TONBRIDGE SCHOOL

Test for Entrance into Year 12 in September 2015

English as an Additional Language

NAME OF CANDIDATE:

Time allowed : 1 hour

You are advised to spend 20 minutes on Part One (Reading Comprehension) and 40 minutes on Part Two (Writing)

Examination administrators, please note the following points:
(1) No dictionaries or electronic translators may be used.
(2) Answers must be handwritten, unless evidence in line with current UK public examination regulations is provided to support the need to use a computer, in which case the computer must not allow the candidate access to anything other than a plain page to type on. (Spell- and grammar- checks must be disabled.)
(3) No extra time may be awarded, unless evidence is produced of a condition that would merit such extra time being granted, again in accordance with current UK public examination regulations.

PART ONE: READING COMPREHENSION

You should spend about 20 minutes on Questions 1 – 15, which are based on the reading passage below.

SUGAR AND OTHER SWEETENERS: why do we love them so much?

1. The sweetness of a substance results from physical contact between that substance and the many thousand taste buds of the tongue. The taste buds are clustered around several hundred small, fleshy protrusions called *taste papilla* which provide a large surface area for the taste buds and ensure maximum contact with a substance.

2. Although there are many millions of olfactory cells in the nose, taste is a more intense experience than smell; food technologists believe this is because of the strong pleasure relationship between the brain and food. And it is universally acknowledged that sweetness is the ultimate pleasurable taste sensation. For example, the French writer Marcel Proust is famous for using this idea in his work: eating a particular cake by chance one day brings back extremely vivid memories of childhood for the narrator of his epic *In Search of Past Time*. The words 'sugar', 'honey' and 'sweetie' are used by lovers as terms of endearment. Pregnant women can often ward off morning sickness by eating something sweet. In Tudor times, to have teeth blackened by decay from eating too much sugar was seen as a desirable characteristic open only to the rich and aristocratic upper class. Even recently, with the harm sugar can do much more widely known, advertisers have managed to create demand for sweet-tasting cakes with the catch-phrase 'naughty but nice'. Despite the attraction of all things sugary, however, no-one is sure what exactly makes a substance sweet.

3. Nature is abundant with sweet foodstuffs, the most common naturally occurring substance being fructose, which is found in almost all fruits and berries and is the main component of honey. Of course, once eaten, all foods provide one or more of the three basic food components - protein, fat and carbohydrate - which eventually break down (if and when required) to supply the body with the essential sugar glucose. Nature also supplies us with sucrose, a naturally occurring sugar within the sugar cane plant, which was discovered and exploited many centuries BC. Sucrose breaks down into glucose within the body. Nowadays, this white sugar is the food industry standard taste for sugar - the benchmark against which all other sweet tastes are measured. In the U.S.A. a number of foods, and especially soft drinks, are commonly sweetened with High Fructose Corn Syrup (HFCS), derived from corn starch by a process developed in the late 1960s. And man has further added to nature's repertoire by developing a dozen or so artificial sweetening agents that are considered harmless, non-active chemicals with the additional property of sweetness (see Figure 1), to cater for his sweet tooth.

4. There is, indeed, an innate desire in humans (and some animals) to seek out and enjoy sweet-tasting foods. Since sweet substances provide energy and sustain life, they have always been highly prized. All food manufacturers capitalise on this craving for sweetness by flavouring most processed foods with carefully measured amounts of sugar in one form or another. The maximum level of sweetness that can be attained before the intrinsic taste of the original foodstuff is lost or unacceptably diminished is, in each case, determined by trial and error.

5. Furthermore, the most acceptable level of sweetness for every product - that which produces the optimum amount of pleasure for most people - is surprisingly constant, even across completely different cultures. This probably goes a long way towards explaining the almost universal appeal of Coca-Cola. (Although the type of sugar used in soft drinks differs from group to group, the intensity and, therefore, pleasure invoked by such drinks remains fixed within a fairly narrow range of agreement.)

6. Artificial sweeteners cannot match the luxurious smoothness and mouth-feel of white sugar. Even corn syrup has a slightly lingering after-taste. The reason why food technologists have not yet been able to create a perfect alternative to sucrose (presumably a non-kilojoule-producing substitute) is simple. There is no molecular structure yet known that predisposes towards sweetness. In fact, there is no way to know for certain if a substance will taste sweet or even taste of anything at all. Our currently available artificial sweeteners were all discovered to be sweet purely by accident.

Figure 1. Commercial Sweeteners

Sweetener	**Strength***	**Taste**	**When Discovered**
Sorbitol	0.6	slightly oily	1872 (France)
Sucrose	1.0	standard	pre-400 BC? (India?)
HFCS**	1.0	slight after-taste	1960s (USA)
Cyclamate	30	sickly	1937 (USA)
Aspartame (NutraSweet)	200	close to sucrose but softer, thinner	1965 (USA)
Saccharin	300	slightly bitter after-taste	1878 (Germany)

** relative to sucrose - base 1.0 ** a mixture of fructose and glucose*

Passage and table adapted from IELTS practice materials.

Questions 1 – 5

Do the following statements agree with the claims of the writer of the passage?

In boxes 1 – 5 below write

YES ***if the statement agrees with 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***

1	The popularity of sweet-tasting foods has recently led to a vast amount of academic research into the phenomenon of taste.	**1**
2	The mechanism by which we appreciate taste is not yet understood.	**2**
3	There are many examples in literature of taste triggering memories of the past.	**3**
4	It is a matter of pure chance whether the food industry will ever develop artificial sweeteners as popular as naturally occurring sugars.	**4**
5	Glucose is considered to be the perfect sweetener by the food industry.	**5**

Questions 6 – 15

The following paragraphs summarise the reading passage. Choose the ONE most appropriate word from the box below the paragraphs to complete each blank space. Write your answers in boxes 6 – 15. The first one has been done for you as an example.

Note that NO WORD CAN BE USED MORE THAN ONCE.

Sugar tastes sweet because of thousands of receptors on the tongue which connect the substance with the brain. The taste of sweetness is universally ...(Ex:) *accepted*..... as the most pleasurable known, although it is a .....(6)..... why a substance tastes sweet. Fructose is the most .....(7)..... naturally occurring sugar, sources of which include .....(8)..... and honey. Sucrose, which supplies .....(9)..... to the body, is extracted from the sugar-cane plant, and white sugar (pure sucrose) is used by food .....(10)..... to measure sweetness in other .....(11)..... Approximately a dozen artificial sweeteners have been .....(12).... ; one of the earliest was Sorbitol from France.

Manufacturers often add large amounts of sugar to foodstuffs but never more than the .....(13)..... required to produce the optimum pleasurable taste. Surprisingly, this amount is .....(14)..... for different people and in different cultures. No-one has yet discovered a way to predict whether a substance will taste sweet, and it was by chance alone that all the man-made .....(15)..... sweeteners were found to be sweet.

[accepted]	**chemicals**	**HFCS**	**surprise**	**fruit**
quality	**abundant**	**difficulty**	**different**	**dishes**
artificially	**glucose**	**average**	**maximum**	**similar**
minimum	**problem**	**unvarying**	**requirements**	**nutrients**
commonly	**technologists**	**most**	**expert**	**unusual**
substances	**chemical**	**sugary**	**discovered**	**fructose**
popular	**chemist**	**suitable**	**invented**	**mystery**

Write your answers to Questions 6 – 15 in the boxes below.

Q6	**Q7**	**Q8**	**Q9**	**Q10**
Q11	**Q12**	**Q13**	**Q14**	**Q15**

CHECK YOUR ANSWERS CAREFULLY & THEN GO ON TO PART TWO.

PART TWO: WRITING

You should spend about 40 minutes on this task, with 5 – 10 minutes used for planning. Write your plan legibly on the back page of this booklet. The absence of a written plan will lose you marks.

Write on ONE of the following topics, giving reasons for your answer and including relevant examples from your own knowledge or experience.

Write between 250 and 300 words. (Further writing after 300 words will not be awarded any marks and your essay will be considered incomplete.)

Choose ONE TOPIC from the following:

1. Self-control and self-denial are not popular virtues nowadays. Self-indulgence is far more enjoyable. But the ability to discipline oneself and delay gratification is a necessary quality in anyone who wants to succeed in life.

   To what extent do you agree or disagree?

2. Providing help for the poor should be the top priority of a government in any civilised society.

   To what extent do you agree or disagree?

3. The main difference between a scientist and an artist is that a scientist looks at an object and wants to know how it came to be like that, and an artist looks at the same thing and wants to invent a creative use for it.

   To what extent do you agree or disagree with this definition? Can you think of a better one?

4. Extroverts***** are more useful to society than introverts*****?

   To what extent do you agree or disagree?

*** *Extroverts: people who love being with other people and dislike too much solitude.***

Introverts: people who need solitude frequently and dislike spending too long with others.

END OF PAPER