

Test 3

Reading and Use of English 1 hour 30 minutes

Part 1

For questions 1–8, read the text below and decide which answer (A, B, C or D) best fits each gap. There is an example at the beginning (0).

Example:

0 A getting B sending C putting D setting

0 ☐ A ☐ B ☒ C ☐ D

Burglars Beware! Don't touch the food

It seems that a burglar's inability to say no to his stomach could go a long way towards (0) him behind bars. According to the British Dental Journal, 'Criminals appear to be unable to (1) food, chocolate or fruit that they find on (2) into which they enter illegally. There's also a (3) to leave, at the site, the unconsumed portions.' For years, forensic experts have examined these food traces in the (4) of finding bite-mark evidence, but with DNA identification now commonplace, investigators try to uncover molecular fingerprints as well.

Californian researchers recently wanted to test the (5) of recovering DNA from foods. They organized a dinner party in which guests were asked to (6) themselves to a few bites of whatever they fancied and leave the (7) behind. Cheese, carrots, apples and pizza returned the most complete DNA profiles while chocolate was (8) useless. The researchers think the chocolate failure was more to do with the fact that the pieces were small, meaning that less saliva was left behind.

- | | | | |
|----------------|---------------|---------------|---------------|
| 1 A resist | B decline | C deny | D refuse |
| 2 A houses | B locations | C grounds | D premises |
| 3 A habit | B tendency | C behaviour | D likelihood |
| 4 A reason | B chance | C hope | D view |
| 5 A dependency | B reliability | C suitability | D methodology |
| 6 A control | B limit | C restrain | D ration |
| 7 A extra | B spare | C excess | D remains |
| 8 A hardly | B extremely | C virtually | D barely |

Part 2

For questions 9–16, read the text below and think of the word which best fits each space. Use only **one** word in each gap. There is an example at the beginning (0).

Write your answers IN CAPITAL LETTERS on the separate answer sheet.

Example:

0 WHOM

Language and Moral Choices

In a recent study, 725 participants, most of (0) were either native speakers of Spanish with English as a foreign language, or native speakers of English learning Spanish, (9) presented with a moral dilemma. They had to imagine that they were on a railway bridge, looking down at five workers in danger (10) of the high speed train speeding towards them. Would they push the heavy man standing beside them off the bridge (11) that his impact would stop the train, and the workers be saved? (12) was found that when participants heard the dilemma in their native tongue, they were far less likely to opt for pushing the heavy man than those hearing it in their second language. Breaking a moral code (13) killing the bystander seems easier to do when considering the problem in a language learnt later (14) life. The authors of the study attribute (15) to the fact that foreign language appears to trigger a less emotional response, leaving people (16) able to make a pragmatic decision.

Part 3

For questions 17–24, read the text below. Use the word given in capitals at the end of some of the lines to form a word that fits in the gap in the same line. There is an example at the beginning (0).

Write your answers IN CAPITAL LETTERS on the separate answer sheet.

Example:

0 READILY

Up until the mid 1800s, sport had mainly relied on (0) available **READY**
materials such as wood or leather. Rubber was not commonly used for
balls since it became a rigid and (17) substance in winter and **BREAK**
was (18) sticky in the high temperatures of summer. Then, thanks **NATURE**
to a process known as vulcanization (the (19) of sulphur and heat **APPLY**
in the right quantities) manufacturers were able to (20) rubber for **STABLE**
the first time. The mass production of rubber balls began, and one of the first
sports to take advantage of this (21) advance was tennis. **TECHNOLOGY**
Players used to a low-bouncing ball suddenly had to adapt to a far more
(22) game driven by the new 'India-rubber' ball. Later on, rugby **ENERGY**
and football also saw how rubber could be (23) to the game; artificial **BENEFIT**
rubber bladders were reliable and durable (24) for the pigs' bladders **REPLACE**
traditionally used inside the leather.

Part 4

For questions 25–30, complete the second sentence so that it has a similar meaning to the first sentence, using the word given. Do not change the word given. You must use between three and six words, including the word given. Here is an example (0).

Example:

0 As he continued to listen to the speech, Richard became increasingly sleepy.

SLEEPY

The more Richard listened to the speech,
became.

The gap can be filled with the words 'the sleepier he', so you write:

Example:

0 THE SLEEPY HE

Write only the missing words IN CAPITAL LETTERS on the separate answer sheet.

25 Although we booked a table, it wasn't necessary because the restaurant was empty.

NEED

There a reservation because the restaurant was
empty.

26 John resigned because he wants to travel, not because he wants a new job.

DO

John's resignation is desire to travel than
wanting a new job.

27 Albert's wife said he had to start being interested in their children's lives.

TIME

Albert's wife said it an interest in their children's
lives.

28 I almost didn't recognize Takeshi because he had lost so much weight.

DUE

I hardly the amount of weight he'd lost.

29 It was wrong of you not to tell me that information.

KEPT

You should me.

30 The council officer promised to get someone to remove the rubbish.

HAVE

The council officer promised he away.

Part 5

You are going to read a magazine article about the sense of morality that animals might possess. For questions 31–36, choose the answer (A, B, C or D) which you think fits best according to the text.

Mark your answers on the separate answer sheet.

Virtuous Nature

Can animals really have a sense of right and wrong? Marc Bekoff thinks they do.

If you think that we are the only creatures on Earth with a moral sense, then you're in good company. Most experts in behaviour believe that morality is a uniquely human trait, without which our complex social life would never have emerged – yet I'm convinced that many animals can distinguish right from wrong. Decades spent watching wild and captive animals have persuaded me that species living in groups often have a sense of fair play built on moral codes of conduct that help cement their social relationships. The notion of Nature being naturally ruthless and selfishly competitive doesn't hold true for those of us who have observed and analysed animal relationships.

That's not all. I suspect that herein lies the origin of our own virtue. Biologists have had real problems trying to explain why people are frequently inexplicably nice to each other. It just doesn't make sense in evolutionary terms, unless there are ulterior motives behind our seemingly altruistic actions. Perhaps we expect a payback somewhere down the line, or maybe our good deeds are directed only towards kin, with whom we share a biological heritage. Nobody has really considered the possibility that being considerate to your neighbours might sometimes be the best way to survive. But I'm starting to find evidence that a well-developed sense of fair play helps non-human animals live longer, more successful lives.

I'm particularly interested in social play amongst youngsters because it has its own special rules of engagement, allowing participants to reinterpret acts that might otherwise seem aggressive. My studies of infant dogs, wolves and coyotes reveal that they use a special signal to prevent misinterpretation of playful actions. They perform a 'bow' – which entails crouching on the forelimbs while keeping the rear upright – when initiating play, or in association with aggressive actions such as biting, to modify their meaning. And role

reversal is common, so that during play a dominant animal will often allow a subordinate to have the upper hand. Such behaviours reduce inequalities in size, strength and dominance between playmates, fostering the co-operation and reciprocity that are essential for play to occur. Indeed, on the rare occasions when an animal says 'Let's play' and then beats up an unsuspecting animal, the culprit usually finds itself ostracized by its former playmates.

My belief is that a sense of fairness is common to many animals, because there could be no social play without it, and without social play individual animals and indeed, entire groups would be at a disadvantage. If I'm right, morality evolved because it is adaptive. It helps many animals, including humans, to survive and flourish in their particular social environment. This may sound like a radical idea, particularly if you view morality as uniquely human and a sort of mystical quality that sets us apart from other animals. But if you accept my argument that play and fairness are inextricably linked, you're halfway there.

I am not putting the case forward for a specific gene for fair or moral behaviour. As with any behavioural trait, the underlying genetics is bound to be complex, and environmental influences may be large. No matter. Provided there is variation in levels of morality among individuals, and provided virtue is rewarded by a greater number of offspring, then any genes associated with good behaviour are bound to accumulate in subsequent generations. And the observation that play is rarely unfair or uncooperative is surely an indication that natural selection acts to weed out those who don't play by the rules.

What does this tell us about human morality? First, we didn't invent virtue – its origins are much more ancient than our own. Secondly, we should stop seeing ourselves as morally superior to other animals. True, our big brains endow us with a highly sophisticated sense of what's right and wrong, but they also give us much greater scope for manipulating others – to deceive and try to benefit from immoral behaviour. In that sense, animal morality might be 'purer' than our

own. We should accept our moral responsibility towards other animals, and that means developing and enforcing more restrictive regulations governing animal use. While animal minds may vary from one

species to another, they are not so different from our own, and only when we accept this can we truly be moral in our relations with nature as a whole.

- 31 In the first paragraph, what does the writer state about morality?
 - A Humans are the only creatures that demonstrate true emotional behaviour.
 - B A well-developed moral code does not lead to civilization.
 - C Humans and animals share the same selfish instincts for survival.
 - D There is a common misconception that animals are not moral.
- 32 What point does the writer make in the second paragraph?
 - A People who are generous to others are not always sure why they behave this way.
 - B People who do not possess good social skills achieve less in life.
 - C People who behave considerately to others have selfish reasons for doing so.
 - D People who treat acquaintances better than relatives are unusual.
- 33 What has the writer deduced about social play from his observation of animals?
 - A It provides an opportunity for physically weaker animals to develop survival skills.
 - B It allows animals to prove who is dominant in the group without using real aggression.
 - C It requires animals to abide by the rules or they will be excluded from the group.
 - D It demonstrates that certain animals possess a large range of emotions.
- 34 Which of the following best summarizes the writer's argument in the fourth paragraph?
 - A There are different degrees of morality between various cultures.
 - B Groups benefit from social play more than individuals do.
 - C Spirituality and morality are inseparable.
 - D Humans adopted moral behaviour as a means of survival.
- 35 What does the writer state about the evolution of morality?
 - A There may be a particular gene responsible for morality.
 - B Moral development depends on physical hardships.
 - C There is little point seeking the origin of moral behaviour.
 - D Animals that behave fairly are more likely to breed.
- 36 In the final paragraph, the writer concludes that people
 - A must treat animals on equal terms with humans.
 - B should be less arrogant in their view of themselves.
 - C are more advanced as they use immorality to their advantage.
 - D should discriminate between which animals display morality and those that don't.

Part 6

You are going to read four reviews of a book about economics. For questions 37–40, choose from the reviews (A–D). The reviews may be chosen more than once.

I Spend, Therefore I am

Four reviewers comment on Philip Roscoe's book called 'I Spend, Therefore I Am'

- A** Philip Roscoe's book appears to join a growing pantheon of popular literature on economics that attests to the creeping influence of this most imprecise science. But while other authors are happy to see all facets of life through an economic lens, Roscoe believes the intrusion of economics into our daily affairs is pernicious and that we should look for alternatives to an economics-based worldview. Roscoe makes a convincing case for the way economics has commodified aspects of our lives that should be governed by other considerations. Ranking tables and cost-benefit algorithms, for example, have become de facto in education and healthcare; online dating substitutes a calculated approach to finding the 'right' partner for the spontaneity of a serendipitous encounter. Economics is only this influential, economists would retort, because the 'market' it seeks to explain reflects a natural order based on the immutable truth of human self-interest. Yet Roscoe skilfully deconstructs this notion, exposing the flawed assumptions in the economic theories of some respected thinkers. He gives us an incisive, and truly engaging critique of a doctrine still shaping our society.
- B** We economists construct models not because they are a completely true reflection of reality but because they are useful pointers. Of course we think economics is at the centre of things and we could do better as a society if only we were listened to but that is a far cry from believing that economics explains everything that goes on in people's lives. But without it, the ability to understand what is going on, price options accordingly and be able to make informed decisions would be reduced. Philip Roscoe does not agree. He bemoans the power of economics and argues that since it only explains a small part of real life and promotes self-interested behaviour, it must be rethought. He uses intriguing examples to make his case, such as online dating. This, he believes, alters the true basis for making choices as one is forced to narrow down the desired qualities rather than be guided by the way attraction really works. But I fail to see exactly what is wrong here. Online dating could be seen as what economics can do well: it cuts down the cost of transactions and the sites
- offer extra choice. I was hoping for deeper insights into the nature of economics, but by the end of what is otherwise a very readable and entertaining book, I wasn't any the wiser.
- C** In *I Spend, Therefore I Am* Philip Roscoe uses his knowledge of management and philosophy to challenge the principles of modern economics and champion the values of social responsibility. Unlike other books in the genre, its focus is on the complex moral and political philosophy that occurs at the checkout or, rather, *might* occur if consumers were provided with the full information about the origins of a product; who made it, and what were the conditions? Roscoe sets out a credible line of reasoning in terms that a lay person can readily digest, avoiding the extremes of economist-speak. Using dating sites as an example of the insidious influence of economics, he masterfully debunks the notion that we can use surveys and statistics to create perfect relationships and that partners should ever be commodities to be compared and consumed. He also refers to low paid construction workers and the frequency of accidents in their industry, blaming free-market economics for the exploitative practices they cannot escape. All in all, an edifying yet gloomy read.
- D** In *I Spend, Therefore I Am* – Philip Roscoe condemns the dispassionate science of modern economics and how it affects our decision-making. It is this, he believes, that now encourages us to pick a potential partner in the same way as we might look at options for car insurance. When we donate blood, it is no longer altruism that motivates us but cash incentives. Economists will not always be persuaded by Roscoe's accusations as his economic research is, at times, quoted rather too selectively. Indeed, having once worked in the field myself, I would say that it is not economics itself that is at fault but the particular use of certain types of economics as political and financial justification. On the whole, Roscoe reinforces his argument with logic and indisputable data that neither consumer nor economist can ignore. However, it's a pity that he takes so long to do so. The early sections on the history of economic theory are dryly academic; lacking the drive and power of the rest of the book.

Which reviewer

takes a similar view to reviewer B regarding the extent to which economists might share Roscoe's viewpoint?

37

has a different opinion from the others on the clarity and persuasiveness of Roscoe's argument?

38

shares reviewer A's opinion of Roscoe's choice of a particular example to reinforce his argument?

39

expresses an opposing opinion to reviewer A in regard to Roscoe's style of writing?

40

Part 7

Read the text and the test questions. Before you answer the test questions, go to the Further Practice and Guidance pages which follow.

You are going to read an extract from a magazine article. Six paragraphs have been removed from the extract. Choose from the paragraphs A–G the one which fits each gap (41–46). There is one extra paragraph which you do not need to use.

Mark your answers on the separate answer sheet.

Mountain Challenge

When the Army asked him to go on a climbing mission, Alex Wade said 'Yes, sir!'

I was managing the mountain climb fairly well until we got to the crevasse – a two-metre wide crack in the ice. 'What do I do with my ice axe?' I yelled. 'Don't worry about it,' the leader of the expedition, Mark Smyth, shouted back at me. 'Just jump.' I obeyed but with the knowledge that a tumble on the other, lower, side would result in an express ride to the perilous glacier below. I just about made it. For an average climber like myself, this seemed more like a military operation!

41

I had met Mark a year previously on a climb in Russia. He had dropped me a line: 'I'm climbing Mont Blanc in June. Interested?' I'd had a rough time there on a previous attempt, failing to reach the summit because of altitude sickness. Here was a chance to try again with a serious mountaineer. But still, this was a full military expedition, so, technically, I wouldn't be his responsibility. If I climbed with them, would I be OK? 'Put it this way, I'm not going to let you fall off,' he said.

42

As Mark put it, 'Climbing Mont Blanc from this approach is not technically difficult but is never to be underestimated. The weather can change in minutes, and freezing temperatures and 120kph winds are common. At over 5,000 metres, these extreme conditions test the endurance limit of all but the hardest of mountaineers.'

43

Looks can be deceptive. After a few days' walking to acclimatize to the altitude I was exhausted. Come the climb itself, we camped on the Col du Midi (3,542 metres), having hiked down the

exposed ridge from the cable car station. Everyone was coping fine with the altitude, and the warm sunlight made Mont Blanc seem harmless. Around 3am the next morning we began the long slog up Tacul. From the shoulder of Tacul we had a perfect view of the route across the Col du Mont Maudit. It was on the Col that I had turned back two years ago.

44

Even digging snow pits for the tents was a real struggle. Teams of two or three dug holes, got their tents up and got warm. On my own, I was the first to start digging and the last to finish. No one said much, too exhausted to waste energy on speech.

45

I couldn't have been more wrong. The descent made everything that had gone before seem easy. After eventually negotiating the crevasses, we staggered down to just above the glacier – all that lay between us and safety. The ice on the glacier would be unstable, but there was a chance we would make it. Then a lump of ice the size of a house crashed to pieces right on our prospective path.

46

Sure enough, as I forced my legs to go down the agonizingly steep slope, I slipped. Though I managed to slam my axe into the ice, I committed the worst crime of failing to secure my feet before I stood up. I slid further down, ice axe stuck in the snow above me, into the next man on the rope. Fortunately neither of us slid any further. It was several more hours before we made it back down but as Mark said 'The aim of the expedition was achieved. Now you know what it's like to be on a mountain.'

- A This time it seemed I was having better luck and the climb went well save for the near-vertical ice wall which stood before our next brief stop on the Col de la Brenva. We laboured up the wall and I could scarcely stand by the time we came to camp. By this stage, though, everyone was suffering.
- B It looked like the decision had been made for us. There was no choice but to trudge back up the mountain and spend the night at the Grands Mulets refuge. Next morning we headed off to re-attempt our glacier crossing. But it only takes a moment to make a mistake, and they usually happen when you're tired.
- C I wasn't the only one! Our destination seemed no nearer although we'd been on the move for hours, and so far, we'd all managed to maintain a reasonable pace. But at this point, we could hardly turn around and I didn't want to let Mark down.
- D Despite that reassurance, I wondered whether I could keep up with the others. I didn't feel too optimistic when I learned of the route – 'The Grand Traverse' – which takes in two other mountains, Mont Blanc du Tacul and Mont Maudit, starting from the Aiguille de Midi cable car station. We would be carrying full rucksacks for three days.
- E After another early start in temperatures of around -20, we finally made it to the summit. The wind was roaring and I could barely see the peaks around us. It was a long way to come for such a poor view but at least the worst was over.
- F To add to my apprehension, it was this same route that had beaten me the last time around. But after two months of frantic training since Mark's invitation, there I was, with the army in Chamonix. They seemed a decent bunch, and didn't appear too fit.
- G But that, however, was exactly what it was. I was the 13th man on an expedition to climb Mont Blanc. As Mark said, 'The aim is to put the men into a challenging environment to develop the qualities of team spirit.' A good aim, yes, but the difference between them and me is that I was the sole civilian.

Before you check your answers, go to page 90.

Part 8

You are going to read a newspaper article in which a scientist talks about the process of invention. For questions 47–56, choose from the sections (A–D). The sections may be chosen more than once.

Mark your answers on the separate answer sheet.

In which section are the following mentioned?

the writer's justification for decisions made in regard to spending

47

a comparison between lone scientists and another superseded species

48

the incentive that lies behind all kinds of scientific innovation?

49

the writer's fear that people will increasingly seek to repress individual talent

50

a sense of nostalgia for various scientific methods no longer common

51

a new system that hinders individual scientists from disseminating their research

52

an argument in favour of science being carried out in a collaborative manner

53

the writer's personal motivation for pursuing science as an activity

54

forms of bureaucracy that impede certain scientific developments

55

an erroneous belief regarding the lifestyle of an independent scientist

56

Why we need lone scientists

Inventor James Lovelock mourns the passing of the golden age of solitary scientific genius

A In 2011 journalist-philosopher Jonah Lehrer argued that the days of the lone scientist were over and that, if the equals of the great individual scientists of the past – Galileo, Newton and Einstein – appeared today, they would find no place in the modern world of science. Science, he wrote, was now so complex and expensive that only governments and corporations could afford to support the teams required. My first instinctive thought was that this was nonsense. But then I realized that he was at least partly right. When I started my practice as a lone scientist-inventor in 1961, the restrictions of officialdom were mild, but now, in most nations of the developed world, they rule out the greater parts of hands-on science. A Faraday or a Darwin would be buried in paperwork and obliged to spend their time solving problems concerning health and safety. More than that, the internet has made the human world a monstrous village with an ever-growing population of uninformed critics and officious fools; soon, I worry, we face a life in which society sees an outstanding brain as like a nail that stands out and which must always be hammered in.

B For the past 40 years, I have worked alone in my laboratory but as part of a rich life within a family and a village community. It is a mistake to regard a lone scientist as an unnatural or pathologically disabled person; I do not think that I was disabled or even lonely. What I mean by a lone scientist is one who is self-sufficient and does not need immersion in a think-tank to excite ideas. In today's world, more and more, the exciting and slightly dangerous experiments once done with chemicals, high voltages and radioactive substances are now generally done by computer simulations. From my viewpoint, science lost its glamour about 30 years back. No doubt the few surviving dinosaurs 60 million years ago felt the same about the safer mammalian world that was thrust upon them. Those in the arts know well the delights of hand and eye creativity and the true freedom it brings, but it is now so rarely found in science.

C I have always, from childhood on, regarded science as a calling, a vocation, never as a career. For this reason, I chose employment as a laboratory assistant in the late 1930s to learn the craftsmanship of science; the next 23 years I spent doing postgraduate medical research, before being employed as a research professor. But during all that time I fully developed my vocation as a lone practitioner. There is nothing quirky about this way of life, but it does differ from that of most professionals because the bulk of my income went towards the science I did rather than to improve the standard of living enjoyed by me and my wife. I saw no point in acquiring the latest equipment, because I knew that such apparatus was probably 10 years out of date already and that I could invent it myself.

D When I look back, I am surprised by how often inventions stole into my brain when someone entered my room and asked: 'Can you think of a way to do ...?' An example easy to recall is the sudden appearance at the entrance of my lab in wartime London in 1943 of my boss. He said: 'Lovelock, can you make for me an instrument that will measure heat radiation accurately? I need it by 10 tomorrow morning.' It was then about 4pm. From the expression of the need to the creation of the product there was about four hours of thought and experimental test. The crux of invention is always necessity. But it is difficult for lone scientists to succeed because science is now biased against approval or support of them. In particular, the recently devised process of peer review is prejudiced against outsiders and loners. The few lone scientists now in existence find it almost impossible to publish their work and ideas in scientific journals. And without peer-reviewed papers to judge an applicant, funding agencies cannot offer financial support. In no way do I mean to denigrate teamwork. The truth is that we need both teams and individuals, and we need them now.