. C or D.
Write the correct letter in boxes 31-36 on your answer sheet.

31. Compared with today's museums those of the past
A. did not present history in a detailed way.
B. were not primarily intended for the public.
C. were more clearly organized.
D. preserved items with greater care.

32. According to the writer, current trends in the heritage industry
A. emphasize personal involvement.
B. have their origins in York and London,
C. rely on computer images.
D. reflect minority tastes.

33. The writer says that museums. heritage sites and theme parks
A. often work in close partnership.
B. try to preserve separate identities.
C. have similar exhibits.
D. are less easy to distinguish than before.

34. The writer says that in preparing exhibits for museums, experts
A. should pursue a single objective.
B. have to do a certain amount of language translation.
C. should be free from commercial constraints.
D. have to balance conflicting priorities.

35. In paragraph E. the writer suggests that some museum exhibits
A. fall to match visitor expectations.
B. are based on the false assumptions of professionals.
C. reveal more about present beliefs than about the past.
D. allow visitors to make more use of their imagination.

36. The passage ends by noting that our view of history is biased because
A. we fail to use our imagination.
B. only very durable objects remain from the past.
C. we tend to ignore things that displease us.
D. museum exhibits focus too much on the local area.

Questions 37-40
Do the following statements agree with the information given in Reading Passage 3?
In boxes 37-40 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

37. Consumers prefer theme parks which avoid serious issues.
38. More people visit museums than theme parks.
39. The boundaries of Leyden have changed little since the seventeenth century.
40. Museums can give a false impression of how life used to be.

Answers

27. ii
28. vi
29. i
30. iii
31. B
32. A
33. D
34. D
35. C
36. B
37. FALSE
38. NOT GIVEN
39. FALSE
40. TRUE

Academic IELTS Reading Sample 60: Let's Go Bats

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

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 ft 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 (Amencan), as wail 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'radar1, 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 .....
.

Answers

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