



Šifra kandidata:

Državni izpitni center



M 0 5 2 2 4 2 1 1

JESENSKI ROK

Višja raven  
**ANGLEŠČINA**  
Izpitna pola 1

A: Bralno razumevanje  
B: Poznavanje in raba jezika

**Petek, 26. avgust 2005 / 80 minut (40 + 40)**

*Dovoljeno dodatno gradivo in pripomočki: kandidat prinese s seboj nalivno pero ali kemični svinčnik, svinčnik HB ali B, radirko in šilček.  
Kandidat dobi list za odgovore.*

SPLOŠNA MATURA

**NAVODILA KANDIDATU**

**Pazljivo preberite ta navodila. Ne izpuščajte ničesar!**

**Ne obračajte strani in ne začenjajte reševati nalog, dokler Vam nadzorni učitelj tega ne dovoli.**

**Naloge, pisane z navadnim svinčnikom, se točkujejo z nič (0) točkami.**

Prilepite kodo oziroma vpišite svojo šifro (v okvirček desno zgoraj na tej strani in na list za odgovore).

Izpitna pola je sestavljena iz dveh delov, dela A in dela B. Časa za reševanje je 80 minut: 40 minut za del A in 40 minut za del B. Nadzorni učitelj Vas bo opozoril, kdaj lahko začnete reševati del B. Vračanje k delu A ni priporočljivo. Izpitna pola vsebuje tri naloge v delu A in tri naloge v delu B. Vsak pravilen odgovor je vreden eno (1) točko.

Odgovore z nalivnim peresom ali s kemičnim svinčnikom vpisujte v **izpitno polo** v za to predvideni prostor, pri 2. in 3. nalogi dela A pa **na listu za odgovore** s svinčnikom še počrnite ustrezne kroge. Pišite čitljivo. Če se zmotite, odgovor prečrtajte in napišite na novo. Nečitljive rešitve in nejasni popravki se točkujejo z nič (0) točkami.

Zaupajte vase in v svoje sposobnosti.

Želimo Vam veliko uspeha.

*Ta pola ima 12 strani, od tega 1 prazno.*

**A: BRALNO RAZUMEVANJE** (Čas reševanja: 40 minut)

**READING TASK 1: SHORT ANSWERS**

Answer ***in note form*** in the spaces below.

**Example:**

0. How far do some birds fly for food?

Up to thousands of kilometres

## **An ant's-eye view**

1. What do theories about bird migration lack?

\_\_\_\_\_

2. Why is the ability to reduce water loss important for desert ants?

\_\_\_\_\_

3. What does the desert ant's compass work on?

\_\_\_\_\_

4. What do human beings lack that would enable them to see polarised light?

\_\_\_\_\_

5. Why does the desert ant re-set the compass when it leaves home?

\_\_\_\_\_

6. When do desert ants loop?

\_\_\_\_\_

7. Where are the finds about the desert ant used?

\_\_\_\_\_

# An ant's-eye view

Adapted from an article in *The Independent*, 12 July 2001, by Lewis Wolpert

I am amazed at the ability of some animals to find their way. In the southern Indian Ocean, wandering albatrosses leave their nests and go on foraging flights of hundreds or even thousands of kilometres, yet they can reliably return to their home island, which to us would be but a tiny speck in the vast expanse of sea.

The idea that birds use the Sun, the stars and the earth's magnetic field to guide them in their wide-ranging migrations is well known. But Rudiger Wehner, a zoologist in Zurich, is uncomfortable with such grand theories. He also believes that one needs to look at the details.

He has focussed not on birds, but on a long-legged desert ant, *Cataglyphis fortis*. *Cataglyphis* lives in the Saharan desert, and hibernates underground in winter. In the heat of summer, all other insects forage only at night, but *Cataglyphis* comes out when the temperature is 53°C. No other animal can survive such a high body temperature, and it has special mechanisms to reduce water loss by expelling carbon dioxide discontinuously in short bursts, while oxygen is taken in continuously.

Wehner still remains astonished at the pathways taken by these ants when hunting for food. They separately leave their tiny hole, which leads to underground colonies, and travel several hundred metres to capture prey. They move over the surface of the ground, across sand dunes and gravel, wandering in a variety of directions. Having found food, they have the ability to return directly, in an almost straight line, to their home starting-point.

To do this, they must have in their "cockpit" a compass for determining direction, a gauge for measuring distance, and some record of the pathway they have taken, as well as an integrator to tell them the direct path home. The latest research into this tiny creature shows that when it moves over little hills, it can calculate the distance back along the flat.

The compass used by this ant is based on sunlight, which is scattered as it meets air molecules in the earth's atmosphere. The result is that the light is polarised in a way that we humans are not able to see. But the ant has cells in its eyes that are sensitive to this polarised light, and the information is processed so that the ant has a sense of the direction in which it is facing.

It thus obtains a generalised map of the sky; but the process is even more complicated than it appears, as the scattering of the sunlight varies with the time of day and the elevation of the sun. So *Cataglyphis* must recalibrate its compass each time it ventures forth, and must not stay out too long. When it leaves its colony it does a little dance, presumably to set its compass correctly.

But it does not only use this system, together with how far it has travelled, to get back home. It also uses landmarks along its horizon to correct any errors it might make in its calculations. Experiments have shown that, as it approaches its home, the ant continually compares what it sees with a memorised snapshot that it took when it set out, and moves so as to reduce any difference between the two. If the terrain is flat with no landmarks, the ant adopts a systematic search strategy, looping around the area where the home base is most likely to be.

*Cataglyphis* has used a number of interlinked special mechanisms to find its way home. One can only be in awe of how evolution has exploited what is available, like scattered light, and linked it to other processes. It is also amazing that so small a brain can compute so much.

It turns out that the US Navy uses a similar looping strategy to that of our ant for searching for missiles lost by the US Air Force. And robots are now being built that roam the desert using the mechanisms first identified in the ant. Surely, no engineer working at the drawing board could ever have come up with such imaginative solutions.

## READING TASK 2: GAPPED TEXT

In the following extract 9 sentences have been removed.

Choose from sentences A–J the one which fits each gap 1–9. There is one EXTRA sentence which you do not need.

Write your answers in the spaces next to the numbers and shade in the appropriate circles on your answer sheet.

There is an example at the beginning: Gap 0.

# 'I wasn't so good at caring for cows'

Adapted from an article in *The Observer*, 13 November 2003, by Ian Sample

If it hadn't been for a lack of concentration, Onesmo ole-MoiYoi's plans to be a cattle herder might have worked out. As a boy growing up in a Maasai village on the border of Tanzania and Kenya, he regularly took charge of the community's herd, often numbering some 800 cows. (0 K)

But it wasn't to be. As his attention wandered – and it often did – so too did the cattle. It took only what seemed like a momentary distraction – a spot of writing, reading or studying the plants and insects at his feet, for the herd to amble off. "I just couldn't watch them closely enough. I had to follow them around all the time. But now and again, I'd be doing something else and I'd look up and they wouldn't be there, they'd just wander off," says ole-MoiYoi. His lapses didn't go unnoticed and before long the prospect of becoming a full-time cattle herder started to fade. "My father decided I wasn't so good at taking care of animals. (1 \_\_\_)"

The local school was a five-mile run from ole-MoiYoi's home in Loliondo, "literally the end of the world" as he puts it. But he excelled there and after taking a year out to work for the Maasai federal council chasing cattle hustlers and collecting taxes, ole-MoiYoi landed an Aga Khan scholarship to Harvard University to study science and headed west. (2 \_\_\_)

America was something of a change. "The contrast was dramatic but not traumatic," he says. "(3 \_\_\_) I just couldn't understand people." The culture shock was accentuated by Harvard's policy of filling its undergraduate houses with people from diverse backgrounds. "The house I was in, there was a guy from Montana who was literally a cowboy," he says. "I think they thought we might find something in common."

In all, ole-MoiYoi spent 18 years in and around Cambridge, the home of Harvard, in Massachusetts, before one of his colleagues got an offer to move to Nairobi to set up a new lab. (4 \_\_\_) "I always thought I'd go back at some point, just as a kind of payback," he says. After working in Nairobi at the International Laboratory for Research on Animal Diseases, ole-MoiYoi set up a new research lab, the Institute of Molecular and Cell Biology, which focused on the genetic and molecular pathways that parasites exploit to hide from immune systems and spread disease. He has now switched labs again, this time to head up research at the International Centre of Insect Physiology and Ecology (ICIPE) in Nairobi. (5 \_\_\_)

Last week ole-MoiYoi received the prestigious Kilby International Award for playing a key role in the fight against human, animal and plant diseases. It's not always about combating disease, though. Often, the scientists identify ways of changing things in specific communities that give the

local people a precious leg-up out of poverty. Take bees, for example. A group of scientists went out to this community who are traditional beekeepers and said: "We'll show you how to make honey." (6 \_\_\_) But now, five years later, they are still laughing, but for a totally different reason. They now have their own cooperative for selling honey and they are better off. They have better houses, they can send their children to school, they can buy medicines, they are a self-sustaining community.

The ICIPE scientists had arranged for the community to receive specially bred strains of queen bees. (7 \_\_\_) It's this kind of local intervention that works best, says ole-MoiYoi: targeting specific issues in local communities, laying the groundwork for them to sell their own products and boost their local economy. "Doing this kind of capacity building is often the only way to get these people out of poverty," he says.

Disease though, in its myriad forms, is still the main focus for ole-MoiYoi. The lack of progress in crushing malaria, a disease that kills more than two million people in Africa each year, is something he finds especially exasperating. (8 \_\_\_) Two new ways of attacking malaria may make all the difference, he hopes.

The first new front on malaria is all down to a few communities where people have natural resistance to the malaria parasite. While people in those communities may still carry the parasite, they show no symptoms and appear untroubled by the infection. Scientists quickly realised that the resistance was inherited, indicating a gene or group of genes was responsible.

There's another big hope that will be brought in to fight malaria, hopefully by the end of the year. Thanks to a \$1m (£600,000) plant, donated by the Chinese, for making a natural pesticide called *Bacillus thuringiensis* (Bt). (9 \_\_\_) "It's been used elsewhere and it works. We're convinced we can control malaria here too," he says.

On Friday, ole-MoiYoi was in London to receive his award, which, according to the judging committee is designed to single out role models who have made extraordinary contributions to society.

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- A** The biggest problem I had was colloquialisms.
- B** The centre specialises in finding effective and sustainable ways of dealing with problems that local communities face on the ground.
- C** Those resistant to malaria probably act as carriers of the disease, he says.
- D** But he remains hopeful.
- E** They just got laughed at because these people have kept bees all their lives.
- F** I was causing too much trouble, so he sent me to school instead.
- G** Local communities will soon be able to spray mosquito breeding grounds.
- H** Ole-MoiYoi was asked to go along and decided it was the right thing to do.
- I** They were not as wild as the African bees they had been using and produced excellent honey.
- J** A mediocre cattle herder was on his way to becoming one of Africa's most prominent scientists.
- K** *He'd watch over them as they grazed, making sure they weren't attacked by the more ferocious animals.*

**READING TASK 3: TRUE / FALSE / NOT GIVEN**

Decide whether the following statements are TRUE, FALSE, or NOT GIVEN.

Tick (✓) the appropriate column below and shade in the appropriate circles on your answer sheet.

*Example:*

		TRUE	FALSE	NOT GIVEN
0.	<i>This time no human victims were reported.</i>		✓	

## Worst storm in 50 years tears into Bermuda

		TRUE	FALSE	NOT GIVEN
1.	Some tourists in St George were found badly injured.			
2.	The island has been unreachable by air for two days.			
3.	The exact data about the devastating power of Fabian is not available yet.			
4.	Bermuda is better prepared to cope with hurricanes than any other place.			
5.	Hotel guests shared the same fate as residents.			
6.	The hurricane appeared suddenly out of nowhere.			
7.	Damaged power lines caused fires on the island.			
8.	Despite the weather forecast, all guests remained at the Harmony Club.			
9.	The hotel coped well with the situation.			

# Worst storm in 50 years tears into Bermuda

Adapted from an article in *The Independent*, 7 September 2003,  
by Matthew Taylor and Andrew Buncombe

The most powerful hurricane to hit Bermuda in 50 years slammed into the British territory late on Friday, leaving four people missing presumably dead, cutting power supplies to more than a third of the island and unleashing winds that split trees and swept trucks off roads. The four missing are two police officers and two civilians, who were swept into white-capped waters when wind blew their vehicles off a shattered causeway connecting Bermuda's main island to the airport. A damaged wall on this, the only way to the airport, means that all flights into and from the island, suspended now for two days, may not be resumed yet.

By yesterday, the hurricane's 120mph (193kph) winds had eased as Hurricane Fabian pushed away from Bermuda, but officials were still trying to cope with reports of widespread damage and injuries. The storm knocked out power in 25,000 homes, tore tiles from roofs and covered roads with debris. Many of the vacation spot's golf courses, including the prestigious St George's, were in ruins.

The Category 3 storm is the most violent to hit Bermuda since Hurricane Edna brought 115mph winds in 1953. Fabian's winds were sustained at this speed, and may have reached higher velocities, but since a satellite dish and instruments to measure winds were ripped from their fixings by a strong gust on Friday, more precise data will not be forthcoming. But Bermuda, 650 miles off the coast of North Carolina, is better equipped to withstand hurricane-force blasts than any area in the world. It requires newly built houses to withstand sustained winds of 110mph (177kph), and the territory has many underground power and phone lines.

For the island's 62,000 residents, however, Friday's buffeting was a mixture of fear, heartbreak at damaged property, and the camaraderie over shared adversity. Islanders bolted themselves inside homes or fled to hotels, some of which reported gushing leaks. At the Sonesta Beach hotel in the south, where 10ft (three-metre) waves were crashing against the rocky coastline, about 160 people were moved out of the building. Hundreds of other residents left their homes on the coast.

At the island's £2,000-a-week Harmony Club, many guests had already responded to the storm warnings and left earlier in the week. Those that remained were evacuated from their chalets and apartments to spend a tense day in the main reception of the complex, which had already suffered some damage. At around 3pm local time (7pm BST), the lights went out and candles were placed on white wicker tables by staff and management carrying torches. Within an hour people were moved away from windows and glass doors to a more central part of the lounge as uncertainty about the hurricane increased.

Fiona Mulligan was moved to the Harmony Club from her accommodation further up the island, having arrived in Bermuda from Ireland only on Thursday night. She said: "It is very, very scary and very uncertain but the drink is making it a little bit easier. You feel quite powerless." At the Fairmont Hamilton Princess hotel, which had nearly 300 guests, Paul Tormey, the manager, said: "We've come up with a Fabian cocktail for our guests. The drinks will have umbrellas turned inside out."



write down, 15, so he concentrated on conceptual thinking about the geometry of the universe.

At one Royal Society meeting, the still unknown Hawking interrupted a lecture by Fred Hoyle, 16 at the pinnacle of his renown as an astrophysicist, to tell him he had 17 a mistake in the middle of his extremely complex calculations. 'How do you know?' demanded the irritated Hoyle. 'Because I've worked 18 out in my head,' Hawking told the startled assembly of boffins.

In 19 seventies, Hawking – already confined to a wheelchair – produced a stream of first-class research, the most important concerning the discovery of Hawking radiation, by which a black hole leaks energy and fades to nothing. 'He was smart, inspiring and able to conceptualise astronomical issues in a unique 20,' remembers astronomer Professor Bernard Carr. 'He is a great physicist, although one has to acknowledge there are 21 a number of such individuals these days,' he adds.

Then, in 1979, Hawking 22 appointed Lucasian professor of Mathematics at Cambridge, a post originally filled 23 Newton. The appointment propelled him into the limelight. The media went into raptures about this giant intellect trapped in a wasted body. A few years later, he wrote his fascinating, but deeply obscure, book, A Brief History of Time. It became a global publishing phenomenon, 24 a million copies – of which only a handful are reckoned to have been 25 from cover to cover, and even fewer understood.

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23. \_\_\_\_\_
24. \_\_\_\_\_
25. \_\_\_\_\_

## TASK 2: GAP FILL

Write the correct form of the verbs given in brackets in the spaces on the right.

There is an example at the beginning: Gap 0.

## British dig uncovers mummies

Apted from an article in *The Observer*, 16 March 2003, by Robin McKie

Archaeologists   0   (**UNCOVER**) the remains of two embalmed humans, providing the first proof that ancient Britons made mummies of their kings and queens. The bodies – a man and a woman – predate the pharaoh Tutankhamen, who   1   (**MUMMIFY**) and buried 3,200 years ago.

The discovery at Cladh Hallan, a remote Bronze Age site in South Uist in the Outer Hebrides, makes the couple – a man and a woman – the oldest mummies found anywhere in Europe. It   2   (**BELIEVE**) the male is around 3,500 years old, the female a couple of centuries younger.

'These are the only prehistoric mummies found in this country,' said project leader Dr Mike Parker Pearson, of Sheffield University. 'We have some from historic times – the body of Edward I was wrapped in cloth. But we   3   (**NEVER / FIND**) an example of the kind of thing that went on in ancient Egypt till now.'

Unlike their Egyptian counterparts, however, the Cladh Hallan mummies had to survive, after embalming, in extremely wet conditions. Hebridean weather in the Bronze Age   4   (**BE**) as grim as it is today. As a result, the couple's wrappings long ago disintegrated. Yet Dr Pearson and his team are convinced the pair   5   (**MUST / WRAP**) in bandages.

'We found them with their knees around the chests and their thighs and calves absolutely parallel. There is no way that could have been done unless they had been very tightly bandaged or tied up with cords or straps of leather,' added Pearson. 'Over the millennia, the cloth disintegrated.'

The team found evidence that the people of South Uist   6   (**GO**) to extra-ordinary pains to preserve the bodies of the Cladh Hallan couple. Although the pair were found buried in the foundations of two Bronze Age dwellings   7   (**CALL**) roundhouses, they had not been put in the earth immediately after death.

The state of their bodies   8   (**INDICATE**) they had been kept above ground for several hundred years – at least 500 years, in the case of the male mummy. 'Something must have been done to preserve their flesh before it was wrapped up,' said Pearson.

'We   9   (**NARROW**) this down to four options: the pair were left out to dry in the wind; they were slowly dried over a peat fire; they were pickled in salt, or they were dipped in a peat bog for a while.

  10   (**FIND**) out which, we studied mineral deposits on their bones which showed that both bodies   11   (**IMMERSE**) in peaty water for a considerable time – possibly a year before they were bandaged up.'

After that, it   12   (**APPEAR**) the couple were put on display or kept in a sacred, warm, dry place – otherwise they would have disintegrated. Just why this couple, who   13   (**LIVE**) a couple of centuries apart, were venerated in this rather grisly way is still a mystery, however.

'It could be a form of ancestor worship, or the local people could   14   (**PRESERVE**) them because they were great leaders or shamans whose powers they hoped to tap into after death,' said Pearson.

Bronze Age funeral customs in South Uist changed for some reason around 3,000 years ago. The couple were taken from their place of display and buried in the foundations of one of the roundhouses.

'There is something touching about still   15   (**TAKE**) such care about people who had died centuries earlier', said Pearson. 'It indicates a considerable continuity to the local culture.'

0.           have uncovered          

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### TASK 3: WORD FORMATION

Write the correct form of the words in the spaces on the right.

There is an example at the beginning: Gap 0.

## Putting the gangs to rights

Adapted from an article in *The Observer*, 8 December 2002, by Alexander Garrett

A film about poverty, drugs and violence shot in a slum with unknown actors is an unlikely recipe for a block-buster, \_\_0\_\_ in a country that has always tended to ignore its worst social problems. Yet *City of God* has broken records in Brazil, where more than three million people have seen it.

Its success looks certain to spread. *City of God* was the talk of Cannes this year, despite not being in \_\_1\_\_, and next month it will be given the largest international release of any Brazilian film ever. If \_\_2\_\_ were needed that *City of God* is a film of the moment, director Fernando Meirelles is receiving piles of Hollywood scripts and has already been offered a film with a \$65 million budget.

*City of God* is \_\_3\_\_ because it tells a story rarely told before, a story that Brazilians have rarely wanted to listen to before, of how huge areas of the country's cities have fallen into the control of \_\_4\_\_ drug gangs. The situation in Rio de Janeiro is like a war, with teenagers involved in daily shootouts and deaths. But despite being set 25 years ago, the film feels \_\_5\_\_ up-to-date. This year, drugs-related urban violence became the \_\_6\_\_ issue in Rio. *City of God* appeared like a \_\_7\_\_ to this heightened climate of fear. It was a statement of despair and a call to arms.

Whereas a small number of Brazilian films have tackled urban poverty, none has done so with the panache of *City of God*, which is fast paced, \_\_8\_\_ and smart. Because of the violent subject matter, sharp directing style and \_\_9\_\_ pop soundtrack, Meirelles has been hailed as Latin America's Martin Scorsese. In *City of God* he creates a new, brilliantly slick aesthetic for Brazil's crime-ridden peripheries as he weaves the story of a group of teenagers through the Sixties and Seventies.

The success of *City of God* has been linked to other changes in Brazil, such as the election of the country's first ever socialist president. Both events show a desire to look at social problems in a different way. 'A decade ago no one talked about these issues, There was no study of the causes of \_\_10\_\_ and violence, no questioning of the society. Now there is a search to understand. People realise that the police on their own cannot solve the violence.'

0. SPECIAL  
*especially*

1. COMPETE

2. PROVE

3. POWER

4. ARM

5. DEPRESS

6. POLITICS

7. RESPOND

8. ENTERTAIN

9. LIVE

10. RACE

PRAZNA STRAN