IELTSFever Academic IELTS Reading Test 112

Reading Passage 1

You should spend about 20 minutes on Questions 1-13, which are based on the IELTSFever Academic IELTS Reading Test 112 Reading Passage Density and Crowding below.

Density and Crowding

{A} Of the great myriad of problems which man and the world face today, there are three significant trends which stand above all others in importance: the unprecedented population growth throughout the world—a net increase of 1,400,000 people per week—and all of its associations and consequences; the increasing urbanization of these people, so that more and more of them are rushing into cities and urban areas of the world; and the tremendous explosion of communication and social contact throughout the world, so that every part of the world is now aware of every other part. All of these trends are producing increased crowding and the perception of crowding.

{B} It is important to emphasize at the outset that crowding and density are not necessarily the same. Density is the number of individuals per unit area or unit space. It is a simple physical measurement. Crowding is a product of density, communication, contact, and activity. It implies a pressure, a force, and a psychological reaction. It may occur at widely different densities. The frontiersman may have felt crowded when someone built a homestead a mile away. The suburbanite may feel relatively uncrowded in a small house on a half-acre lot if it is surrounded by trees, bushes, and a hedgerow, even though he lives under much higher physical density than did the frontiersman. Hence, crowding is very much a psychological and ecological phenomenon and not just a physical condition.

{C} A classic crowding study was done by Calhoun (1962), who put rats into a physical environment designed to accommodate 50 rats and provided enough food, water, and nesting materials for the number of rats in the environment. The rat population peaked at 80, providing a look at cramped living conditions. Although the rats experienced no resource limitations other than space restriction, a number of negative conditions developed: the two most dominant males took harems of several female rats and occupied more than their share of space, leaving other rats even more crowded; many females stopped building nests and abandoned their infant rats; the pregnancy rate declined; infant and adult mortality rates increased; more aggressive and physical attacks occurred; sexual variation increased, including hypersexuality, inhibited sexuality, homosexuality, and bisexuality.

{D} Calhoun's results have led to other research on crowding effects on human beings, and these research findings have suggested that high density is not the single cause of negative effects on humans. When crowding is defined only in terms of spatial density (the amount of

space per person), the effects of crowding are variable. However, if crowding is defined in terms of social density, or the number of people who must interact, then crowding better predicts negative psychological and physical effects.

{E} There are several reasons why crowding makes us feel uncomfortable. One reason is related to stimulus overload - there are just too many stimuli competing for our attention. We cannot notice or respond to all of them. This feeling is typical of the harried mother, who has several children competing for her attention, while she is on the phone and the doorbell is ringing. This leaves her feeling confused, fatigued and yearning to withdraw from the situation. There are strong feelings of a lack of privacy - being unable to pay attention to what you want without being repeatedly interrupted or observed by others.

{F} Field studies done in a variety of settings illustrate that social density is associated with negative effects on human beings. In prison studies, males generally became more aggressive with increases in density. In male prisons, inmates living in conditions of higher densities were more likely to suffer from fighting. Males rated themselves as more aggressive in small rooms (a situation of high spatial density), whilst the females rated themselves as more aggressive in large rooms (Stokols et al., 1973). These differences relate to the different personal space requirements of the genders Besides, Baum and Greenberg found that high density leads to decreased attraction, both physical attraction and liking towards others and it appears to have gender differences in the impact that density has on attraction levels, with males experiencing a more extreme reaction. Also, the greater the density is, the less the helping behavior. One reason why the level of helping behavior may be reduced in crowded situations links to the concept of diffusion of responsibility. The more people that are present in a situation that requires help, the less often help is given. This may be due to the fact that people diffuse responsibility among themselves with no-one feeling that they ought to be the one to help.

{G} Facing all these problems, what are we going to do with them? The more control a person has over the crowded environment the less negatively they experience it, thus the perceived crowding is less (Schmidt and Keating). The ability to cope with crowding is also influenced by the relationship the individual has with the other people in the situation. The high density will be interpreted less negatively if the individual experiences it with people he likes. One of the main coping strategies employed to limit the impact of high density is social withdrawal. This includes behaviors such as averting the gaze and using negative body language to attempt to block any potential intrusions

Questions 1-7

Reading passage 1 has seven paragraphs, A-G

Choose the correct heading for paragraphs A -G from the list of headings below.

Write the correct number, i-x, in boxes 1-7 on your answer sheet.

List of headings

(I) Other experiments following Calboun's experiment offering a clearer indication

(II) The effects of crowding on people in the social scope

(III) Psychological reaction to crowding

(IV) Responsibility does not work

(V) Problems that result in crowding

(VI) What cause the upset feel of crowding

(VII) Definitions of crowding and density

(VIII) Advice for crowded work environment

(IX) Difference between male and females' attractiveness in a crowd

(X) Nature and results of Calboun's experiment

(1) Paragraph A

(2) Paragraph B

(3) Paragraph C

(4). Paragraph D

(5) Paragraph E

(6) Paragraph F

(7) Paragraph G

Questions 8-13

Complete the sentences below.

*Choose **NO MORE THAN THREE WORDS** from the passage for each answer. Write your answers in boxes 8-13 on your answer sheet.*

(8) Being disturbed repeatedly, the harried mother feels frustrated for the lack of .....

(9) Inmates in high density settings were more aggressive in……..

(10) The different result between male and female is associated with the varying needs of …….

(11) Especially for male, Baum and Greenberg found that .....declined with high density.

(12) The idea of responsibility diffusion may explain a person's reluctance to .....

(13) Schmidt and Keating suggest that if more ……..... was present there would be a reduction in crowding stress.

Reading Passage 2

You should spend about 20 minutes on Questions 14-26, which are based on the IELTSFever Academic IELTS Reading Test 112 Reading Passage Plant Scents below.

The Development of Plastics

{A} When rubber was first commercially produced in Europe during the nineteenth century, it rapidly became a very important commodity, particularly in the fields of transportation and electricity. However, during the twentieth century a number of new synthetic materials, called plastics, superseded natural rubber in all but a few applications.

{B} Rubber is a polymer — a compound containing large molecules that are formed by the bonding of many smaller, simpler units, repeated over and over again. The same bonding principle — polymerisation underlies the creation of a huge range of plastics by the chemical industry.

{C} The first plastic was developed as a result of a competition in the USA. In the 1860s, $10,000 was offered to anybody who could replace ivory — supplies of which were declining — with something equally good as a material for making billiard balls. The prize was won by John Wesley Hyatt with a material called celluloid. Celluloid was made by dissolving cellulose, a carbohydrate derived from plants, in a solution of camphor dissolved in ethanol. This new material rapidly found uses in the manufacture of products such as knife handles, detachable collars and cuffs, spectacle frames and photographic film. Without celluloid, the film industry could never have got off the ground at the end of the 19th century.

{D} Celluloid can be repeatedly softened and reshaped by heat, and is known as a thermoplastic. In 1907 Leo Baekeland, a Belgian chemist working in the USA, invented a different kind of plastic by causing phenol and formaldehyde to react together. Baekeland called the material Bakelite, and it was the first of the thermosets — plastics that can be cast and moulded while hot, but cannot be softened by heat and reshaped once they have set. Bakelite was a good insulator, and was resistant to water, acids and moderate heat. With these properties it was soon being used in the manufacture of switches, household items, such as knife handles, and electrical components for cars.

{E} Soon chemists began looking for other small molecules that could be strung together to make polymers. In the 1930s, British chemists discovered that the gas ethylene would polymerise under heat and pressure to form a thermoplastic they called polythene. Polypropylene followed in the 1950s. Both were used to make bottles, pipes and plastic bags. A small change in the starting material — replacing a hydrogen atom in ethylene with a chlorine atom — produced PVC (polyvinyl chloride), a hard, fireproof plastic suitable for drains and gutters. And by adding certain chemicals, a soft form of PVC could be produced, suitable as a substitute for rubber in items such as waterproof clothing. A closely related plastic was Teflon, or PTFE (polytetrafluoroethylene). This had a very low coefficient of friction, making it ideal for bearings, rollers, and non-stick frying pans. Polystyrene, developed during the 1930s in Germany, was a clear, glass-like material, used in food containers, domestic appliances and toys. Expanded polystyrene — a white, rigid foam — was widely used in packaging and insulation. Polyurethanes, also developed in Germany, found uses as adhesives, coatings, and — in the form of rigid foams — as insulation materials. They are all produced from chemicals derived from crude oil, which contains exactly the same elements — carbon and hydrogen — as many plastics.

{F} The first of the man-made fibres, nylon, was also created in the 1930s. Its inventor was a chemist called Wallace Carothers, who worked for the Du Pont company in the USA. He found that under the right conditions, two chemicals - hexamethylenediamine and adipic acid ----- would form a polymer that could be pumped out through holes and then stretched to form long glossy threads that could be woven like silk. Its first use was to make parachutes for the US armed forces in World War II. In the post-war years nylon completely replaced silk in the manufacture of stockings. Subsequently many other synthetic fibres joined nylon, including Orion, Acrilan and Terylene. Today most garments are made of a blend of natural fibres, such as cotton and wool, and man-made fibres that make fabrics easier to look after.

{G} The great strength of plastic is its indestructibility. However, this quality is also something of a drawback: beaches all over the world, even on the remotest islands, are littered with plastic bottles that nothing can destroy. Nor is it very easy to recycle plastics, as different types of plastic are often used in the same items and call for different treatments. Plastics can be made biodegradable by incorporating into their structure a material such as starch, which is attacked by bacteria and causes the plastic to fall apart. Other materials can be incorporated that gradually decay in sunlight — although bottles made of such materials have to be stored in the dark, to ensure that they do not disintegrate before they have been used.

Questions 14-20

*Complete the table below. Choose **NO MORE THAN THREE WORDS** from the passage for each answer. Write your answers in boxes 14-20 on your answer sheet.*

Name of Plastic	Date of Invention	Original region	Property	Common use
Celluloid	1860S	US		Clothing and **14**……..
15……..	1907	US	Can be cast and moulded but cannot be softened by heal	**16**…….. Household items and car parts
Polythene	1930s	**17**……		bottles
Rigid PVC			**18**……..	Drains and Gutters
Polystyrene	1930s	Germany	Transparent and resembling **19**……	Food Containers domestic
Polyurethanes		Germany	Formation like **20**…….	Adhesives, coatings and insulation

Questions 21-26

Do the following statements agree with the information given in Reading Passage 2? In boxes 21-26 on your answer sheet, write

TRUE	if the statement is True
FALSE	if the statement is false
NOT GIVEN	If the information is not given in the passage

21 The chemical structure of plastic is very different from that of rubber.

22 John Wesley was a famous chemist.

23 Celluloid and Bakelite react to heat in the same way.

24 The mix of different varieties of plastic can make them less recyclable.

25 Adding starch into plastic does not necessarily make plastic more durable.

26 Some plastic containers have to be preserved in special conditions.

Reading Passage 3

You should spend about 20 minutes on Questions 27-40, which are based on the IELTSFever Academic IELTS Reading Test 106 Reading Passage Sand Dunes below.

Sand Dunes

{A} One of the main problems posed by sand dunes is their encroachment on human habitats. Sand dunes move by different means, all of them aided by the wind. Sand dunes threaten buildings and crops in Africa, the Middle East, and China. Preventing sand dunes from overwhelming cities and agricultural areas has become a priority for the United Nations Environment Program. On the other hand, dune habitats provide niches for highly specialized plants and animals, including numerous rare and endangered species.

{B} Sand is usually composed of hard minerals such as quartz that cannot be broken down into silt or clay. Yellow, brown and reddish shades of sand indicate the presence of iron compounds. Red sand is composed of quartz coated by a layer of iron oxide. White sands are nearly pure gypsum. Sand with a high percentage of silicate can be used in glassmaking. Sandstone is created by sand, mixed with lime, chalk or some other material that acts as a binding agent, that is deposited in layers at the bottom of a sea or other area and pressed together into rock by the great pressure of sediments that are deposited on top over thousands or millions of years.

{C} The most common dune form on Earth and on Mars is the crescentic. Crescent-shaped mounds are generally wider than they are long. The slipfaces are on the concave sides of the dunes. These dunes form under winds that blow consistently from one direction, and they also are known as barchans, or transverse dunes. Some types of crescentic dunes move more quickly over desert surfaces than any other type of dune. A group of dunes moved more than 100 metres per year between 1954 and 1959 in China's Ningxia Province, and similar speeds have been recorded in the Western Desert of Egypt. The largest crescentic dunes on Earth, with mean crest-to-crest widths of more than 3 kilometres, are in China's Taklamakan Desert.

{D} Radially symmetrical, star dunes are pyramidal sand mounds with slipfaces on three or more arms that radiate from the high center of the mound. They tend to accumulate in areas with multidirectional wind regimes. Star dunes grow upward rather than laterally. They dominate the Grand Erg Oriental of the Sahara. In other deserts, they occur around the margins of the sand seas, particularly near topographic barriers. In the southeast Badain Jaran Desert of China, the star dunes are up to 500 metres tall and may be the tallest dunes on Earth. Straight or slightly sinuous sand ridges typically much longer than they are wide are known as linear dunes. They may be more than 160 kilometres (99 mi) long. Some linear dunes merge to form Y-shaped compound dunes. Many form in bidirectional wind regimes. The long axes of these dunes extend in the resultant direction of sand movement. Linear loess hills known as pahas are superficially similar.

{E} Once sand begins to pile up, ripples and dunes can form. Wind continues to move sand up to the top of the pile until the pile is so steep that it collapses under its own weight. The collapsing sand comes to rest when it reaches just the right steepness to keep the dune stable. This angle, usually about 30-34°, is called the angle of repose. Every pile of loose particles has a unique angle of repose, depending upon the properties of the material it's made of, such as the grain size and roundness. Ripples grow into dunes with increase of wind and sand input.

{F} The repeating cycle of sand inching up the windward side to the dune crest, then slipping down the dune's slip face allows the dune to inch forward, migrating in the direction the wind blows. As you might guess, all of this climbing then slipping leaves its mark on the internal structure of the dune. The image on the right shows fossil sand dune structure preserved in the Merced Formation at Fort Funston, Golden Gate National Recreation Area. The sloping lines or laminations you see are the preserved slip faces of a migrating sand dune. This structure is called cross-bedding, and can be the result of either wind or water currents. The larger the cross-bedded structure, however, the more likely it is to be formed by wind, rather than water.

{G} Sand dunes can "sing" at a level up to 115 decibels and generate sounds in different notes. The dunes at Sand Mountain in Nevada usually sing in a low C but can also sing in B and C sharp. The La Mar de Dunas in Chile hum in F while those at the Ghord Lahmar in Morocco howl in G sharp. The sounds are produced by avalanches of sand generated by blowing winds. For a while it was thought that the avalanches caused the entire dune to resonate like a flute or violin but if that were true then different size dunes would produce different notes. In the mid 2000s, American, French and Moroccan scientists visiting sand dunes in Morocco, Chile, China and Oman published a paper in the Physical Review Letters that determined the sounds were

produced by collisions between grains of sand that caused the motions of the grains to become synchronized, causing the outer layer of a dune to vibrate like the cone of a loudspeaker, producing sound. The tone of the sounds depended primarily on the size of the grains.

{H} Scientists performed a computer simulation on patterns and dynamics of desert dunes in the laboratory. Dune patterns observed in deserts were reproduced. From the initial random state, stars and linear dunes are produced, depending on the variability of the wind direction. The efficiency in sand transport is calculated through the course of development. Scientists found that the sand transport is the most efficient in the linear transverse dune. The efficiency in sand transport always increased through evolution, and the way it increased was stepwise. They also found that the shadow zone, the region where the sand wastes the chance to move, shrinks through the course of evolution, which greatly helps them build a model to simulate sand move.

You should spend about 20 minutes on the following questions, which are based on reading passage 3 on the following pages.

Questions 27-34

Reading passage3 A-H

Choose the correct heading for paragraphs A-H from the list below. Write the correct number, i-x, in boxes 1-8 on your answer sheet.

List of Headings

(i) potential threat to buildings and crops despite the benefit.

(ii) the cycle of sand moving forward with wind

(iii) protection method in various countries.

(iv) scientists simulate sand move and build model in lab

(V) sand composition explanation

(vi) singing sand dunes

(vii) other types of sand dunes

(viii) the personal opinion on related issues.

(ix) reasons why sand dunes form

(x) the most common sand type

(27) Paragraph A

(28) Paragraph B

(29) Paragraph C

(30) Paragraph D

(31) Paragraph E

(32) Paragraph F

(33) Paragraph G

(34) Paragraph H

Question 35-36

Answer the questions 35-36 and choose the correct letter A B C or D.

Question 35: What is the main composition of white sand made according to the passage ?

(A) Quartz

(B) Gypsum

(C) Lime

(D) Iron

Question 36: Which one is not mentioned as a sand type in this passage?

(A) Linear

(B) Crescentic

(C) Overlap

(D) Star

Questions 37-40

Complete the summary using the list of words, A-J below.

Write the correct letter, A-J in boxes 37-40 on your answer sheet.

Crescentic is an ordinary.....**37**.....on both Earth and Mars, apart from which, there are also other types of sand dunes. Different colors of the sand reflect different components, some of them are rich in.....**38**.....that can not be easily broken into clay. Sand dunes can "sing" at a level up to 115 decibels and generate sounds in different notes. Sand dunes can be able to .....**39**..... at a certain level of sound intensity, and different size of grains creates different .....**40**..... of the sounds.

A quartz	B shape	C pressure	D tone	E protection
F category	G minerals	H sing	I lab	J direction