



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Advanced Subsidiary Level

GENERAL PAPER

8001/21

Paper 2

October/November 2012

INSERT

1 hour 30 minutes

READ THESE INSTRUCTIONS FIRST

You are required to answer **one** question.

This Insert contains three passages, one for each of Questions 1 to 3. You need to study the passage for the question you have chosen before starting your answer. The time needed to do this is allowed for within the time set for the examination.

This document consists of **6** printed pages and **2** blank pages.



Passage 1 Study the material below to answer Question 1 parts (a–d).

500 teenagers chosen at random from various secondary schools in your area were asked to identify their chief concern. Their initial replies are below.

TABLE 1

Schoolwork and exams	172
My future prospects	73
Relationships with my friends	55
My personal appearance	46
My parents and family	40
Being healthy	34
Money	30
Getting into trouble	26
Another concern	14
Nothing	5
Don't know	5

Below are two reactions to these original findings:

A What a self-indulgent bunch of individuals! All they do is squander money on fancy clothes and make-up, flirt with whoever crosses their path, and hound their parents to pay their bills. With their criminally irresponsible life-style, no wonder they are obsessed with their health! And then they whine about being caught out! A good stiff dose of discipline would soon bring them to their senses.

B What a joyless lot these are! With their noses in textbooks or panicking over where they'll be in twenty years' time, they are letting life, real life, pass them by. And they'll never put a foot wrong in case someone notices! I can just see them queuing up at the doctor's when they've a cold or crawling to their bank manager when they're still comfortably in credit. The sooner they do something really silly, the better.

The next day, the same 500 teenagers were asked again to identify their chief concern. Their replies, on this occasion, are below.

TABLE 2

Schoolwork and exams	158
My future prospects	73
My personal appearance	70
Relationships with my friends	55
My parents and family	40
Being healthy	34
Money	30
Getting into trouble	26
Another concern	14
Nothing	0
Don't know	0

Passage 2 Study the dialogue below to answer Question 2 parts (a–d).

Ganna is a young, hard-up graduate who is about to be employed abroad for the first time as a modern languages teacher at the International Academy in the city of Jikam. As the conversation below opens, a House Agent has taken Ganna to an old four-storey house in which there is a room to be rented.

Agent: Mind the steps, they're rather slippery. The front door, as you can see, has a combination lock. You'll be given the number if you take the room.

Ganna: Ah, the room! On the ground floor, you said?

Agent: Here, just inside on the left. With double security locks if I can find the keys.

Ganna: And all this mail in the hall? Whose is . . . ?

Agent: Here they are and in we go! Just let me pull the curtains back. That's better.

Ganna: The lights won't come on.

Agent: No. There's a meter outside in the hall. You'll need a pile of coins to feed it but at least you'll never have a massive electricity bill.

Ganna: That's a blessing. I really can't afford . . .

Agent: I'm sure this is much bigger than you anticipated. It's where all the children of Klaus Looberg, the eminent nineteenth century philosopher, used to . . .

Ganna: Do what?

Agent: Eat. Next door was the kitchen and behind that . . .

Ganna: So I'll be able to cook for myself?

Agent: Unfortunately not. No cooking's allowed on the premises – too much of a fire risk – but you can boil a kettle over there and keep biscuits, cereals and suchlike in that wall cabinet. There's a small fridge as well.

Ganna: I see. So I would have to eat out for most of the time?

Agent: I'm informed that the meals at the International Academy are highly nutritious. Besides, there are plenty of bars, cafes and restaurants round here. They're cheap, too, so I'm told. And there are a couple of launderettes not too far away. This neighbourhood is also famous for its vibrant night life. Talk about everything being on hand!

Ganna: Well, it does sound pretty noisy outside, even with the windows shut.

Agent: I'd keep them that way, if I was you. But don't worry, the traffic melts away after 6 p.m. once all the office workers have gone home. And, doubtless, you'll be fast asleep by the time the people leave the clubs.

Ganna: Still, at least I wouldn't have to commute, the International Academy being so close. The other day it cost me a fortune to come from the station.

Agent: Public transport does run away with the money, doesn't it? And the rent is as low as you'll find anywhere.

Ganna: I must admit, all the other rooms I've looked at so far have been much too expensive.

Agent: Low rent and a fully furnished room. You've got it made!

Ganna: It looks like it but where's the bed?

Agent: Oh, you just take the cushions off the sofa, extend it like this, and you'll have as comfortable a sleep as you've had anywhere.

Ganna: Just like my student flat in my home university. But it does feel rather damp. And isn't it a bit chilly in here?

Agent: Nothing that the electric fire won't put right. So, where was back home?

Ganna: Munadu.

Agent: Munadu? 'Land of Fruit!' That's where two of our tenants come from.

Ganna: Yes. I couldn't help noticing their names on the junk mail by the front door.

Agent: They've been with us for ages and very good tenants they are, too! They always keep the place neat and tidy and pay their rent in advance without fail. A most friendly pair, they are.

Ganna: In advance?

Agent: Of course! Two months in advance.

Ganna: But I don't get my first salary from the International Academy until . . .

Agent: Don't you bother about that. We can easily arrange a temporary loan through Nugget Investments to help you through to your first pay day.

Ganna: Really? Oh, thank you. I am rather short . . .

Agent: No problem. You borrow the money, pay the first two months' rent on the day you move in. Then, next month, you repay the loan with interest when you send us the second instalment of rent. Then . . .

Ganna: But won't that leave me with nothing for other . . .?

Agent: And I should say at this point, before we finalise everything, that the minimum term for any tenancy agreement with us is six months.

Ganna: I think . . . Where's the bathroom?

Agent: Three floors up and with a magnificent view of the rooftops. The cistern's leaking but the plumber is coming back later today.

Passage 3 Study the article below to answer Question 3 parts (a–e).

“The most resilient parasite is an idea planted in the unconscious mind.”

Are you dreaming as you read this sentence? I’m sure you’re confident that you’re wide awake – but if you’ve seen *Inception*, the new blockbuster movie, you may harbour a nagging doubt.

At the heart of this excellent film is an intriguing idea that lingers in the mind despite the usual overblown Hollywood treatment. Leonardo DiCaprio plays Dom Cobb, a spy who steals secrets from his victims when they dream, sometimes as they dream within a dream. He can even plant an idea in an unconscious mind, where it can take root. “The most resilient parasite is an idea,” he says. 5

One of the most resilient of those parasites is that, by giving a complex phenomenon – such as “consciousness” – a convenient label, we will understand what we are talking about. In fact, this is an illusion: there’s no agreed definition, because scientists still struggle to understand this central feature of everyday life. 10

In reality, we slip in and out of different states of consciousness all the time. There’s dreaming, when the sleeping brain processes information and lays down memories. There’s lucid dreaming, a twilight zone between waking and slumber in which, unlike in a standard dream, you are aware that you are dreaming and able to control what you do. There’s sleep paralysis, when the brain is conscious yet the body is unable to move, frozen to prevent it acting out its dreams. 15

Then there are those unfortunate people who appear to be unconscious, but are actually aware. One of the leading figures in the effort to explore the phenomenon is Adrian Owen, of the MRC Cognition and Brain Sciences Unit at Cambridge University (soon, alas, to take his team to Canada). A few months ago, Owen and Steven Laureys of the University of Liège made headlines for showing how the brains of apparently unaware patients in a vegetative state could respond in much the same way as conscious people when asked to think of a given activity, such as walking around or playing tennis. 20

Remarkably, they trained a brain-damaged 29-year-old to answer questions by thinking of a corresponding activity, where wandering around the house was a “no” and serve-and-volleying a “yes”. Their conclusion, which is as heartening as it is disturbing, was that some vegetative bodies harbour conscious minds. 25

More extraordinary still, Owen can now use brain scanning to probe the bewildering possibilities that lie between oblivion and consciousness. In *Inception*, he was fascinated by the degree to which dreamers were cut off from the outside world. In natural sleep, we are surprisingly aware of what is going on around us. This is not the case when the sleep is drug-induced, as our experience during major surgery demonstrates – but even here, Owen and his colleagues at Cambridge’s Division of Anaesthesia showed that the brain remains highly active when heavily sedated, and even responds to people’s speech with a crackle of activity. 30 35

Inception raises other issues: if you are trapped in an alternative reality created by your brain, does it have to obey the laws of physics? In the movie, one of the most intriguing ideas is that time passes more quickly within a dream, and faster still in a dream embedded within another dream: years can zip by in a matter of minutes.

This time-warping effect resonates with Owen. Working with Tristan Bekinschtein, he studied what happens when people doze off while asked to conduct a monotonous task such as repeatedly tapping their finger. Having taken part himself, Owen was surprised to find that when he drifted off, he picked up the task again as soon as he awoke, unaware that time had elapsed: “I had dozed off half a dozen times during the course of an hour, and each time was 40

completely unaware that I had ‘lost’ a few minutes of my life – as a result, my estimate was that the experiment had lasted less than 30 minutes.” 45

This offers a new twist on an idea that I first encountered a couple of decades ago, when it was speculated that, in a dying brain, the perception of time would speed up to the point where the victim perceives their last few moments as lasting for weeks, months or even longer.

At that time, it was hardly possible for scientists to show the brain at work, let alone draw any conclusions about what someone was thinking. Two decades later, we can not only use scanners to lift that veil, but to enable a vegetative patient to communicate with the outside world. “In another 20 years,” Owen tells me, “we may well be able to determine what the dreamers are actually seeing.” As for whether we will be able, like DiCaprio, to enter the “reality” created in someone else’s unconscious mind, there’s a simple answer: dream on. 50
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