READING PASSAGE 1

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

The unsung sense

New research reassesses the nature and importance of smell

Traditionally, smell has not been at the forefront of sensory research, pushed aside in favour of the seemingly more vital senses of vision and hearing. There has been a strong belief that people, especially compared to other mammals, are not that influenced by smells.

One of the first to assert the relative unimportance of the human sense of smell was Pierre Paul Broca, an influential 19th-century anatomist. After comparing the proportion of the brain devoted to smell in different animals, he suggested that mammals can be classed into two broad groups: macrosmatic mammals, such as dogs, have a finely tuned sense of smell which they rely on to perceive the world, while marine mammals and primates, including humans, are microsmatic – the organ with which they smell is small and functionally redundant.

That idea seemed to fit with more recent studies in genetics, which found that the majority of mammals have about one thousand different types of smell receptor. Most of these aren't present in humans, who only possess four hundred or so different types.

Yet these findings may have been misleading. Brain scans show that more of the human brain is devoted to smell processing than Broca's anatomical studies suggested. And although we may have fewer types of receptor than other mammals, research has shown that the human nose and brain are unusually well connected, with each group of receptors linking to many more neural regions than is the case in other animals. That should give us a good ability to process incoming scents.

Once researchers began looking, they found the nose to be far more sensitive than its reputation suggested. One study, for example, found that we can pick out a particular substance even when heavily diluted. In fact, a person can smell just one drop of a chemical in a large swimming pool.

What's more, with the latest findings, it is becoming clear that the brain's smelling centres are intimately linked to its system for controlling emotion, fear and memory. That suggests a link between smell and the way we think. One Dutch academic, for example, found that when the smell of orange, seawater or peppermint was pumped through a nightclub, those inside partied harder – they danced more, laughed more, and even thought the music was better than when there was no added scent.

Other work has found that scent can influence our cognitive skills. A study found that when men were subjected to a novel smell – either good or bad – during a task used to test decision-making skills, they performed significantly worse than normal. The researchers concluded that the scent stimulated brain areas connected with emotion, making their decisions emotional rather than rational.

The surprising thing about such studies is that up to 95% of subjects altered their behaviour, despite only 5% of them being aware of the introduced smells that they were facing. The question, then, is why do we pay so little conscious attention to our noses unless we smell something really strong?

One vital factor is that our noses just aren't equipped to locate the source of an odour. This makes the sense of smell fundamentally different to vision or hearing, which are built to identify sights and sounds with precision. Apparently, we become aware of something when the brain focuses on a single location, after which it picks out the details, like a familiar face, from the scene. With smell, though, the brain does not focus in the same way, and so is not able to make us aware of the details relating to one particular area. It's for this reason that we can only ever pick out around four smells from a complex mixture.

Nevertheless, we all have the capacity to train our sense of smell, but it needs to be worked at. Master perfumers, for instance, learn to recognise, name and imagine an extraordinary range of smells through years of practice. This is accompanied by a significant reorganisation of the olfactory areas in the brain that helps them to process the scents more efficiently.

Smells are also especially good memory evokers, but it's actually a myth that odours trigger more complete memories than other stimuli. These memories are neither more accurate nor more detailed, but they are unique in that they are more emotional. This isn't surprising when you consider that both emotion and smell are processed by the same areas of the brain, and there is a strong link between emotion and memory.

That said, not all smell memories are equal. The link between a memory and a smell is stronger if the smell is an unpleasant rather than a pleasant one, which makes sense from an evolutionary perspective. In addition, the very first time we associate a smell with an object, it evokes a much greater response in our brains than for any encounter with the smell or object in later life, laying down stronger foundations for the memory. That doesn't happen with any other sense. Since most first encounters with a smell happen at a young age, this might explain why smells often carry us back to our childhood.

Questions 1–6

Complete the notes below.

*Choose **ONE WORD AND/OR A NUMBER** from the passage for each answer.*

Write your answers in boxes 1–6 on your answer sheet.

Research on smell

Pierre Paul Broca

- referred to mammals for whom smell is vital as macrosmatic
- categorised humans with other **1** _____ and sea mammals as having a small smell organ

More recent studies

- humans have about **2** _____ kinds of smell receptor
- humans process incoming smells efficiently due to the way they reach the brain
- studies prove that humans can detect a single **3** _____ of some substance in a huge quantity of liquid

The latest research

- the effects of introducing certain aromas into a **4** _____ were studied
- certain smells altered the way Dutch party-goers felt about the **5** _____
- unfamiliar smells created a response related to emotion and changed the way some people made decisions
- as many as **6** _____ of people in research studies reacted to introduced smells

Questions 7–13

Do the following statements agree with the information given in Reading Passage 1?

In boxes 7–13 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

7 Human vision and hearing are designed to locate exactly where stimuli are coming from.

8 Even when complex multiple smells are present, most humans can identify only a few individual odours.

9 Professional help is needed when a person is developing their sense of smell.

10 Smells stimulate more precise memories than sights or sounds do.

11 A pleasant smell creates the strongest memories.

12 Sensitivity to new smells declines in adulthood.

13 Smell-related memories can frequently evoke childhood experiences.

Questions 1–6（选词填空：每空 ONE WORD AND/OR A NUMBER）

题号	答案	题干翻译	精确定位句（原文＋段落）	定位句翻译	详细解释
1	**primates**	把人类与其他**_____**以及海洋哺乳动物一起归为“嗅觉器官很小”的一类	“…**marine mammals and primates, including humans, are microsmatic – the organ with which they smell is small and functionally redundant.**” (Para.2)	“……**海洋哺乳动物和灵长类（包括人类）**属于微嗅觉类——它们用来嗅觉的器官很小，且功能上多余。”	空格限定为“humans with other ___ and sea mammals”，与句中并列搭配只可能是 **primates（灵长类）**。
2	**400**	人类大约有**2 _____**种嗅觉受体	“…humans, **who only possess four hundred or so different types**.” (Para.3)	“……而**人类只有大约四百种**。”	允许数字作答；标准写法可为 **400**（或 *four hundred*）。
3	**drop**	研究表明人类能在巨量液体中检测出某物质的单个 **3 _____**	“In fact, a person can smell just **one drop** of a chemical in a large swimming pool.” (Para.5)	“事实上，在一个大型游泳池里，人甚至能闻出**一滴**化学物质。”	“single ___ of some substance” 与 “one **drop**” 直对应。
4	**nightclub**	研究了把某些气味引入**4 _____**的效果	“…when the smell of orange, seawater or peppermint was pumped through **a nightclub**…” (Para.6)	“……当橙子、海水或薄荷的气味被输送进**夜店**时……”	名词单数；与 “effects of introducing aromas into a ___ were studied” 对应。
5	**music**	某些气味改变了荷兰派对人群对**5 _____**的感觉	“…and even thought the **music** was better…” (Para.6)	“……甚至觉得音乐更好听。”	“felt about the ___”=“他们对___的感受/评价”；原文直给 **music**。
6	**95%**	研究中多达**6 _____**的受试者对引入的气味产生了反应	“…**up to 95% of subjects altered their behaviour**, despite only 5% of them being aware…” (Para.2, p.2)	“……**多达 95% 的**受试者改变了自己的行为，尽管只有 5% 的人意识到……”	“reacted to introduced smells” 体现在 “altered their behaviour（改变行为）”；数值写作 **95%** 或 *95 per cent* 均可。

Questions 7–13（判断题：TRUE / FALSE / NOT GIVEN）

题号	答案	题干翻译	精确定位句（原文＋段落）	定位句翻译	详细解释
7	**TRUE**	人类的视觉与听觉被设计成能精确定位刺激的来源。	“…our noses aren’t equipped to locate the source of an odour. This makes smell different to **vision or hearing, which are built to identify sights and sounds with precision**.” (Para.3, p.2)	“……我们的鼻子并不适合定位气味来源。这使得嗅觉与**被构造成能精确识别**的视觉和听觉不同。”	题干说视觉/听觉能 “定位来源”，原文用 “built… with precision” 确认该功能，与题干一致。
8	**TRUE**	即便存在复杂的多重气味，大多数人也只能辨认出少数几种单独的气味。	“**we can only ever pick out around four smells from a complex mixture**.” (Para.3, p.2)	“**在复杂混合气味中我们最多只能分辨出大约四种气味**。”	“only a few individual odours”=“around four”。“most humans” 用文中的一般人称 “we” 代表。
9	**NOT GIVEN**	人在培养嗅觉时需要专业人士的帮助。	“Nevertheless, **we all have the capacity to train our sense of smell**, but it needs to be worked at. **Master perfumers**, for instance, learn… through years of practice.” (Para.4, p.2)	“尽管如此，**每个人都有能力训练**嗅觉，但需要付出练习。例如**调香大师**通过多年的训练……”	文中说明 “可以训练、需练习”，举了调香师为例，但**并未陈述“必须由专业人士帮助”**，也未否定，信息缺失→**NG**。
10	**FALSE**	嗅觉激发的记忆比视觉或听觉更精确。	“it’s **a myth** that odours trigger more complete memories… **neither more accurate nor more detailed**…” (Para.5)	“所谓‘气味触发的记忆更完整’**是个神话**……这些记忆**既不更准确也不更详细**……”	题干声称 “更精确”（=更准确/更细致），原文明确否定，故 **FALSE**。
11	**FALSE**	**愉快的**气味能产生最强烈的记忆。	“The link… is **stronger if the smell is an unpleasant rather than a pleasant one**.” (Para.6)	“如果气味是**不愉快的**而不是愉快的，记忆与气味之间的联系会**更强**。”	与题干取向相反：原文说 “不愉快更强”，故 **FALSE**。
12	**NOT GIVEN**	对新气味的敏感度在成年期会下降。	（无直接信息）；相关语境仅有：“the very first time… at a young age… might explain why smells often carry us back to our childhood.” (Para.6)	“第一次把某种气味与某物联系通常发生在年幼时期……或许解释了为何气味常把我们带回童年。”	文中未讨论 “成年期敏感度下降”，只谈 “首次联结更强且多发生于童年”。结论不足→**NG**。
13	**TRUE**	与气味相关的记忆常常能唤起童年经历。	“this might explain **why smells often carry us back to our childhood**.” (Para.6)	“这也许能解释**为何气味常把我们带回童年**。”	题干的 “frequently” 与原文 “often” 同义，表述一致→**TRUE**。