READING PASSAGE 2

*You should spend about 20 minutes on **Questions 14–26**, which are based on Reading Passage 2 below.*

How to be Happy

Some recent developments in the science of happiness

A A psychiatrist Tony Fernando was walking down the street when he saw a group of young homeless men sitting on the footpath. As Fernando handed out gifts of food, he tried to video the men's reactions in his mind, recording how their gratitude lifted him in return. 'I felt warm, content, meaningful,' he says. Fernando believes the brain can be trained to make us happy and that his 'video method' is one way to achieve this. In fact, a growing body of scientific research internationally is showing how we can learn happiness in the same way we can learn to play the piano. In the soft tissue that forms the brain, there are approximately ten trillion synapses connecting roughly a hundred billion neurons. Active synapses become more sensitive; less active synapses die, but new ones grow quickly. This is relatively new thinking – just 30 years ago, neuroscientists believed that adult brain cells couldn't regenerate. One of the pioneers in this field is University of Wisconsin professor Richard Davidson. He studied Buddhist monks using brain scans in his research facility, and found that those trained in meditation had higher levels of activity in the left prefrontal cortex – the area associated with happiness. Davidson believes that the trained brain is physically different from the untrained one.

B The idea that we can train our brains to find more happiness has been called 'mindfulness' by neuropsychologist Rick Hanson, author of Hardwiring Happiness. It was in college that Hanson, quite unintentionally, first recognised the importance of something that would become his life's work. As an unconfident teenager, he discovered he could turn a small event, 'a young woman smiling at me', into a good feeling he could hold on to. To do this, Hanson employs exactly the same imaginary 'video method' as psychiatrist Tony Fernando. 'The brain takes its shape from what the mind rests upon,' says Hanson. If you keep resting your mind on self-criticism and worries, he argues, your brain will be shaped by that. Hanson explains that resting it on pleasant feelings and the things you have accomplished means that over time your brain will take on a different shape, with strength and optimism hard-wired into it.

C In New Zealand, the Mental Health Foundation runs mindfulness programmes in 14 schools. Foundation CEO Judi Clements says, 'It's a valuable approach because children are told to pay attention, but aren't told how to pay attention.' Preliminary results on the outcomes found that children had sustained increases in well-being. The Foundation recognises five pathways to happiness – being active, connecting with others, taking notice, learning and giving. And, says Clements, 'We're detecting a hunger for it from different organisations and professions as well, so the Foundation is soon going to pilot an online "well-being game" in several workplaces.' The project leader is psychologist Carsten Grimm, who is interested in whether some pathways to happiness are more effective than others. In a study, Grimm recorded the activities and corresponding happiness scores of 173 people. What he found was that people who used several pathways to happiness achieved the best results, suggesting it's better to have a balance than concentrate on the single pathway you most identify with.

D However, Associate Professor of Psychological Medicine Nathan Consedine greets our relentless search for the secrets to happiness with a tired sigh. 'The more you chase it, the less you get it,' he says, quoting studies showing those who value contentment and well-being are, in fact, less happy. The big question, he says, is whether there's any benefit in actively seeking happiness. He cites a study, for example, which showed that people who were happier were less inclined to show sympathy. Consedine says that's probably because happy people are strongly motivated to stay happy, but engaging sympathetically with others typically involves engaging with their distress, and that's going to reduce their own happiness. Consedine's not disagreeing with the theory of mindfulness, but believes there's more work to be done.

E Some of that work is being conducted at Auckland University's Centre for Brain Research. Associate Professor Johanna Montgomery has been studying Hanson's theory – that altering our brain activity at a synaptic level affects our behaviour. She accepts that it's a logical explanation based on studies from animals, but we haven't yet got the technology to prove it scientifically in humans. It's true that MRI scans certainly do indicate an increased flow of blood to different areas of the brain which are experiencing positive stimuli. However, she warns that this is a long way from confirming that the brain itself is developing or strengthening.

F Nonetheless, Montgomery believes she is making progress. In the laboratory, when scientists want to experiment with synaptic connections, they stimulate the brain with electricity, as this copies the high-frequency firings that happen normally in the brain every second. Using this technique, Montgomery has made a number of findings. For example, the hormones that are released routinely in response to good or bad situations – such as adrenaline – act to regulate the brain, in the same way that weather has a regulating effect on human activity more generally. But scientists understand some of these stimuli better than others. More is known about the impact on brain activity of prolonged periods of fear than the effects of 'happiness' hormones that are released by positive events in life. This is one potentially important area that she hopes to investigate further in future.

Questions 14—17

Reading Passage 2 has six paragraphs, ***A–F****.*

Which paragraph contains the following information?

Write the correct letter, ***A–F****, in boxes 14–17 on your answer sheet.*

NB *You may use any letter more than once.*

14 a reference to a fact that two scientists use the same technique to promote their own happiness

15 the suggestion that scientific opinion about an aspect of brain function has changed over a given time period

16 an estimate of how numerous some brain components are

17 the reason why some educational courses were set up

Questions 18—21

Look at the following statements (Questions 18–21) and the list of people below.

Match each statement with the correct person, ***A–F****.*

Write the correct letter, ***A–F****, in boxes 18–21 on your answer sheet.*

18 It's better to look for a variety of ways to increase happiness than focus on just one.

19 Focusing on personal achievements rather than negative experiences will make people happier.

20 Happy people might have a reason not to display one favourable characteristic.

21 A range of groups are becoming more interested in learning techniques to improve happiness.

List of People

A Tony Fernando
B Richard Davidson
C Rick Hanson
D Judi Clements
E Carsten Grimm
F Nathan Consedine

Questions 22—26

Complete the summary below.

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

Write your answers in boxes 22–26 on your answer sheet.

Auckland University's Centre for Brain Research

Associate Professor Johanna Montgomery says that current research into brain activity and behaviour only relates to **22** _____, so Hanson's theories have not been proved correct. While scans do show that positive stimuli result in more **23** _____ reaching parts of the brain, this isn't proof that the brain is getting stronger.

But Montgomery is making progress. In laboratory experiments, scientists use **24** _____ to initiate brain activity, because it's similar to natural processes. One finding is that hormones can be compared to the **25** _____, because both can change human behaviour. But scientists understand some stimuli, such as **26** _____, better than they understand more positive stimuli.

14–17 段落匹配（A–F）

题号	题干翻译	答案	定位段落 & 原文摘录	解析
14	提到**两位科学家使用相同的方法**来促进自己的幸福感	**B**	第 2 段 (B)：“Hanson **employs exactly the same imaginary ‘video method’ as** psychiatrist Tony Fernando.”	“exactly the same … method”=同一技巧；两人分别是 Rick Hanson 与 Tony Fernando，对应题干 “two scientists use the same technique”。
15	暗示**科学界对某一脑功能的看法在一段时间内发生变化**	**A**	第 1 段 (A)：“This is relatively new thinking – **just 30 years ago, neuroscientists believed** that adult brain cells couldn’t regenerate.”	“30 years ago … believed” ⇔ 过去观点；“relatively new thinking” ⇔ 现在观点 → 体现 “over a given time period” 的变化。
16	**某些脑部成分数量的估计**	**A**	第 1 段 (A)：“…there are **approximately ten trillion synapses** connecting roughly **a hundred billion neurons**.”	“approximately/roughly”=估计；对象是突触和神经元数量。
17	**某些教育课程设立的原因**	**C**	第 3 段 (C)：Judi Clements 说，“It’s a valuable approach **because children are told to pay attention, but aren’t told how** to pay attention.”	说明为什么要在 **14 所学校**开展正念课程：“被要求专注，却**不知道如何**专注”。这正是设立课程的动因。

18–21 人名匹配（A–F）

题号	题干翻译	答案（人名）	定位段落 & 原文摘录	解析
18	相比只专注一种方式，**寻找多种提升幸福的方法更好**	**E (Carsten Grimm)**	第 3 段 (C)：“…people who **used several pathways to happiness achieved the best results**, suggesting it’s **better to have a balance** than concentrate on the single pathway…”	“several pathways” “better … than … single pathway” 与题干完全一致。
19	**专注于个人成就**（而非负面经历）会让人更快乐	**C (Rick Hanson)**	第 2 段 (B)：“…resting [your mind] on **pleasant feelings and the things you have accomplished** means that over time your brain will take on a different shape…”	“things you have **accomplished**”=个人成就；与 “rather than negative experiences” 对应 B 段前文 “self-criticism and worries”。
20	快乐的人**可能不愿表现出某一优点**（同情心）	**F (Nathan Consedine)**	第 4 段 (D)：“…a study… showed that **people who were happier were less inclined to show sympathy**… because … engaging sympathetically… reduces their own happiness.”	“less inclined to show sympathy”=不愿展示 “favourable characteristic (sympathy)”，且给出原因。
21	**越来越多的群体**对学习提升幸福的技巧感兴趣	**D (Judi Clements)**	第 3 段 (C)：“We’re detecting **a hunger for it from different organisations and professions** as well, so the Foundation is soon going to pilot … in several workplaces.”	“different organisations and professions… workplaces”=多类群体、场域的兴趣上升。

22–26 概要填空（每空 ONE WORD ONLY）

题号	答案	题干要点译意	精确定位句	关键词/同义替换解析
22	**animals**	现有研究只与**动物**有关，因此 Hanson 的理论尚未被在人类上证明	第 5 段 (E)：“…logical explanation **based on studies from animals**, **but we haven’t yet** got the technology to prove it… **in humans**.”	“only relates to” → 仅限；“studies from **animals**” 直接填入。
23	**blood**	扫描显示积极刺激使更多**血液**到达大脑各区	第 5 段 (E)：“…MRI scans indicate an **increased flow of blood** to different areas of the brain … experiencing positive stimuli.”	概要要求一词：用核心名词 **blood**（而非 “blood flow”）。
24	**electricity**	实验中用**电**来启动脑活动，因为它类似自然过程	第 6 段 (F)：“…they **stimulate the brain with electricity**, as this **copies** the high-frequency firings that happen normally…”	“initiate brain activity” ⇔ stimulate；“similar to natural processes” ⇔ copies … happen normally。
25	**weather**	激素可与**天气**类比，二者都能改变人类行为	第 6 段 (F)：“…hormones … **act to regulate the brain, in the same way that weather** has a regulating effect on human activity…”	“compared to” ⇔ in the same way as；填 **weather**。
26	**fear**	科学家更了解**恐惧**等刺激的作用，而非更积极的刺激	第 6 段 (F)：“**More is known** about the impact … of prolonged periods of **fear** than the effects of ‘happiness’ hormones …”	“understand … better” ⇔ more is known；“such as” 后举例 **fear**。