

Section 1

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

A song on the brain

Some songs just won't leave you alone. But this may give us clues about how our brain works

A

Everyone knows the situation where you can't get a song out of your head. You hear a pop song on the radio - or even just read the song's title and it haunts you for hours, playing over and over in your mind until you're heartily sick of it. The condition now even has a medical name 'song-in-head syndrome'. WWW.THEIELTSHUB.COM

B

But why does the mind annoy us like this? No one knows for sure, but it's probably because the brain is better at holding onto information than it is at knowing what information is important. Roger Chaffin, a psychologist at the University of Connecticut says, 'It's a manifestation of an aspect of memory which is normally an asset to us, but in this instance, it can be a nuisance.'

C

This eager acquisitiveness of the brain may have helped our ancestors remember important information in the past. Today, students use it to learn new material, and musicians rely on it to memorise complicated pieces. But when this useful function goes awry it can get you stuck on a tune. Unfortunately, superficial, repetitive pop tunes are, by their very nature, more likely to stick than something more inventive.

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D

The annoying playback probably originates in the auditory cortex. Located at the front of the brain, this region handles both listening and playback of music and other sounds. Neuroscientist Robert Zatorre of McGill University in Montreal proved this some years ago when he asked volunteers to replay the theme from the TV show Dallas in their heads. Brain imaging studies showed that this activated the same region of the auditory cortex as when the people actually heard the song.

E

Not every stored musical memory emerges into consciousness, however. The frontal lobe of the brain gets to decide which thoughts become conscious and which ones are simply stored away. But it can become fatigued or depressed, which is when people most commonly suffer from song-in-head syndrome and other intrusive thoughts, says Susan Ball, a clinical psychologist at Indiana University School of Medicine in Indianapolis. And once the unwanted song surfaces, it's hard to stuff it back down into the subconscious. 'The more you try to suppress a thought, the more you get it,' says Ball. 'We call this the pink elephant phenomenon. Tell the brain not to think about pink elephants, and it's guaranteed to do so,' she says. WWW.THEIELTSHUB.COM

F

For those not severely afflicted, simply avoiding certain kinds of music can help. 'I know certain pieces that are kind of "sticky" to me, so I will not play them in the early morning for fear that they will run around in my head all day,' says Steven Brown, who trained as a classical pianist but is now a neuroscientist at the University of Texas Health Science Center at San Antonio. He says he always has a song in his head and, even more annoying, his mind never seems to make it all the way through. 'It tends to involve short fragments between, say, 5 or 15 seconds. They seem to get looped, for hours sometimes,' he says.

G WWW.THEIELTSHUB.COM

Brown's experience of repeated musical loops may represent a phenomenon called 'chunking', in which people remember musical phrases as a single unit of memory, says Caroline Palmer, a psychologist at Ohio State University in Columbus. Most listeners have little choice about what chunks they remember. Particular chunks may be especially 'sticky' if you hear them often or if they follow certain predictable patterns, such as the chord progression of rock 'n' roll music. Palmer's research shows that the more a piece of music conforms to these patterns, the easier it is to remember. That's why you're more likely to be haunted by the tunes of pop music than by those of a classical composer such as J. S. Bach.

H

But this ability can be used for good as well as annoyance. Teachers can tap into memory reinforcement by setting their lessons to music. For example, in one experiment students who heard a history text set as the lyrics to a catchy song remembered the words better than those who simply read them, says Sandra Calvert, a psychologist at Georgetown University in Washington DC.

I

This sort of memory enhancement may even explain the origin of music. Before the written word could be used to record history, people memorised it in songs, says Leon James, a psychologist at the University of Hawaii. And music may have had an even more important role. 'All music has a message,' he says. 'This message functions to unite society and to standardise the thought processes of people in society.'

Questions 1-3 WWW.THEIELTSHUB.COM

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

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

- 1.** The writer says that 'song-in-head syndrome' may occur because the brain
 - A. confuses two different types of memory.
 - B. cannot decide what information it needs to retain.
 - C. has been damaged by harmful input.
 - D. cannot hold onto all the information it processes.

- 2.** A tune is more likely to stay in your head if
 - A. it is simple and unoriginal.
 - B. you have musical training.
 - C. it is part of your culture.
 - D. you have a good memory. WWW.THEIELTSHUB.COM

- 3.** Robert Zatorre found that a part of the auditory cortex was activated when volunteers
 - A. listened to certain types of music.
 - B. learned to play a tune on an instrument.
 - C. replayed a piece of music after several years.

D. remembered a tune they had heard previously.

Questions 4-7

Look at the following theories (Questions 4-7) and the list of people below.

Match each theory with the person it is credited to.

Write the correct letter **A-F** in boxes **4-7** on your answer sheet.

- 4. The memorable nature of some tunes can help other learning processes.
- 5. Music may not always be stored in the memory in the form of separate notes.
- 6. People may have started to make music because of their need to remember things. WWW.THEIELTSHUB.COM
- 7. Having a song going round your head may happen to you more often when one part of the brain is tired.

List of people

- A. Roger Chaffin
- B. Susan Ball
- C. Steven Brown
- D. Caroline Palmer
- E. Sandra Calvert
- F. Leon James

Questions 8-13

Reading Passage 321 has nine paragraphs labelled A-I.

Which paragraph contains the following information?

Write the correct letter **A-I** in boxes **8-13** on your answer sheet.

NB. You may use any letter more than once.

- 8. a claim that music strengthens social bonds
- 9. two reasons why some bits of music tend to stick in your mind more than others
- 10. an example of how the brain may respond in opposition to your wishes WWW.THEIELTSHUB.COM
- 11. the name of the part of the brain where song-in-head syndrome

begins

12. examples of two everyday events that can set off song-in-head syndrome

13. a description of what one person does to prevent song-in-head syndrome WWW.THEIELTSHUB.COM

Section 2

You should spend about 20 minutes on **Questions 14- 27**, which are based on Passage below.

Worldly Wealth

Can the future population of the world enjoy a comfortable lifestyle, with possessions, space and mobility, without crippling the environment?

The world's population is expected to stabilize at around nine billion. Will it be possible for nine billion people to have the lifestyle enjoyed today only by the wealthy? One school of thought says no: not only should the majority of the world's people resign themselves to poverty forever, but rich nations must also revert to simpler lifestyles in order to save the planet. WWW.THEIELTSHUB.COM

Admittedly, there may be political or social barriers to achieving a rich world. But in fact, there seems to be no insuperable physical or ecological reason why nine billion people should not achieve a comfortable lifestyle, using technology only slightly more advanced than that which we now possess. In thinking about the future of civilization, we ought to start by asking what people want. The evidence demonstrates that as people get richer they want a greater range of personal technology, they want lots of room (preferably near or in natural surroundings) and they want greater speed in travel. More possessions, more space, more mobility.

In the developed world, the personal technologies of the wealthy, including telephones, washing machines and cars, have become necessities within a generation or two. Increasing productivity that results in decreasing costs for such goods has been responsible for the greatest gains in the standard of living, and there is every reason to believe that this will continue. WWW.THEIELTSHUB.COM

As affluence grows, the amount of energy and raw materials used for the production of machinery will therefore escalate. But this need not mean

an end to the machine age. Rather than being thrown away, materials from old machinery can be recycled by manufacturers. And long before all fossil fuels are exhausted, their rising prices may compel industrial society not only to become more energy efficient but also to find alternative energy sources sufficient for the demands of an advanced technological civilization nuclear fission, nuclear fusion, solar energy, chemical photosynthesis, geothermal, biomass or some yet unknown source of energy.

The growth of cities and suburbs is often seen as a threat to the environment. However, in fact, the increasing amount of land consumed by agriculture is a far greater danger than urban sprawl. Stopping the growth of farms is the best way to preserve many of the world's remaining wild areas. But is a dramatic downsizing of farmland possible? Thanks to the growth of agricultural productivity, reforestation and 're-wilding' have been underway in the industrial countries for generations. Since 1950 more land in the US has been set aside in parks than has been occupied by urban and suburban growth. And much of what was farmland in the nineteenth century is now forest again. Taking the best Iowa maize growers as the norm for world food productivity, it has been calculated that less than a tenth of present cropland could support a population of 10 billion. WWW.THEIELTSHUB.COM

In *The Environment Game*, a vision of a utopia that would be at once high-tech and environmentalist. Nigel Calder suggested that 'nourishing but unpalatable primary food produced by industrial techniques - like yeast from petroleum may be fed to animals, so that we can continue to eat our customary meat, eggs, milk, butter, and cheese and so that people in underdeveloped countries can have adequate supplies of animal protein for the first time.'

In the long run, tissue-cloning techniques could be used to grow desired portions of meat by themselves. Once their DNA has been extracted to create cowless steaks and chickenless drumsticks, domesticated species of livestock, bred for millennia to be stupid or to have grotesquely enhanced traits, should be allowed to become extinct, except for a few specimens in zoos. However, game such as wild deer, rabbits and wild ducks will be ever more abundant as farms revert to wilderness, so this

could supplement the laboratory-grown meat in the diets of tomorrow's affluent.

With the rising personal incomes come rising expectations of mobility. This is another luxury of today's rich that could become a necessity of tomorrow's global population - particularly if its members choose to live widely dispersed in a post-agrarian wilderness. In his recent book *Free Flight*, James Fallows, a pilot as well as a writer, describes serious attempts by both state and private entrepreneurs in the USA to promote an 'air taxi' system within the price range of today's middle class and perhaps tomorrow's global population.

Two of the chief obstacles to the science fiction fantasy of the personal plane or hover car are price and danger. While technological improvements are driving prices down, piloting an aircraft in three dimensions is still more difficult than driving a car in two. and pilot error causes more fatalities than driver error. But before long our aircraft and cars will be piloted by computers which are never tired or stressed.

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So perhaps there are some grounds for optimism when viewing the future of civilization. With the help of technology, and without putting serious strains on the global environment, possessions, space and mobility can be achieved for all the projected population of the world.

Questions 14-19

Do the following statements reflect the claims of the writer in Reading Passage?

In boxes **14-19** on your answer sheet, write -

- YES** if the statement reflects the writer's claims
NO if the statement contradicts the writer's claims
NOT GIVEN if it is impossible to say what the writer thinks about this

14. Today's wealthy people ignore the fact that millions are living in poverty.

15. There are reasons why the future population of the world may not enjoy a comfortable lifestyle.

16. The first thing to consider when planning for the future is

environmental protection.

17. As manufactured goods get cheaper, people will benefit more from them.

18. It may be possible to find new types of raw materials for use in the production of machinery.

19. The rising prices of fossil fuels may bring some benefits.

Questions 20-25

Complete the summary below.

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

Write your answers in boxes **20-25** on your answer sheet.

Space for an increased population

According to the writer, the use of land for **20** is the most serious threat to the environment. However, in the US, there has already been an increase in the amount of land used for **21** and forests. Far less land would be required to feed the world's population if the **22** of the land could be improved worldwide. It has also been claimed that the industrial production of animal foods could allow greater access to animal **23** by the entire world's population.

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Scientists could use **24** from domesticated animals to help produce meat by tissue cloning, and these species could then be allowed to die out. In addition to this type of meat, **25** will also be widely available.

Questions 26-27

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

Write your answers in boxes **26-27** on your answer sheet.

26. Greater mobility may be a feature of the future because of changes in

- A. the location of housing.
- B. patterns of employment.
- C. centres of transport.
- D. the distribution of wealth.

- 27.** Air transport will be safe because of
- A. new types of aircraft.
 - B. better training methods.
 - C. three-dimensional models.
 - D. improved technology.

You should spend about 20 minutes on **Questions 27- 40**, which are based on Passage below.

Video game research

Although video games were first developed for adults, they are no longer exclusively reserved for the grownups in the home. In 2006, Rideout and Hamel reported that as many as 29 percent of preschool children (children between two and six years old) in the United States had played console video games, and 18 percent had played hand-held ones. Given young children's insatiable eagerness to learn, coupled with the fact that they are clearly surrounded by these media, we predict that preschoolers will both continue and increasingly begin to adopt video games for personal enjoyment. Although the majority of gaming equipment is still designed for a much older target audience, once a game system enters the household it is potentially available for all family members, including the youngest. Portable systems have done a particularly good job of penetrating the younger market.

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Research in the video game market is typically done at two stages: some time close to the end of the product cycle, in order to get feedback from consumers, so that a marketing strategy can be developed; and at the very end of the product cycle to 'fix bugs' in the game. While both of those types of research are important, and may be appropriate for dealing with adult consumers, neither of them aids in designing better games, especially when it comes to designing for an audience that may have particular needs, such as preschoolers or senior citizens. Instead, exploratory and formative research has to be undertaken in order to truly understand those audiences, their abilities, their perspective, and their needs. In the spring of 2007, our preschool-game production team at Nickelodeon had a hunch that the Nintendo DS - with its new features, such as the microphone, small size and portability, and its relatively low

price point - was a ripe gaming platform for preschoolers. There were a few games on the market at the time which had characters that appealed to the younger set, but our game producers did not think that the game mechanics or design were appropriate for preschoolers. What exactly preschoolers could do with the system, however, was a bit of a mystery. So we set about doing a study to answer the query: What could we expect preschoolers to be capable of in the context of hand-held game play, and how might the child development literature inform us as we proceeded with the creation of a new outlet for this age group?

Our context, in this case, was the United States, although the games that resulted were also released in other regions, due to the broad international reach of the characters. In order to design the best possible DS product for a preschool audience, we were fully committed to the ideals of a 'user-centered approach', which assumes that users will be at least considered, but ideally consulted during the development process. After all, when it comes to introducing a new interactive product to the child market, and particularly such a young age group within it, we believe it is crucial to assess the range of physical and cognitive abilities associated with their specific developmental stage.

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Revelle and Medoff (2002) review some of the basic reasons why home entertainment systems, computers, and other electronic gaming devices, are often difficult for preschoolers to use. In addition to their still developing motor skills (which make manipulating a controller with small buttons difficult), many of the major stumbling blocks are cognitive. Though preschoolers are learning to think symbolically, and understand that pictures can stand for real-life objects, the vast majority are still unable to read and write. Thus, using text-based menu selections is not viable. Mapping is yet another obstacle since preschoolers may be unable to understand that there is a direct link between how the controller is used and the activities that appear before them on screen. Though this aspect is changing, in traditional mapping systems real life movements do not usually translate into game-based activity.

Over the course of our study, we gained many insights into how preschoolers interact with various platforms, including the DS. For instance, all instructions for preschoolers need to be in voice-over, and

include visual representations, and this has been one of the most difficult areas for us to negotiate with respect to game design on the DS. Because the game cartridges have very limited memory capacity, particularly in comparison to console or computer games, the ability to capture large amounts of voice-over data via sound files or visual representations of instructions becomes limited. Text instructions take up minimal memory, so they are preferable from a technological perspective. Figuring out ways to maximise sound and graphics files, while retaining the clear visual and verbal cues that we know are critical for our youngest players, is a constant give and take. Another of our findings indicated that preschoolers may use either a stylus, or their fingers, or both although they are not very accurate with either. One of the very interesting aspects of the DS is that the interface, which is designed to respond to stylus interactions, can also effectively be used with the tip of the finger. This is particularly noteworthy in the context of preschoolers for two reasons. Firstly, as they have trouble with fine motor skills and their hand-eye coordination is still in development, they are less exact with their stylus movements; and secondly, their fingers are so small that they mimic the stylus very effectively, and therefore by using their fingers they can often be more accurate in their game interactions. WWW.THEIELTSHUB.COM

Questions 28-31

Do the following statements agree with the claims of the writer in Reading Passage?

In boxes **28-31** on 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

- 28.** The proportion of preschool children using video games is likely to rise.
- 29.** Parents in the US who own gaming equipment generally allow their children to play with it.
- 30.** The type of research which manufacturers usually do is aimed at improving game design.
- 31.** Both old and young games consumers require research which is

specifically targeted.

Questions 32-36

Complete the summary using the list of words/phrases, A-I, below.

Problems for preschool users of video games

Preschool children find many electronic games difficult, because neither their motor skills nor their **32** are sufficiently developed.

Certain types of control are hard for these children to manipulate, for example, **33** can be more effective than styluses.

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Also, although they already have the ability to relate **34** to real-world objects, preschool children are largely unable to understand the connection between their own **35** and the movements they can see on the screen. Finally, very few preschool children can understand **36**

- | | | | |
|------------------------|-------------|---------------------|------------------|
| A. actions | B. buttons | C. cognitive skills | D. concentration |
| E. fingers | F. pictures | G. sounds | |
| H. spoken instructions | | I. written menus | |

Questions 37- 40

Choose the correct letter, **A, B, C** or **D** and white them in boxes **37-40** on your answer sheet.

37. In 2007, what conclusion did games producers at Nickelodeon come to?

- A. The preschool market was unlikely to be sufficiently profitable.
- B. One of their hardware products would probably be suitable for preschoolers.
- C. Games produced by rival companies were completely inappropriate for preschoolers.
- D. They should put their ideas for new games for preschoolers into practice.

38. The study carried out by Nickelodeon

- A. was based on children living in various parts of the world.
- B. focused on the kinds of game content which interests preschoolers.
- C. investigated the specific characteristics of the target market.
- D. led to products which appealed mainly to the US consumers.

39. Which problem do the writers highlight concerning games instructions for young children? WWW.THEIELTSHUB.COM

- A. Spoken instructions take up a lot of the available memory.
- B. Written instructions have to be expressed very simply.
- C. The children do not follow instructions consistently.
- D. The video images distract attention from the instructions.

40. Which is the best title for Reading Passage 3?

- A. An overview of video games software for the preschool market
- B. Researching and designing video games for preschool children
- C. The effects of video games on the behaviour of young children
- D. Assessing the impact of video games on educational achievement



1. B
2. A
3. D
4. E
5. D
6. F
7. B
8. I
9. G
10. E
11. D
12. A
13. F
14. NOT GIVEN
15. YES
16. NO
17. YES
18. NOT GIVEN
19. YES
20. agriculture / farms / farmland
21. parks
22. productivity
23. protein
24. DNA
25. game
26. A
27. D
28. YES
29. NOT GIVEN
30. NO
31. YES
32. C
33. E
34. F
35. A
36. I
37. B
38. C
39. A
40. B

