SAMPLE SWELT READING TEXT WITH QUESTIONS AND ANSWERS

NOTE: THIS TEXT CONSTITUTES HALF OF A ONE-HOUR PAPER

TEXT A: Read the text below, and answer the questions in your ANSWER BOOKLET

CAN ANIMALS PREDICT EARTHQUAKES?

A On the morning Of 26 December 2004, villagers in Thailand noticed something strange. A herd of cows grazing on the beach lifted their heads, pricked their ears and looked out to sea, then turned and ran to the top of a nearby hill. For the puzzled villagers who chose to follow them, it was a life-saving move. Minutes later, the tsunami struck. Since then, there have been hundreds of reports of animals seemingly foretelling the catastrophe - not just minutes, but sometimes hours and even days before it occurred.

B The idea that animals can predict earthquakes has ancient origins. Way back in 373 BC the Greek historian Thucydides recorded descriptions of rats, dogs and snakes deserting the city of Helice just days before a big earthquake hit. There is also no shortage of theories about what might be going on. What has been lacking, however, is any real scientific data linking strange animal behaviour with earthquakes. Now at last we have some, and from a most unusual quarter. Last November, a psychologist looking for signs of depression in dogs announced that he had stumbled upon this elusive evidence.

C In 2000, Stanley Coren from the University of British Columbia started a study to find out whether dogs, like some humans, suffer from "seasonal affective disorder", commonly known as the wintertime blues. Twice a week, he would email 200 dog owners in Vancouver, asking them to rate their pets' activity and anxiety levels using a nine-point scale. The results were disappointing. In general there was little daily variability, and Coren's initial analysis of many months' worth of information strongly refuted his suspicion that dogs can become depressed during winter. "I just assumed that the data wasn't going anywhere and put the project on the backburner," he says. So it was some time before Coren even noticed what he had unknowingly recorded.

D "When I finally did go through the figures in detail a couple of years later, I noticed a strange anomaly in the data which occurred on 27 February 2001. Of the 193 dogs recorded that day, 47 per cent were well above their usual baseline for activity and 49 per cent - mostly the same dogs - were well above their usual baseline for anxiety. The likelihood of such a big difference happening by chance was less than 1 in l000".

E At first Coren thought that severe weather, perhaps a thunderstorm, might have unsettled the dogs. Flicking through the newspaper archives proved him wrong. Instead, he noticed the earthquake. On 28 February a quake of magnitude 6.8 shook the area, with an epicentre at Nisqually, about 240 kilometres south of Vancouver.

Coren was fascinated by his chance discovery and started to wonder what the dogs could possibly have sensed.

F One idea is that some animals detect changes in the Earth's electrical field . Another theory is that animals are responding to subterranean gases such as radon and hydrogen released from rocks before a quake. It has even been suggested that these animals might have a sixth sense.

G Coren's attention, however, was drawn to a more down-to-earth idea. He suspected the dogs in his study might simply be hearing vibrations. So back he went to his data to see whether there was any evidence to support this. Sure enough, Coren discovered that of the 14 dogs in his study that were deaf or had hearing impairments, only one had shown any significant increase in anxiety that day, and it was living with a hearing dog that had also become anxious. Encouraged by this finding, he went on to look for factors that might explain why some dogs became agitated on 27 February and others did not. He found that dogs with floppy ears showed only half the change in activity and one-third the change in anxiety levels of dogs with pricked ears. Not only would an ear flap reduce the amount of sound reaching the inner ear, Coren also realised that it would weaken high-frequency sounds more than low-frequency ones. What's more, dogs with smaller heads were significantly more likely to behave strangely before the earthquake than those with larger heads, with nearly double the increase in anxiety and activity. This was particularly interesting given that dogs with smaller heads tend to be more sensitive to high frequencies than those with larger heads.

H Coren suspects that the high-frequency sounds that many dogs can hear are emitted before an impending earthquake, perhaps from rocks scraping or breaking underground. Admittedly this is only one study. Even if Coren is right about dogs, it is still possible that other animals may be able to predict quakes in different ways. Still, his findings will appeal to anyone interested in putting the phenomenon on a more scientific footing.

I However, Andy Michael, an American seismologist, is extremely sceptical about Coren's findings. He points out that the epicentre of the quake was over 240 kilometres south of Vancouver. "It is unlikely that seismic waves could travel that far and be above the background noise level," he says. "After all, if they have trouble getting through a dog's ear flap, how will they get through hundreds of kilometres of rock?" Normally, he adds, seismic waves at such high frequencies are only detectable at most a few tens of metres away from their source. "I am inclined to believe that this is just an extraordinary coincidence," he says.

J However, if animals such as dogs really are able to foretell earthquakes, does it really matter how? While western society has been reluctant to use animals as earthquake predictors, China has embraced the idea .At the Nanning earthquake bureau, experts use a video link to keep a 24-hour watch on snakes in farms across the country. If animals in any of the farms begin making desperate and concerted attempts to escape from their enclosure, the observers raise a warning. Other governments may not be willing to go that far just yet, but Coren believes they should at least explore the possibility of animal quake prediction. It could cost little more than the price of setting up a phone line. Put that way, what have we got to lose?

QUESTION BOOKLET Questions 1-20 are on TEXT A " Can animals predict earthquakes?"

Questions 1-7 : *The text has 10 paragraphs, marked* **A** TO **J**
Below are 7 headings, which could be used for 7 of these paragraphs.
For each heading, write the ***letter*** *of the paragraph in the right hand column*

THEN COPY THE LETTERS TO YOUR ANSWER SHEET

The first has been done for you as an example.

	Question Number	Paragraph (write letter)
A very old idea	EXAMPLE	B
Press report suggests new line of enquiry	(1)	
An example worth following by other countries	(2)	
Support from detailed analysis	(3)	
Various explanations proposed	(4)	
Doubts about validity of explanation	(5)	
Lucky escape	(6)	
Psychologist's findings fail to support his theory	(7)	

Questions 8-14
Decide whether these statements are TRUE (T) or FALSE(F) according to the text . Cicle T for True, F for False. If the text does not say whether the statement is true or false , circle NG (NOT GIVEN)
THEN COPY THESE ANSWERS TO YOUR ANSWER SHEET

STATEMENT	Question Number	Circle T, F or NG
Some people in Thailand survived the tsunami because they followed some animals.	(8)	T F NG
The ancient Greeks were able to predict earthquakes.	(9)	T F NG
The psychologist's research showed that dogs tend to get depressed in winter.	(10)	T F NG
In the experiment, the dogs which became most active were usually those that were least anxious.	(11)	T F NG
How well a dog can hear certain kinds of sounds depends on the size of its head	(12)	T F NG
The earthquake on 28 February caused no damage to buildings in Vancouver	(13)	T F NG
In China, earthquake experts who think an earthquake is coming warn snake farmers to stop their snakes from escaping..	(14)	T F NG

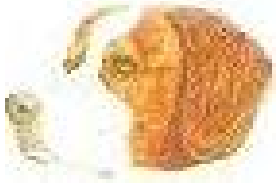
Question 15

If Coren's theory is correct, which of the four dogs below would be most suitable and which least suitable for predicting earthquakes ?
Place them in order, with the most suitable first and least suitable last
Your answer will be ONE of the following :

ABC ACB BAC BCA CAB CBA

WRITE THE **ONE** CORRECT SEQUENCE ON YOUR ANSWER SHEET

A



B

C

(These dogs' heads are drawn to the same scale)

Questions 16-20

Find words in the text which match the following definitions
Write the words from the text, in the right hand column.The first one has been done for you as an example .

Quest-ion Num-ber	Word definition	**Word from text (write in the box below)** THEN COPY TO THE ANSWER SHEET)	Paragraph where the word is
0	(verb): to predict.	*foretelling* EXAMPLE	A
(16)	(verb): to prove that an idea is wrong		C
(17)	(noun): a situation that is different from what is normal or expected		D
(18)	(noun): the state of having a physical or mental condition which means that part of the body or brain does not work correctly		G
(19)	(adjective): (usually of an unpleasant event) that is going to happen very soon		H
(20)	(adjective): having doubts that a claim or statement is true or that something will happen		I

ANSWERS TO SAMPLE SWELT READING QUESTIONS ON TEXT:
"**Can animals predict earthquakes**?"

Question Number	Answer	
1	**E**	Write : ← Paragraph ← Letter ←
2	**J**	
3	**G**	
4	**F**	
5	**I**	
6	**A**	
7	**C**	

8	**T**	: ← **T** **F** or **NG** ←
9	**NG**	
10	**F**	
11	**F**	
12	**T**	
13	**NG**	
14	**F**	

15	**ACB**	← Write one of : ABC ACB BAC BCA CAB CBA

16	**refuted**	Write the word which matches the definition ← (Write the word *as it is in the text*, which may have an ending such as –ing , -ed, – s , etc.) ←
17	**anomaly**	
18	**impairments**	
19	**impending**	
20	**sceptical**	