SECTION 3 *Questions 28–40*

Read the passage below and answer Questions 28- 40.

LACK OF SLEEP

Section A

It is estimated that the average man or woman needs between seven-and-a-half and eight hours' sleep a night. Some can manage on a lot less. Baroness Thatcher, for example, was reported to be able to get by on four hours' sleep a night when she was Prime Minister of Britain. Dr Jill Wilkinson, senior lecturer in psychology at Surrey University and co-author of 'Psychology in Counselling and Therapeutic Practice', states that healthy individuals sleeping less than five hours or even as little as two hours in every 24 hours are rare, but represent a sizeable minority.

Section B

The latest beliefs are that the main purposes of sleep are to enable the body to rest and replenish, allowing time for repairs to take place and for tissue to be regenerated. One supporting piece of evidence for this rest-and-repair theory is that production of the growth hormone somatotropin, which helps tissue to regenerate, peaks while we are asleep. Lack of sleep, however, can compromise the immune system, muddle thinking, cause depression, promote anxiety and encourage irritability.

Section C

Researchers in San Diego deprived a group of men of sleep between 3am and 7am on just one night, and found that levels of their bodies' natural defences against viral infections had fallen significantly when measured the following morning. 'Sleep is essential for our physical and emotional well-being and there are few aspects of daily living that are not disrupted by the lack of it', says Professor William Regelson of Virginia University, a specialist in insomnia. 'Because it can seriously undermine the functioning of the immune system, sufferers are vulnerable to infection.'

Section D

For many people, lack of sleep is rarely a matter of choice. Some have problems getting to sleep, others with staying asleep until the morning. Despite popular belief that sleep is one long event, research shows that, in an average night, there are five stages of sleep and four cycles, during which the sequence of stages is repeated. In the first light phase, the heart rate and blood pressure go down and the muscles relax. In the next two stages, sleep gets progressively deeper. In stage four, usually reached after an hour, the slumber is so deep that, if awoken, the sleeper would be confused and disorientated. It is in this phase that sleep-walking can occur, with an average episode lasting no more than 15 minutes. In the fifth stage, the rapid eye movement (REM) stage, the heartbeat quickly gets back to normal levels, brain activity accelerates to daytime heights and above and the eyes move constantly beneath closed lids as if the sleeper is looking at something. During this stage, the body is almost paralysed. This REM phase is also the time when we dream.

Section E

Sleeping patterns change with age, which is why many people over 60 develop insomnia. In America, that age group consumes almost half the sleep medication on the market. One theory for the age-related change is that it is due to hormonal changes. The temperature

rise occurs at daybreak in the young, but at three or four in the morning in the elderly. Age aside, it is estimated that roughly one in three people suffer some kind of sleep disturbance. Causes can be anything from pregnancy and stress to alcohol and heart disease. Smoking is a known handicap to sleep, with one survey showing that ex-smokers got to sleep in 18 minutes rather than their earlier average of 52 minutes.

Section F

Apart from self-help therapy such as regular exercise, there are psychological treatments, including relaxation training and therapy aimed at getting rid of pre-sleep worries and anxieties. There is also sleep reduction therapy, where the aim is to improve sleep quality by strictly regulating the time people go to bed and when they get up. Medication is regarded by many as a last resort and often takes the form of sleeping pills, normally benzodiazepines, which are minor tranquillisers.

Section G

Professor Regelson advocates the use of melatonin for treating sleep disorders. Melatonin is a naturally secreted hormone, located in the pineal gland deep inside the brain. The main function of the hormone is to control the body's biological clock, so we know when to sleep and when to wake. The gland detects light reaching it through the eye; when there is no light, it secretes the melatonin into the bloodstream, lowering the body temperature and helping to induce sleep. Melatonin pills contain a synthetic version of the hormone and are commonly used for jet lag as well as for sleep disturbance. John Nicholls, sales manager of one of America's largest health food shops, claims that sales of the pill have increased dramatically. He explains that it is sold in capsules, tablets, lozenges and mixed with herbs. It is not effective for all insomniacs, but many users have weaned themselves off sleeping tablets as a result of its application.