READ THESE INSTRUCTIONS FIRST

An answer booklet is provided inside this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.

Answer two questions.
You should spend about 15 minutes reading the passages and questions before you start writing your answers. You are reminded of the need for good English and clear presentation in your answers.

The number of marks is given in [ ] at the end of each question or part question.
Both questions carry equal marks.
The following text is a transcription from an online video in which the speaker, Roger Haeske, describes his top three anti-ageing tips.

(a) Imagine that you are a publisher. You are going to publish a book about anti-ageing written by Roger Haeske. Write the promotional text for the back cover of this book. You should write between 120 and 150 words.

(b) Compare the language and style of your response with the language and style of the original text.

**TRANSCRIPTION KEY**

(1) = pause in seconds  
(.) = micro-pause  
[laughs] = paralinguistic feature  
underlining = stressed sound/syllable(s)

I will share with you my three most powerful and unusual anti-ageing strategies (1) the first one has to do with exercise (.) but not just any exercise you need to do (.) vigorous (.) heart pounding exercise (.) the problem with doing stuff like aerobics especially long distance running like marathons and ultra marathons (.) a lot of those guys (1) end up looking prematurely old (.) ageing themselves (.) instead what you want to do is something really vigorous and there are many kinds of exercise but one of them that i'll tell you i'll suggest to you today is doing some kind of sprinting (.) and not just little jogging (.) sprinting up hills (1) any chance you get (.) run as fast as you can (1) and what happens is (.) if you do this properly (.) you can release up to five hundred percent more human growth hormone into your body which helps you to look younger (.) look slimmer and so on (.) so that's anti-ageing tip number one is vigorous exercise (2) number two (.) is eat a lot more raw fruits and vegetables (1) what scientists have discovered through many studies and correlations of the people who ended up living the longest in these studies they usually find (.) they found that (.) the number one most important food (.) for anti-ageing is is dark mineral rich leafy greens (1) the second most important food or the people who live the longest were also eating a lot of raw fruit (1) and what i eat is a raw food diet i've been eating it for over ten years (.) actually for about fifteen years (.) but pretty much exclusively for over ten years now (.) which it consists of raw fruits vegetables nuts and seeds and i found a magic elixir (.) that made me want to eat way more in er in terms of greens (.) okay and it first started out i figured out a way of making salads that doesn't require any dressings its called the blended salad (.) and that was really good (.) i made it for years and years and years and then i started adding different ingredients and then i found a few little tricks and that was like man this is now so delicious (.) and so we transformed a plain blended salad into something delicious and spectacular called savoury veggie stews (.) and by eating that (.) most of the people who try it end up at least doubling or if not tripling their greens intake because it tastes so good (.) a typical blended salad just so you know is you blend tomatoes cucumber celery and you liquify that and then you add in some spinach or some lettuce any other greens (.) and anyway that is how to get more greens in your diet (.) and certainly eat a lot more fruit (.) id recommend doing it all that way but start off where you can (.) final strategy is a spiritual one and mainly you want to have as much joy in your life at all times as possible regardless of where you are (.) whether you're in prison (.) whether you're in alaska (.) whether you're here in hawaii (.) doesn't matter (.) you have control of your thoughts and you want to focus on being happy you don't want to let children your children annoy you [laughs] you need to be in control of your emotions cos negative thoughts actually break down and prematurely age the body (.) so that's tip number three of my most powerful and unusual anti-ageing strategies.
Text A and B both relate to sleep.

Text A is an article from a website called *Geekosystem*.

Text B is an extract from a chapter called *The Science of Sleep* which is taken from an academic textbook.

Compare the language and style of Text A and Text B.

**Text A**

**Scientists Finally Understand Why We Need Sleep, And It’s Because Of Our Dirty Minds**

Humans need sleep; everybody knows that without it, we get cranky, a bit loopy, and then we die. Unfortunately, science has been a little iffy about it; though we understood the negative effects associated with lack of sleep, no one really knew *why* those things happened. Now, we’re finally getting some insight into what sleep does for our bodies.

For the first time ever, scientists at the University of Rochester have found one of the reasons our brain *needs* sleep to survive. Turns out, when we sleep, our brain takes that time to clean out the build-up of brain junk we accumulate during our waking hours. Sleep is pretty much necessary for our body’s mental street-cleaners to come out and do their work.

When cells do their daily cell-type work, they produce waste product. The rest of the body has this waste cleared out by the lymphatic system, but the brain is disconnected from that, so it needs another way to wipe out the waste. The brain has its own garbage men, carried on the waves of cerebrospinal fluid, who surf the leftovers straight down to your liver for elimination. As it turns out, the brain’s garbage men move twice as fast when you’re sleeping, because your neurons shrink by half, making the fluid channels wider.

“This study shows that the brain has different functional states when asleep and when awake,” said U of R researcher Maiken Nedergaard. “In fact, the restorative nature of sleep appears to be the result of the active clearance of the by-products of neural activity that accumulate during wakefulness.”

So get lots of rest, or else your brain’s spinal-fluid surfing street cleaners can’t get their gig done right.
Text B

Theories on the purpose of sleep

Historically it has been assumed that sleep must serve some universal essential purpose. However, emerging evidence suggests that this is not necessarily the case. Instead, sleep has evolved multiple functions to cope with the increasing sophistication of the nervous system and the ever-increasing volume of sensory information that must be processed in complex species.

Numerous theories regarding specific sleep functions have been proposed, but none is well established (Siegel 2005). Energy conservation appears to be an important sleep function for many animals as this serves to optimize the timing and duration of behaviour and therefore prevents unnecessary activity at inopportune times. Nervous system recuperation and restoration is another important consideration – that sleep somehow reverses wake-related change in brain function that may otherwise cause damage, such as depletion of energy stores and neuronal death. The role for sleep in neurogenesis\(^1\), thermoregulation\(^2\) and the regulation of emotion is also being investigated.

In humans, the ‘information-processing’ theories have been most studied so far. Sleep has a role in the reinforcement of learning and consolidation of memory, with distinct roles for NREM\(^3\) and REM\(^4\) sleep. Some research supports the formation of new brain connections during sleep whilst other research suggests that they are removed during sleep, thereby retaining important information and discarding non-essential information (Crick and Mitchison 1983; Meerlo et al 2009). Studies have suggested that memories are replayed, modified, stabilized and enhanced during sleep, although there is disagreement about whether NREM, REM or both are required and to what extent they are involved (Stickgold 2005, 2006). Such research gives us reason to believe that there may be some truth in the concept of ‘sleeping on a problem’ and the saying ‘sleep on it’.

Whereas slow-wave sleep is most closely associated with sleep’s restorative effects, REM sleep is thought to play an important role in development because it is maximal in the young. Other data suggests that REM sleep may have a role in facilitating entry into the wake state following NREM sleep. One of the more fascinating aspects of REM sleep is its relationship to dreaming. Whilst dreaming can occur in the other stages of sleep, it most often happens during REM.

Notes:

1 Neurogenesis: the growth and development of cells called neurons.
2 Thermoregulation: the process by which a human or other organism maintains an internal body temperature within certain boundaries.
3 NREM: a stage of sleep involving non-rapid eye movement.
4 REM: a stage of sleep involving rapid eye movement.