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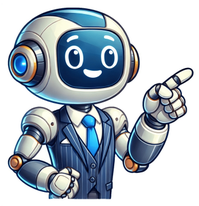

ACADEMIC READING / By Manpreet Singh / April 24, 2018 IELTSDATA READING PASSAGE 62-SPACE. SPACE Is humanity running out of space or will we find new frontiers? As populations grow, people have to look for more innovative ways to provide space Section A The world has changed dramatically since Thomas Malthus's work 'An Essay on the Principle of the population', first published in 1798, argued [...] IELTSDATA READING PASSAGE 62-SPACE Read More » As an IELTS instructor with over 20 years of experience, I often encounter intriguing questions within the IELTS Speaking test, and "Is humanity running out of space?" is certainly one that sparks debate. This topic delves into the realms of overpopulation, urbanization, environmental concerns, and sustainable living – all issues relevant to the IELTS exam. Understanding the Question: More Than Just Physical Space When tackling "Is humanity running out of space?", it's crucial to recognize its multifaceted nature. Examiners aren't merely looking for your understanding of geographical limitations, but also your ability to discuss: Overpopulation: The increasing global population's strain on resources and infrastructure. Urbanization: The mass migration to cities and its consequences on housing, pollution, and quality of life. Environmental Impact: The link between human expansion and deforestation, habitat loss, and climate change. Resource Depletion: The finite nature of resources like water, arable land, and fossil fuels. Urban Sprawl: City vs. Nature Crafting Your IELTS Response To effectively address this question, consider these strategies: 1. Acknowledge Different Perspectives: Begin by acknowledging the validity of concerns about dwindling space. You could say: "It's a valid concern. With the global population constantly growing, the pressure on existing resources and spaces is undeniable." 2. Explore Solutions and Innovations: Transition to a discussion about potential solutions: "However, I believe human ingenuity can offer solutions. Sustainable urban planning, renewable energy, and technological advancements in agriculture can help us utilize existing space more efficiently." 3. Provide Concrete Examples: Illustrate your points with real-world examples: "Singapore, despite its limited land, has become a model for vertical urban development, maximizing space while maintaining a high quality of life." "The development of drought-resistant crops is crucial in ensuring food security for growing populations, even with limited arable land." 4. Maintain a Balanced Viewpoint: Avoid extreme stances. Instead, offer a nuanced perspective: "While challenges are undeniable, I remain optimistic. By embracing innovation and sustainable practices, we can ensure a future where humanity thrives without running out of space." Sample IELTS Speaking Response Let's piece together a possible response: Examiner: Some people believe that humanity is running out of space. What are your views on this? Candidate: "It's a valid concern. With the global population constantly growing, the pressure on existing resources and spaces is undeniable. However, I believe human ingenuity can offer solutions. Sustainable urban planning, like that seen in Singapore's vertical city model, showcases how we can maximize existing space. Furthermore, advancements in renewable energy and agriculture can address resource limitations. Challenges exist, but by embracing innovation and sustainable practices, we can ensure a future where humanity thrives without running out of space." Key Takeaways Remember, the IELTS Speaking test assesses your fluency, vocabulary, grammar, and ability to articulate your thoughts. Practice discussing complex topics like "Is humanity running out of space?" using the strategies outlined above. Stay informed about current affairs related to population, urbanization, and environmental issues. Most importantly, communicate your ideas clearly, confidently, and with a touch of optimism! You should spend about 20 minutes on Questions 13-27 which are based on Reading Passage 2 below. The monster ships that changed how we travel When the world's then-largest ocean liner embarked on its first transatlantic voyage in September 1907, thousands of spectators gathered at the docks of Liverpool to watch. Cunard's RMS Lusitania had been outfitted with a new type of engine that differed from that of its rivals – and it would go on to break the speed record for the fastest ocean crossing not once, but twice. Between 1850 and 1900, three British passenger lines – Cunard, Inman and White Star -dominated transatlantic travel. Toward the end of the century, as increasing numbers of emigrants sought passage to the US and a growing class of Gilded Age travellers demanded speed and luxury, corporate rivalry intensified. Pressure from other European lines forced the British companies to add amenities like swimming pools and restaurants. Not unlike today's rivalries between, say, aircraft manufacturers like Airbus and Boeing, each raced to make its ocean liners the largest, fastest and most opulent. In the process, they launched the modern age of leisure cruising – and developed innovations and technologies that continue to be used on cruise ships today. In the mid-19th Century, there were two main players. Inman's inaugural steamship, launched in 1850, made it the first major British line to replace traditional side-mounted paddlewheels with a screw propeller – an apparatus with fixed blades turning on a central axis. With the added speed and fuel efficiency this brought, plus a sleek iron hull that was more durable than wood, Inman established itself as a company unafraid to try new technology for faster crossings. Inman's main rival, Cunard, focused on safety instead. The Cunard way was to let competitors introduce new-fangled technology and let them deal with the setbacks, once that technology had proved itself, only then would Cunard consider using it. But Cunard risked being left behind both by Inman and by a new rival which burst onto the scene in 1870 – the White Star line's splashy debut included five huge ocean liners, dubbed floating hotels. Their flagship, RMS Oceanic, launched in 1871 and the contrast with Cunard was stark, for example where Oceanic had bathtubs, Cunard offered a sink. In 1888, Inman introduced ships which no longer required auxiliary sails, giving ocean liners a similar look to the one they have today. Cunard, meanwhile, ventured into the new world of telecommunications by installing the first Marconi wireless stations, which allowed radio operators to transmit messages at sea, on its sister ships RMS Lucania and RMS Campania. First-class passengers could even book European hotels by wireless before reaching port. In 1897, Germany entered the fray with the SS Amerika, wowed its well-heeled guests by introducing the first à la carte restaurant at sea: the Ritz-Carlton, brainchild of Paris hotelier Cesar Ritz and renowned chef Auguste Escoffier. It allowed guests to order meals at their leisure and dine with their friends rather than attend rigidly scheduled seatings – a forerunner of the kind of freestyle dining seen on today's cruise ships. To complicate matters, American banking tycoon JP Morgan was buying up smaller companies to create a US-based shipping-and-railroad monopoly. In 1901, White Star became his biggest acquisition. Suddenly, the battles weren't only in the boardrooms: building the world's top ocean liners was now a point of national pride. With the help of a £2.6 million government loan (equivalent to more than £261 million today), Britain's Cunard line launched the massive twins RMS Lusitania and RMS Mauretania. Both had the first steam turbine engines of any superliner. White Star fought back with RMS Olympic and RMS Titanic that would feature double hulls and watertight bulkheads. With standard reciprocating engines, they were slower than the Cunarders, but surpassed them in size and elegance, even debuted the first indoor swimming pools at sea. History changed course when Titanic hit an iceberg on 14 April 1912 and sank on her first transatlantic voyage. As a result of the tragedy, safety regulations were updated to require lifeboat berths for every passenger and 24-hour radio surveillance (rules which are still in place). But there were more challenges to come. World War One broke out in 1914 and European governments requisitioned liners for war service. Despite a post-war liner-building boom, US anti-immigration laws reduced the number of transatlantic emigrants – the liners' bread and butter – in the 1920s. In 1957, more people crossed the Atlantic by ship than ever before, but by the following year, jet passengers outnumbered them. Cunard said flying was a just fad, and that it was not a genuine concern. Despite Cunard's best efforts, by the late 1950s more people were flying than taking ships to their destinations. Air travel and high operating costs doomed most transatlantic liners by the 1970s – only Cunard's RMS Queen Mary 2 makes regular transatlantic crossings now. Questions 13-18 Label as true, false, or not given (T / F / NG) Do the following statements agree with the information given in passage 2? Write your answers in the boxes for questions 13-18 as: TRUE if the statement agrees with the information FALSE if the statement contradicts the information NOT GIVEN if there is no information on this 13 The competition between modern day airline manufacturers is very much like the early days of ship construction. 14 Inman was fearful of using the latest available materials alongside progressive construction methods to cut crossing times. 15 Following the invention of the radio, second class guests could reserve rooms to stay in the cities they were heading to from the ship they were on. 16 By borrowing a substantial amount of money, a leading British company built a couple of huge identical ships with the very first steam engine propulsion. 17 Crossing the Atlantic is done by the one remaining cruise ship these days on a scheduled timetable. 18 A German company introduced fixed and tightly controlled set-seating meal times on their newest ships. Questions 19–23 Match letters A-C, to the statements numbered below 19-23 Which company does each of the following statements refer to? 19 Being acquired by a high-powered financier meant that the proud thoughts of a nation were at stake. 20 Claiming air travel was a short-term temporary fashionable form of travel not to be overly worried about. 21 Using alternate newer technologies rendered older wind powered systems obsolete giving them the modern-day look. 22 Patiently waiting for their rivals to prove that new technologies and systems worked before implementing them themselves. 23 Producing massive ocean going vessels that gained them the nickname 'hotels that float'. A Cunard B Inman C White Star Questions 24–27 Complete the sentences below. Choose NO MORE THAN TWO TO THREE WORDS from the passage for each answer. It was a couple of times in the early 1900s that the newest ship of the day broke the 24…………………… As European firms excelled, it forced the U.K.-based companies to improve their ships and in particular to 25…………………… Due to a terrible disaster, new rules were put in place after that we can see today are 26…………………… It was often whole families in the early part of the 20th Century, moving from Europe to America that was known to the industry as their 27…………………… The Academic passage, 'Science in Space Reading Answers', is a reading passage that consists of 14 questions. With diligent practice, the Reading Module can be the top-scoring category for IELTS aspirants. To score well, you must understand how to approach and answer the different question types in the Reading Module. By solving and reviewing Sample Reading Questions from past IELTS papers, you can ensure that your Reading skills are up to the mark. Take the practice test Science in Space below and try more IELTS reading practice tests from IELTSMaterial.com. The question types found in this passage are: You should spend about 20 minutes on Questions 27-40, which are based on the Reading Passage below. Science in Space A premier, world-class laboratory in low Earth orbit. That was how the National Aeronautics and Space Administration agency (NASA) sold the International Space Station (ISS) to the US Congress in 2001. Today no one can doubt the agency's technological ambition. The most complex engineering project ever attempted has created an enormous set of interlinked modules that orbits the planet at more than 27,000 kilometres per hour. It might be travelling fast but, say critics, as a lab it is going nowhere. So far, it has gone through $150 billion. B So where should its future priorities lie? This question was addressed at the recent 1st annual ISS research and development conference in Colorado. Among the presenters was Satoshi Iwase of Aichi Medical University in Japan who has spent several years developing an experiment that could help solve one of the key problems that humans will face in space: keeping our bodies healthy in weightlessness. One thing that physiologists have learned is that without gravity our bodies begin to lose strength, leaving astronauts with weakened bones, muscles and cardiovascular systems. To counter these effects on a long-duration mission to, say, Mars, astronauts will almost certainly need to create their own artificial gravity. This is where Iwase comes in. He leads a team designing a centrifuge for humans. In their preliminary design, an astronaut is strapped into the seat of a machine that resembles an exercise bike. Pedalling provides a workout for the astronauts muscles and cardiovascular system, but it also causes the seat to rotate vertically around a central axis so the rider experiences artificial gravity while exercising. C The centrifuge project highlights the station's potential as a research lab. Similar machines have flown in space aboard NASA's shuttles, but they couldn't be tested for long enough to prove whether they were effective. It's been calculated that to properly assess a centrifuge's impact on human physiology, astronauts would have to ride it for 30 minutes a day for at least two months. The only way to test this is in weightlessness, and the only time we have to do that is on the space station,' says Laurence Young, a space medicine expert at the Massachusetts Institute of Technology. D There are certainly plenty of ideas for other experiments: but many projects have yet to fly. Even if the centrifuge project gets the green light, it will have to wait another five years before the station's crew can take a spin. Lengthy delays like this are one of the key challenges for NASA, according to an April 2011 report from the US National Academy of Sciences. Its authors said they were 'deeply concerned' about the state of NASAs science research, and made a number of recommendations. Besides suggesting that the agency reduces the time between approving experiments and sending them into space, it also recommended setting clearer research priorities. E NASA has already begun to take action, hiring management consultants Pro-Orbis to develop a plan to cut through the bureaucracy. And Congress also directed NASA to hire an independent organisation, the Centre for the Advancement of Science in Space (CASIS), to help manage the station's US lab facilities. One of CASIS's roles is to convince public and private investors that science on the station is worth the spend because judged solely by the number of papers published, the ISS certainly seems poor value: research on the station has generated about 3,100 papers since 1998.The Hubble Space Telescope, meanwhile, has produced more than 1,300 papers in just over 20 years, yet it cost less than one-tenth of the price of the space station. F Yet Mark Uhran, assistant associate administrator for the ISS, refutes the criticism that the station hasn't done any useful research. He points to progress made on a salmonella vaccine, for example. To get the ISS research back on track, CASIS has examined more than 100 previous microgravity experiments to identify promising research themes. From this, it has opted to focus on life science and medical research, and recently called for proposals for experiments on muscle wasting, osteoporosis and the immune system. The organisation also maintains that the ISS should be used to develop products with commercial application and to test those that are either close to or already on the market. Investment from outside organisations is vital, says Uhran, and a balance between academic and commercial research will help attract this. G The station needs to attract cutting-edge research, yet many scientists seem to have little idea what goes on aboard it. Jeanne Di Francesco at ProOrbis conducted more than 200 interviews with people from organisations with potential interests in low gravity studies. Some were aware of the ISS but they didn't know what's going on up there, she says. 'Others know there's science, but they don't know what kind.' H According to Alan Stern, planetary scientist, the biggest public relations boost for the ISS may come from the privately funded space flight industry. Companies like SpaceX could help NASA and its partners when it comes to resupplying the ISS, as it suggests it can reduce launch costs by two-thirds. Virgin Atlantic's Space Ship Two or ZeroUnfinity's high- altitude balloon could also boost the space station's fortunes. They might not come close to the ISS's orbit, yet Stern believes they will revolutionise the way we, the public, see space. Soon everyone will be dreaming of interplanetary travel again, he predicts. More importantly, scientists are already queuing for seats on these low-gravity space-flight services so they can collect data during a few minutes of weightlessness. This demand for low-cost space flight could eventually lead to a service running on a more frequent basis, giving researchers the chance to test their ideas before submitting a proposal for experiments on the ISS. Getting flight experience should help them win a slot on the station, says Stern. Questions 27-30 Choose the correct letter, A, B, C or D. 27 What does the writer state about the ISS in the first paragraph? A Its manufacture has remained within the proposed budget. B It is a great example of technological achievement. C There are doubts about the speed it has attained. D NASA should have described its purpose more accurately. 28 What are we told about Satoshi Iwase's experimental machine? A It is based on conventional exercise equipment. B It was originally commissioned by NASA. C It is designed only to work in low-gravity environments. D It has benefits that Iwase did not anticipate. 29 The writer refers to the Hubble Space Telescope in order to A show why investment in space technology has decreased. B highlight the need to promote the ISS in a positive way. C explain which kind of projects are more likely to receive funding. D justify the time required for a space project to produce results. 30 In the sixth paragraph, we are told that CASIS has A rejected certain applications for experiments on the ISS. B expressed concern about testing products used for profit. C questioned the benefits of some of the projects currently on the ISS. D invited researchers to suggest certain health-based projects. Questions 31-35 Look at the following opinions (Questions 31-35) and the list of people below. Match each opinion with the correct person, A, B,C or D. Write the correct letter, A, B, C or D. NB You may use any letter more than once. 31 The ISS should be available for business-related ventures. 32 There is general ignorance about what kinds of projects are possible on the ISS. 33 The process of getting accepted projects onto the ISS should be speeded up. 34 Some achievements of the ISS are underrated. 35 To properly assess new space technology, there has to be an absence of gravity. List of people A Laurence Young B Authors of the US National Academy of Sciences report C Mark Uhran D Jeanne Di Francesco Questions 36-39 Complete the summary using the lists of words, A-H, below. The influence of commercial space flight on the ISS According to Alan Stern, private space companies could affect the future of the ISS. He believes they could change its image; firstly because sending food and equipment there would be more (36) …………………… if a commercial craft were used, and secondly, because commercial flights might make the whole idea of space exploration seem (37)…………………… to ordinary people. Another point is that as the demand for space flights increases, there is a chance of them becoming more (38)…………………… And by working on a commercial flight first, scientists would be more (39) …………………… if an ISS position came up. A safe B competitive C flexible D real E rapid F regular G suitable H economical Question 40 Choose the correct letter, A, B, C or D. 40 The writer's purpose in writing this article is to A promote the advantages of space flight in general. B illustrate how the ISS could become more effective. C criticise the ISS for its narrow-minded attitude. D contrast useful and worthless space projects. Reading Answers 27 Answer: B Question type: Multiple choice Question Answer location: Paragraph A, line 1 – line 3 Answer explanation: In the introductory lines of Paragraph A, it is given that "A premier, world-class laboratory in low Earth orbit. That was how the National Aeronautics and Space Administration agency (NASA) sold the International Space Station (ISS) to the US Congress in 2001.Today no one can doubt the agency's technological ambition.". From these statements it can be concluded that the International Space Station (ISS) was sold as it was a world-class laboratory and no one has any doubt about its technological advancements. Hence, the answer is B. 28 Answer: A Question type: Multiple choice Question Answer location: Paragraph B, line 7 – line 8 Answer explanation: In the quoted lines, it is noted that "He leads a team designing a centrifuge for humans. In their preliminary design, an astronaut is strapped into the seat of a machine that resembles an exercise bike.". It is clear that Satoshi Iwase's experimental machine is based on conventional exercise equipment, which is an exercise bike. Hence, the answer is A. 29 Answer: B Question type: Multiple choice Question Answer location: Paragraph E, line 3 – line 4 Answer explanation: In the noted lines of Paragraph E, it is said that "One of CASIS's roles is to convince public and private investors that science on the station is worth the spend because judged solely by the number of papers published, the ISS certainly seems poor value: research on the station has generated about 3,100 papers since 1998.The Hubble Space Telescope, meanwhile, has produced more than 1,300 papers in just over 20 years, yet it cost less than one-tenth of the price of the space station.". It can be pointed out that initially the ISS seemed to have poor value and produced less number of papers. But, with the Hubble Space Telescope, it was stressed on the increasing number of research papers at a lower cost. Hence, the answer is B. 30 Answer: D Question type: Multiple choice Question Answer location: Paragraph F, line 3 – line 4 Answer explanation: In Paragraph F, it is said that "To get the ISS research back on track, CASIS has examined more than 100 previous microgravity experiments to identify promising research themes. From this, it has opted to focus on life science and medical research, and recently called for proposals for experiments on muscle wasting, osteoporosis and the immune system.". This points to the fact that CASIS has called promising research themes by various researchers to conduct experiments on muscle wasting, osteoporosis and the immune system. Hence, the answer is D. 31 Answer: C Question type: Matching Features Answer location: Paragraph F, line 5 – line 6 Answer explanation: In the lines of Paragraph F, it is said that "The organisation also maintains that the ISS should be used to develop products with commercial application and to test those that are either close to or already on the market. Investment from outside organisations is vital, says Uhran…" This proves the fact that Mark Uhran is of the opinion that the ISS should be available for business-related ventures (commercial application) as investment from outside the organization is essential. Hence, the answer is C. 32 Answer: D Question type: Matching Features Answer location: Paragraph G, line 3 – line 4 Answer explanation: In the mentioned lines, it is stated "Some were aware of the ISS but they didn't know what's going on up there, she says. 'Others know there's science, but they don't know what kind.'". It can be concluded that Jeanne Di Francesco points out that some are aware of the ISS but do not know about what kinds of projects are possible on the ISS. Hence, the answer is D. 33 Answer: B Question type: Matching Features Answer location: Paragraph D, line 4 – line 5 Answer explanation: In Paragraph D, it is said that "Its authors said they were 'deeply concerned' about the state of NASAs science research, and made a number of recommendations. Besides suggesting that the agency reduces the time between approving experiments and sending them into space, it also recommended setting clearer research priorities.". This points out that the authors of the US National Academy of Sciences report suggested that the process of getting accepted projects onto the ISS should be speeded up. Hence, the answer is B. 34 Answer: C Question type: Matching Features Answer location: Paragraph F, line 1 – line 2 Answer explanation: The following lines –Yet Mark Uhran, assistant associate administrator for the ISS, refutes the criticism that the station hasn't done any useful research. He points to progress made on a salmonella vaccine, for example.– proves the fact that Uhran pointed out the progress made on a salmonella vaccine and stated that people underrated the achievements of the ISS. Hence, the answer is C. 35 Answer: A Question type: Matching Features Answer location: Paragraph C, line 4 Answer explanation: The specified line states that "The only way to test this is in weightlessness, and the only time we have to do that is on the space station,' says Laurence Young, a space medicine expert at the Massachusetts Institute of Technology.". From this reference, it can be said that according to Laurence Young, to assess new space technology, there has to be an absence of gravity (weightlessness), otherwise the experiments might fail. Hence, the answer is A. 36 Answer: H Question type: Summary Completion Answer location: Paragraph H, line 1 – line 2 Answer explanation: The indicated lines of Paragraph H mention that "According to Alan Stern, planetary scientist, the biggest public relations boost for the ISS may come from the privately funded space flight industry. Companies like SpaceX could help NASA and its partners when it comes to resupplying the ISS, as it suggests it can reduce launch costs by two-thirds.". This statement indicates that Alan Stern said that the private space companies would be beneficial as resupplying food and equipment would cost less (economical). Hence, the answer is H (economical). 37 Answer: D Question type: Summary Completion Answer location: Paragraph H, line 4 – line 5 Answer explanation: The given lines of Paragraph H say that "They might not come close to the ISS's orbit, yet Stern believes they will revolutionise the way we, the public, see space.". It is clear that Virgin Atlantic's SpaceShipTwo or ZeroUnfinity would make the whole idea of space exploration seem real, as the public (ordinary people) will be able to see it in front of their own eyes. Hence, the answer is D (real). 38 Answer: F Question type: Summary Completion Answer location: Paragraph H, line 7 Answer explanation: The given line of Paragraph H says that "This demand for low-cost space flight could eventually lead to a service running on a more frequent basis…". It is clear that as the demand for space flights increases, there is a chance of them becoming more regular (running on a more frequent basis). Hence, the answer is F (regular). 39 Answer: G Question type: Summary Completion Answer location: Paragraph H, line 7 – line 8 Answer explanation: The given lines in Paragraph H say that "…giving researchers the chance to test their ideas before submitting a proposal for experiments on the ISS. Getting flight experience should help them win a slot on the station, says Stern." In light of the fact that by working on a commercial flight first, scientists would be more suitable to get chosen if an ISS position came up (win a slot on the station), the answer is G (suitable). 40 Answer: B Question type: Multiple Choice Question Answer location: Whole Passage Answer explanation: Throughout the passage, the writer points out various ways in which the ISS can be improved upon or highlights its contribution. In the first paragraph, the space station is mentioned as a 'premier, world-class laboratory in low Earth orbit'. Next, in Paragraph C, it is stated that "The only way to test this is in weightlessness, and the only time we have to do that is on the space station…", which proves that the ISS is an important place to conduct various researches as there is no gravity. Finally, the writer describes ways to boost the prospects of the ISS for the future in Paragraph E and H. Hence, the answer is B. IELTSDATA READING PASSAGE 62-SPACE. SPACE Is humanity running out of space or will we find new frontiers? As populations grow, people have to look for more innovative ways to provide space Section A The world has changed dramatically since Thomas Malthus's work 'An Essay on the Principle of the population', first published in 1798, argued that by the mid-1800s the unrestricted expansion of the human population would outgrow the agricultural land available to supply humanity with food. Over 150 years have passed since this theoretical milestone but mankind, admittedly somewhat more cramped, is still expanding and will continue to do so. Section B The impact of unfettered population growth is clear for all to see. Urbanization is now a more evident worldwide phenomenon than previously as even greater numbers of people drift from rural areas to vast cities all over the world like Tokyo, Mexico City and Mumbai (26.4 million, 18.4 million and 18.1 million inhabitants in 2000 respectively) in their quest for a better life. These mega-cities, i.e. conurbations with an estimated population of more than 10 million people, are springing up in every continent. Now teeming with humanity, they are hungry for one increasingly valuable resource: land. While developments in agricultural technology ensure humanity may be able, by and large, to feed the people flocking to these great metropolises, the expansion of the human race is fuelling an unprecedented appetite for real estate. Space, whether it be for personal or public use, corporate or national, human or flora/fauna is now at a premium as we move into a new century. Not only is more land required for accommodation, but also for a wide range of infrastructure facilities. Transport systems including roads within and between cities need to be constructed or upgraded to create motorways; green fields are turned into airports; the virgin forest is stripped to provide food and firewood. In poorer regions, this newly exposed land becomes desert completing the cycle of destruction. Section C Hitherto, the most common practice for the utilization of expensive space for living and working has been to build upwards; hence, the demand for ever higher buildings, both apartment and commercial, in major cities like New York, Shanghai and Singapore all vying with each other for the tallest buildings. There has also been a tradition for building underground, not just for transport systems, but for the storage of waste, depositories for books etc. as in London, where The British Library housing millions of books has been built largely underground. Recent years have seen more novel construction developments around the world. In the past, in many countries, Holland and the UK included, marshes and floodplains have been reclaimed from the sea. Like the city of Venice in Italy, housing complexes and even airports have now been constructed off-shore to amazing effect. In Japan, Kansai International Airport has been built off-shore on a man-made island at vast expense and in Dubai, a very imaginative and expensive housing complex in the shape of a palm tree is being built just off the coast on land created by a construction company. However, these and other developments are at risk from rising sea levels as a consequence of global warming. Section D But where will the human race go when planet earth is full? There have been many theories put forward about the human population moving to outer space. Marshall Savage (1992, 1994), for example, has projected that the human population will reach five quintillion throughout the solar system by the year 3000, with the majority living in the asteroid belt. Arthur C Clarke, a fervent supporter of Savage, now argues that by the year 2057 there will be humans on the Moon, Mars, Europa, Ganymede, Titan, and in orbit around Venus, Neptune and Pluto. Feeman Dyson (1999) favors the Kuiper belt as the future home of humanity, suggesting this could happen within a few centuries. Section E Habitation in outer space in huge stations is no longer just a dream, but a reality. A permanent international space station now orbits the earth. The first commercial tourist recently went into outer space with more trips planned for the near future. This is only the beginning, but the development of space hotels is not far-off. There is no knowing where mankind may end up. But the ideas about off-world habitation are not fanciful and I am sure I am not alone in fantasizing about summer holidays spent watching the moons rising in some far-flung planet or on a floating hotel somewhere on the Andromeda nebula. Questions IELTSDATA READING PASSAGE 62-SPACE Questions 1-4 Reading passage 1 has five sections A-E. Choose the correct heading for sections B-E from the list of headings below. List of Headings i. How the problem of land scarcity has been overcome in the past ii. Various predictions about future solutions to a lack of space iii. The effects of population growth on land availability iv. The importance of the new British Library v. An expanding population vi. A description of a mega-city vii. A firm belief that human habitation of outer space will occur viii. The importance of having an international space station Example Answer Section A v 1. Section B 2. Section C 3. Section D 4. Section E Questions 5-8 Complete the sentences below. Choose NO MORE THAN TWO WORDS from the passage for each answer. 5. The movement of rural people to cities is a……………………… 6. The land is now very……………………, as a result of the growing demand for space. 7. The feeding of the human race will perhaps be guaranteed by changes in………………… 8. Besides the demands of accommodation, the land is needed for various……………. Questions 9-13 Do the following statements agree with the claims of the writer in Reading Passage? In boxes 9-13 on your answer sheet write YES if the statement reflects 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 9. The destruction of land for food and firewood is linked to desertification. 10. Shortage of space has also led to underground building construction. 11. The building of the airport in Japan costs much more than that of the housing complex in Dubai. 12. Arthur C Clarke was the only person to predict that mankind will inhabit other parts of the solar system. 13. The concept of the habitation of outer space by mankind is unimaginable. Answers of IELTSDATA READING PASSAGE 62-SPACE 1 . III 2 . I 3 . II 4 . VII 5 . WORLDWIDE PHENOMENON 6 . VALUABLE RESOURCE 7 . AGRICULTURAL TECHNOLOGY 8 . INFRASTRUCTURE FACILITIES 9 . Y 10 .Y 11 . G. 12 . N 13 . N IELTSDATA READING PASSAGE 41 Amber – Frozen Moments in Time IELTSDATA READING PASSAGE 46 -The Invisible Thread General Information Read Instructions: Understand each question before answering.Manage Time: Spend about 20 minutes per passage.Skim and Scan: Quickly get the main idea and find specific information.Highlight Key Info: Underline essential words or phrases.Answer All Questions: Attempt every question; no penalty for wrong answers.Stay Focused: Avoid distractions and keep your attention on the task.Check Spelling: Ensure correct spelling and grammar.Transfer Answers Clearly: Write answers neatly on the answer sheet.Don't Dwell: Move on if stuck and return later.Review: If time allows, review your answers.Space Reading PassageParagraph A: In his book "An Essay on the Principle of Population," which was published in 1798, Thomas Malthus projected that by the middle of the 1800s, the unregulated rise of the human population would overflow the farming land that was necessary to feed humanity. A great deal has transpired since then. Since this purported turning point that occurred more than 150 years ago, humankind has continued to advance despite being considerably more constrained.Paragraph B: Unrestrained population increase is obvious. Urbanisation is a more visible worldwide phenomenon than before as more people migrate from rural areas to cities like Tokyo, Mexico City, and Mumbai in search of a better living. Megacities with more than 10 million inhabitants are cropping up on every continent. Now overpopulated, they're eager for land. The expanding human population is fueling a voracious need for real estate despite advances in agricultural technology. Personal, public, corporate, national, human, and flora/fauna space is at a premium in the next century. They are desperate for one resource that is becoming more valuable: land and the human population is now at an all-time high. More land is needed for a variety of infrastructure facilities in addition to housing. While advances in agricultural technology mean humanity may be able to feed the people thronging to these huge metropolises, an unparalleled thirst for real estate is being fueled by the growth of the human race. Green pastures are turned into airports, and virgin forests are cleared for food and firewood. In poorer locations, newly exposed land becomes desert, completing the destruction cycle.Paragraph C: The most popular way to use pricey space for living and working has been to build upwards; therefore, the a desire for ever-taller apartments and commercial buildings in big cities like New York, Shanghai, and Singapore. The British Library, which houses millions of books, was built entirely underground not only for transportation networks but also for garbage storage, book depositories, etc. in London. The global building has become more innovative in recent years. Many countries, including Holland and the UK, have restored marshes and floodplains. Like Venice, Italy, housing complexes and airports have been built off-shore. In Japan, Kansai International Airport was built on a man-made island at great expense. In Dubai, a very inventive and expensive palm tree-shaped housing complex is being developed close to the shoreline. Global warming's rising sea levels threaten these and other developments.Paragraph D: But when Earth is at capacity, where will humanity go? Numerous theories have been put up regarding the expansion of the human population into space. Marshall Savage, for instance, predicted that by the year 3000, there would be five quintillion people living throughout the solar system, with the majority of them residing in the asteroid belt. Savage's ardent admirer, Arthur C. Clarke currently asserts that humanity will be present on the Moon, Mars, Europa, Ganymede, and Titan, and in orbits around Venus, Neptune, and Pluto by the year 2057. According to Freeman Dyson, the Kuiper belt could become the future home of humanity within a few generations.Paragraph E: Huge space stations with human habitation are now a possibility rather than simply a pipe dream. The planet is currently orbited by a permanent multinational space station. Recently, the first commercial tourist visited the space, and additional trips are scheduled for the near future. Although this is just the beginning, space hotels are soon to be built. Where humanity may end up is unknown. Though I'm sure, I'm not the only one who fantasises about spending my summer vacations on a floating hotel in the Andromeda nebula or on a distant planet watching the moons rise, the concepts of the off-world settlement are not outlandish. SpaceSection A The world has changed dramatically since Thomas Malthus's work An Essay on the Principle of Population, first published in 1798, argued that by the mid 1800s the unrestricted expansion of the human population would outgrow the agricultural land available to supply humanity with food. Over 150 years have passed since this theoretical milestone, but mankind, admittedly somewhat more cramped, is still expanding and will continue to do so.Section B The impact of unfettered population growth is clear for all to see. Urbanization is now a more evident worldwide phenomenon than previously as even greater numbers of people drift from rural areas to vast cities all over the world like Tokyo, Mexico City and Mumbai (26.4 million, 18.4 million and 18.1 million inhabitants in 2000 respectively) in their quest for a better life. These mega-cities, i.e. conurbations with an estimated population of more than 10 million people, are springing up in every continent. Now teeming with humanity, they are hungry for one increasingly valuable resource: land.While developments in agricultural technology ensure humanity may be able, by and large, to feed the people flocking to these great metropolises, the expansion of the human race is fuelling an unprecedented appetite for real estate. Space, whether it be for personal or public use, corporate or national, human or flora/fauna, is now at a premium as we move into a new century. Not only is more land required for accommodation, but also for a wide range of infrastructure facilities. Transport systems including roads within and between cities need to be constructed or upgraded to create motorways; green fields are turned into airports; virgin forest is stripped to provide food and firewood. In poorer regions, this newly exposed land becomes desert, completing the cycle of destruction.Section C Hitherto, the most common practice for the utilization of expensive space for living and working has been to build upwards; hence, the demand for ever higher buildings, both apartment and commercial, in major cities like New York, Shanghai and Singapore all vying with each other for the tallest buildings. There has also been a tradition for building underground, not just for transport systems, but for the storage of waste, depositories for books etc. as in London, where The British Library housing millions of books has been built largely underground. Recent years have seen more novel construction developments around the world. In the past, in many countries, Holland and the UK included, marshes and flood plains have been reclaimed from the sea. Like the city of Venice in Italy, housing complexes and even airports have now been constructed off-shore to amazing effect. In Japan, Kansai International Airport has been built off-shore on a man-made island at vast expense and in Dubai a very imaginative and expensive housing complex in the shape of a palm tree is being built just off the coast on land created by a construction company. However, these and other developments are at risk from rising sea levels as a consequence of global warming.Section D But where will the human race go when planet earth is full? There have been many theories put forward about the human population moving to outer space. Marshall Savage (1992, 1994), for example, has projected that the human population will reach five quintillion throughout the solar system by the year 3000, with the majority living in the asteroid belt. Arthur C Clarke, a fervent supporter of Savage, now argues that by the year 2057 there will be humans on the Moon, Mars, Europa, Ganymede, Titan and in orbit around Venus, Neptune and Pluto. Feeman Dyson (1999) favours the Kuiper belt as the future home of humanity, suggesting this could happen within a few centuries.Section E Habitation in outer space in huge stations is no longer just a dream, but a reality. A permanent international space station now orbits the earth. The first commercial tourist recently went into outer space with more trips planned for the near future. This is only a beginning, but the development of space hotels is not far-off. There is no knowing where mankind may end up. But the ideas about off-world habitation are not fanciful and I am sure I am not alone in fantasizing about summer holidays spent watching the moons rising in some far-flung planet or on a floating hotel somewhere on the Andromeda nebula.Questions 1-4 Reading passage 1 has five sections A-E. Choose the correct heading for sections B-E from the list of headings below. Write the correct number, i-viii, in boxes 1-4 on your answer sheet.List of Headings i How the problem of land scarcity has been overcome in the past ii Various predictions about future solutions to a lack of space iii The effects of population growth on land availability iv The importance of the new British Library v An expanding population vi A description of a mega-city vii A firm belief that human habitation of outer space will occur viii The importance of having an international space stationExample: Section A Answer: v 1 Section B 2 Section C 3 Section D 4 Section EQuestions 5-8 Complete the sentences below. Choose NO MORE THAN TWO WORDS from the passage for each answer.5 The movement of rural people to cities is a……………………… 6 Land is now a very……………………………, as a result of the growing demand for space. 7 The feeding of the human race will perhaps be guaranteed by changes in……………… 8 Besides the demands of accommodation, land is needed for various……………………Questions 9-13 Do the following statements agree with the claims of the writer in Reading Passage 1? In boxes 9-13 on your answer sheet writeYES if the statement reflects 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 this9 The destruction of land for food and firewood is linked to desertification. 10 Shortage of space has also led to underground building construction. 11 The building of the airport in Japan cost much more than that of the housing complex in Dubai. 12 Arthur C Clarke was the only person to predict that mankind will inhabit other parts of the solar system. 13 The concept of the habitation of outer space by mankind is unimaginable. Cambridge IELTS Tests 1 to 17The History of Salt1 Salt is so simple and plentiful that we almost take it for granted. In chemical terms, salt is the combination of a sodium ion with a chloride ion, making it one of the most basic molecules on earth. It is also one of the most plentiful: it has been estimated that salt deposits under the state of Kansas alone could supply the entire world's needs for the next 250,000 years.2 But salt is also an essential element. Without it, life itself would be impossible since the human body requires the mineral in order to function properly. The concentration of sodium ions in the blood is directly related to the regulation of safe body fluid levels. And while we are all familiar with its many uses in cooking, we may not be aware that this element is used in some 14,000 commercial applications. From manufacturing pulp and paper to setting dyes in textiles and fabric, from producing soaps and detergents to making our roads safe in winter, salt plays an essential part in our daily lives.3 Salt has a long and influential role in world history. From the dawn of civilization, it has been a key factor in economic, religious, social and political development. In every corner of the world, it has been the subject of superstition, folklore, and warfare, and has even been used as currency.4 As a precious and portable commodity, salt has long been a cornerstone of economies throughout history. In fact, researcher M.R. Bloch conjectured that civilization began along the edges of the desert because of the natural surface deposits of salt found there. Bloch also believed that the first war – likely fought near the ancient city of Essalt on the Jordan River – could have been fought over the city's precious supplies of the mineral.5 In 2200 BC, the Chinese emperor Hsia Yu levied one of the first known taxes. He taxed salt. In Tibet, Marco Polo noted that tiny cakes of salt were pressed with images of the Grand Khan to be used as coins and to this day among the nomads of Ethiopia's Danakil Plains it is still used as money. Greek slave traders often bartered it for slaves, giving rise to the expression that someone was "not worth his salt." Roman legionnaires were paid in salt – a salarium, the Latin origin of the word "salary."6 Merchants in 12th-century Timbuktu – the gateway to the Sahara Desert and the seat of scholars – valued this mineral as highly as books and gold. In France, Charles of Anjou levied the "gabelle," a salt tax, in 1259 to finance his conquest of the Kingdom of Naples. Outrage over the gabelle fueled the French Revolution. Though the revolutionaries eliminated the tax shortly after Louis XVI, the Republic of France re-established the gabelle in the early 19th Century; only in 1946 was it removed from the books.7 The Erie Canal, an engineering marvel that connected the Great Lakes to New York's Hudson River in 1825, was called "the ditch that salt built." Salt tax revenues paid for half the cost of construction of the canal. The British monarchy supported itself with high salt taxes, leading to a bustling black market for the white crystal. In 1785, the earl of Dundonald wrote that every year in England, 10,000 people were arrested for salt smuggling. And protesting against British rule in 1930, Mahatma Gandhi led a 200-mile march to the Arabian Ocean to collect untaxed salt for India's poor.8 In religion and culture, salt long held an important place with Greek worshippers consecrating it in their rituals. Further, in Buddhist tradition, salt repels evil spirits, which is why it is customary to throw it over your shoulder before entering your house after a funeral: it scares off any evil spirits that may be clinging to your back. Shinto religion also uses it to purify an area. Before sumo wrestlers enter the ring for a match – which is in reality an elaborate Shinto rite – a handful is thrown into the center to drive off malevolent spirits.9 In the Southwest of the United States, the Pueblo worship the Salt Mother. Other native tribes had significant restrictions on who was permitted to eat salt. Hopi legend holds that the angry Warrior Twins punished mankind by placing valuable salt deposits far from civilization, requiring hard work and bravery to harvest the precious mineral. In 1933, the Dalai Lama was buried sitting up in a bed of salt. Today, a gift of salt endures in India as a potent symbol of good luck and a reference to Mahatma Gandhi's liberation of India.10 The effects of salt deficiency are highlighted in times of war, when human bodies and national economies are strained to their limits. Thousands of Napoleon's troops died during the French retreat from Moscow due to inadequate wound healing and lowered resistance to disease – the results of salt deficiency.Questions 14-16 Choose THREE letters A-H. NB Your answers may be given in any order.Which THREE statements are true of salt? A A number of cities take their name from the word salt B Salt contributed to the French Revolution C The uses of salt are countless D Salt has been produced in China for less than 2000 years E There are many commercial applications for salt F Salt deposits in the state of Kansas are vast G Salt has few industrial uses nowadays H Slaves used salt as a currencyQuestions 17-21 Complete the summary. Choose NO MORE THAN TWO WORDS from the passage for each answer.Salt is such an (17)………………………that people would not be able to live without it. As well as its uses in cooking, this basic mineral has thousands of business (18)………………………ranging from making paper to the manufacture of soap. Being a prized and (19)…………………………, it has played a major part in the economies of many countries. As such, salt has not only led to war, but has also been used to raise (20)……………………by governments in many parts of the world. There are also many instances of its place in religion and culture, being used as a means to get rid of evil (21)…………………Questions 22-27 Do the following statements agree with the information in Reading Passage 2? In boxes 22-27 on your answer sheet writeTRUE if the statement agrees with the information FALSE if the statement contradicts the information NOT GIVEN if there is no information about the statement22 It has been suggested that salt was responsible for the first war. 23 The first tax on salt was imposed by a Chinese emperor. 24 Salt is no longer used as a form of currency. 25 Most of the money for the construction of the Erie Canal came from salt taxes. 26 Hopi legend believes that salt deposits were placed far away from civilization to penalize mankind. 27 A lack of salt is connected with the deaths of many of Napoleon's soldiers during the French retreat from Moscow.Volunteering: enriching others and helping oneselfA Volunteering, some might mistakenly think, embraces a plethora of people from all walks of life as well as activities, but data from the other side of the world suggest otherwise. A 2001 survey on who participated in volunteering by the Office for National Statistics (ONS) in the United Kingdom (UK) revealed that people in higher income households are more likely than others to volunteer. In England and Wales, 57 per cent of adults with gross annual household incomes of £75,000 or more, have volunteered formally (such as raising or handling money for a charity or being a member of a committee) in the 12 months prior to the survey date. They were almost twice as likely to have done so than those living in households with an annual income under £10,000.B As well as having high household incomes, volunteers also tend to have higher academic qualifications, be in higher socio-economic groups and be in employment. Among people with a degree or postgraduate qualification, 79 per cent had volunteered informally and 57 per cent had volunteered formally in the previous 12 months. For people with no qualifications the corresponding proportions were 52 per cent and 23 per cent. But voluntary work is certainly not the exclusive preserve of the rich, nor should it be. Does the answer not lie perhaps in the fact that the rich tend to have money to allow them the time to become involved in voluntary work compared to less well-off people?C A breakdown in the year 2000 of the range of volunteering activities taken from The Australian Bureau of Statistics gives an idea of the scale of activities in which people are typically involved. Eleven sectors are given ranging from Community and Welfare, which accounted for just over a quarter of the total hours volunteered in Australia, to Law/justice/politics with 1.2 percent at the other end of the scale. Other fields included sport/recreation, religious activities and education, following at 21.2 per cent, 16.9 and 14.3 per cent respectively. Foreign/international volunteer work accounted for 2.4 per cent of the total hours. The data here also seem to point to a cohort of volunteers with expertise and experience.D The knock-on effect of volunteering on the lives of individuals can be profound. Voluntary work helps foster independence and imparts the ability to deal with different situations, often simultaneously, thus teaching people how to work their way through different systems. It therefore brings people into touch with the real world; and, hence, equips them for the future.E Initially, young adults in their late teens might not seem to have the expertise or knowledge to impart to others that say a teacher or agriculturalist or nurse would have, but they do have many skills that can help others. And in the absence of any particular talent, their energy and enthusiasm can be harnessed for the benefit of their fellow human beings, and ultimately themselves. From all this, the gain to any community no matter how many volunteers are involved is immeasurable.F Employers will generally look favourably on people who have shown an ability to work as part of a team. It demonstrates a willingness to learn and an independent spirit, which would be desirable qualities in any employee. So to satisfy employers' demands for experience when applying for work, volunteering can act as a means of gaining experience that might otherwise elude would-be workers and can ultimately lead to paid employment in the desired field.G But what are the prerequisites for becoming a volunteer? One might immediately think of attributes like kindness, selflessness, strength of character, ability to deal with others, determination, adaptability and flexibility and a capacity to comprehend the ways of other people. While offering oneself selflessly, working as a volunteer makes further demands on the individual. It requires a strength of will, a sense of moral responsibility for one's fellow human beings, and an ability to fit into the ethos of an organization or community. But it also requires something which in no way detracts from the valuable work done by volunteers and which may seem at first glance both contradictory and surprising: self-interest.H Organizations involved in any voluntary work have to be realistic about this. If someone, whatever the age, is going to volunteer and devote their time without money, they do need to receive something from it for themselves. People who are unemployed can use volunteer work as a stepping-stone to employment or as a means of finding out whether they really like the field they plan to enter or as a way to help them find themselves.I It is tempting to use some form of community work as an alternative to national service or as punishment for petty criminals by making the latter for example clean up parks, wash away graffiti, work with victims of their own or of other people. This may be acceptable, but it does not constitute volunteer work, two cardinal rules of which are the willingness to volunteer without coercion and working unpaid.Questions 28-33 Reading Passage 3 has nine paragraphs A-I. Which paragraph contains the following information? Write the correct letter, A-I, in boxes 28-33 on your answer sheet.28 a description of what does not satisfy the criteria for volunteer work 29 the impact of voluntary work on the development of individuals 30 the requirement for both selflessness and self-interest in volunteers 31 various areas in which people volunteer 32 the benefit of voluntary work for the young 33 a mistaken view of volunteeringQuestions 34-37 Choose the correct letters A, B, C or D.34 The ONS survey was done to find out A why people undertook volunteering B how many people participated in volunteering C how many rich people did volunteer work D which people were involved in volunteering35 The ONS survey found that people with university qualifications were A as likely to volunteer as those with no qualifications B more likely to volunteer than those with no qualifications C less likely to volunteer than those with no qualifications D the only group likely to do formal volunteer work36 It is suggested that rich people volunteer as a result of having A clearer goals B fewer children C more spare time D greater guilt37 Volunteer work benefits people by teaching them how to A function in systems B communicate clearly C deal with failure D overcome shynessQuestions 38-40 Complete each sentence with the correct ending, A-F below.38 One of the requirements of being a volunteer is being able to 39 Volunteering can be used as a way for the unemployed to 40 Employers in general tend toA consider workers with volunteer work experience an asset. B gain a very well paid job. C gain access to a job in a field of interest. D benefit most from volunteer work. E understand how people behave. F want much younger workers.1. iii 2. i 3. ii 4. vii 5. worldwide phenomenon 6. valuable resource 7. agricultural technology 8. infrastructure facilities 9. yes 10. yes 11. not given 12. no 13. no 14. B 15. E 16. F 17. essential element 18. applications 19. portable commodity 20. taxes 21. spirits 22. true 23. not given 24. not given 25. false 26. true 27. true 28. I 29. D 30. G 31. C 32. E 33. A 34. D 35. B 36. C 37. A 38. E 39. C 40. A