

الاسم: مسابقة في مادة اللغة الانكليزية
الرقم: المدة ساعتان ونصف

Part One: Reading

(Score: 11)

Read the selection below about the danger posed by outer space to the planet Earth, and then answer the questions that follow.

The Ultimate Environmental Catastrophe

1 One of the main weaknesses of the environmental movement has been its unfortunate inclination for using doom-loaded language and catastrophic superlatives to describe problems that are serious but not immediately disastrous. But one calamity that truly deserves such a description is almost never talked about. There are tens of millions of asteroids in the solar system, and several thousands move in orbits that take them close to Earth. Sooner or later, one of them is going to hit it.

2 **Several** have done so in the past. Earth's active surface and enthusiastic weather conspire to scrub the tell-tale impact craters from the planet's surface relatively quickly, but the pockmarked surface of the moon — where such scars endure for much longer — testifies to the amount of rubble floating in the solar system. Earth's thick atmosphere makes it better protected than the moon: asteroids smaller than about 35 meters across will burn up before hitting **its** surface. Nevertheless, plenty of craters exist. The Earth Impact Database in Canada lists more than 170.

3 Fortunately, such impacts are relatively rare, at least on human timescales. Statisticians calculate that the risk to lives and property posed by meteorite strikes is roughly comparable with those posed by earthquakes.

4 Although the chance of an impact may be small in any given year, the consequences could be enormous. The effect of an impact depends on an object's size and speed. A meteorite, a few meters wide, could level a city. The largest (a kilometer or more in diameter) could cause ecological havoc across the entire globe. David Morrison, a NASA scientist, argued at a recent conference that a large meteorite strike is the only known disaster (except perhaps global nuclear war) that could put civilization at risk.

5 Examples give a more instinctual illustration than statistics. The Chicxulub crater, buried beneath modern Mexico, is 65 million years old and 180 km across. Some think that the ten-kilometer meteorite that created it threw so much dust in the atmosphere that **it** blotted out the sun and led to the extinction of the dinosaurs. In 1908 a comparatively tiny-piece of space-borne rock, 30-50 meters across, exploded above Tunguska, a remote part of Siberia. The blast — hundreds of times more powerful than the atom bomb dropped on Hiroshima 37 years later — felled 80 million trees over 2,150 square kilometers. Only blind luck ensured that it took place in a relatively unpopulated part of the world. Astronomers are currently trying to work out whether a 270-meter asteroid named 99942 Apophis will hit Earth in 2036.

6 Happily for humanity, technology has advanced to the point where it is possible, in principle, to avoid such a collision. In 1998 NASA agreed to find and catalogue, by 2008, 90% of those asteroids bigger than 1 km in diameter that might pose a threat to Earth. Any deemed dangerous asteroid would have to be pushed into a safer orbit. One obvious way to do **this** is with nuclear weapons, a method that has the pleasing symmetry of using one potential catastrophe to avert another. But scientists counsel caution. A nuclear blast could simply split one large asteroid into several smaller ones, some of which could still be on a collision course.

7 Other plans have been suggested. One is to use high-speed spaceship simply to ram the asteroid out of the way; another is to land a craft on the rock's surface and use its engines to shift the asteroid to safety. A subtler method is to park a spaceship nearby and use its tiny gravity to pull the asteroid gradually off course. For now, all such suggestions are theoretical, although the European Space Agency is planning a mission, named Don Quijote, to test the ramming tactic in 2011.

8 These schemes offer consolation, but any effort to deflect an asteroid requires plenty of

advance warnings, and that may not always be available. NASA has so far catalogued only the very largest, “civilization-killing” asteroids. Plenty of smaller ones remain undiscovered, and they could inflict considerable damage. In 2002 a mid-sized asteroid (50-120 meters across) missed Earth by 121,000 km—one-third of the distance to the moon. Astronomers discovered it three days after the event. Comets, which originate from the outer reaches of the solar system, are faster moving and harder to track than asteroids, but carry just as much potential for catastrophe.

9 But perhaps the biggest problem is humanity’s indifference. Currently only America is spending any money on detection, and even there, politicians have other priorities. Much of the work is done by Cornell University’s Arecibo radar in Puerto Rico, which is facing federal funding cuts. The telescope costs roughly \$1 million a year to operate. As an insurance policy for civilization, the price looks cheap.

Questions

A. Answer each of the following in 1-4 sentences of your own.

1. According to the writer, which issue demands more emphasis on the part of the environmentalists? (Score: 01)
2. In reference to the selection, which is more liable to be hit by an asteroid, the Earth or the moon? Explain. (Score: 01)
3. How did people survive the collision above Tungaska? (Score: 01)
4. Give two pieces of evidence from the selection to show that the collision of an asteroid might be very damaging. (Score: 01)

B.

1. What is the writer’s purpose in the above selection? Support your answer with evidence. (Score: 01)
2. Identify and explain the paradox in paragraph 6. (Score: 01)
3. What is the thematic relationship between paragraphs 4 and 5. Support your answer with evidence (Score: 01)
4. Identify the pattern of each of the following sentences. (Score: 01)
 - a. Sentence 3, paragraph 2, “*Earth’s thick atmosphere ----hitting its surface.*”
 - b. Sentence 4, paragraph 4, “*The largest ----- globe.*”

C. What do the underlined pronouns in bold type refer to? (Score: 01)

- | | |
|--------------------------|-----------------------|
| 1. Several (paragraph 2) | 2. its (paragraph 2) |
| 3. it (paragraph 5) | 4. this (paragraph 6) |

D. Copy the table, and then refer to paragraphs 6 and 8 to fill it with two measures that should be taken to avoid a catastrophe and the obstacle facing each measure. Use phrases only. (Score: 02)

Measures	Obstacles
1.	1.
2.	2.

Part Two: Writing (Score: 09)

The writer ends the selection with: “As an insurance policy for civilization, the price looks cheap.” Do you agree or disagree with the writer’s opinion that nations should spend more money on outer space research or on health issues such as finding a cure to fatal diseases (cancer, AIDS, swine flu, etc.)? State your position in a well-organized, coherent, and unified essay. Make sure that, in your introduction, you put your reader in the general atmosphere of your topic and clearly provide a thesis statement, and that each of your body paragraphs starts with a topic sentence which you back up with relevant supporting details. Draft, revise, and proofread your essay. Your writing will be assessed for ideas, language and style, and tidiness.(Score: 05 for ideas and organization, 03 for language and style, and 01 for tidiness and legible handwriting)

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Part of the Q	Answer Key	Mark					
	Competencies: - Utilize reading strategies - Develop literal and interpretive comprehension of written discourse - Produce transactional writing						
I-A-1	The danger that really threatens Earth and is never talked about is the one posed by millions of asteroids in the solar system that might one day hit the Earth leading to a complete havoc.	01					
I-A-2	The moon is more at risk of being hit by an asteroid than the planet Earth. The Earth's thick atmosphere makes it more protected. That's why small asteroids will burn up before hitting its surface.	01					
I-A-3	People survived Tungaska's collision because it occurred in an unpopulated area.	01					
I-A-4	The writer provides several examples to show the catastrophic effect of the collision of an asteroid on Earth no matter how small it is. In paragraph 4, he says that a collision of a small meteorite—few meters—can destroy a city; a bigger one — 30-40 meters — can destroy the ecological system across the globe and it may lead to the extinction of life on the planet Earth.	01					
I-B-1	The selection seems to be expository (informative, problem – solution) in nature, for the writer tries to inform the reader about the destructive effects of a possible collision between an asteroid and the Earth and the possible scenarios (measures) to avoid it.	01					
I-B-2	The paradox in paragraph 6 lies in the fact that destruction is used to avoid destruction; a nuclear weapon, a means of destruction, can be used to deflate a meteorite and thus save the Earth from destruction.	01					
I-B-3	The relationship between paragraphs 4 and 5 is that of support/ reinforcement/ explanation/ illustration. The writer in paragraph 5 produces/ narrates events that happened in the past just to reinforce/clarify the idea expressed in paragraph 4.	01					
I-B-4-a	Sentence 3 of paragraph 2: "Earth's thick atmosphere ----hitting its surface." Cause/Effect and Contrast/ Time order Indicators : Cause/ Effect > makes Contrast > better than...smaller Time Order > before	0.5					
I-B-4-b	Sentence 4 of paragraph 4: "The largest ----- globe." Compare/ Contrast; Cause/ Effect Indicators : Comparison > largest Cause/ Effect > cause	0.5					
I-C-1	Several (paragraph 2): asteroids	0.25					
I-C-2	its (paragraph 2) : earth's	0.25					
I-C-3	it (paragraph 5): dust	0.25					
I-C-4	this (paragraph 6): pushing dangerous asteroid into safer orbit.	0.25					
I-D	<table border="1"> <thead> <tr> <th>Measures</th> <th>Obstacles</th> </tr> </thead> <tbody> <tr> <td>1.Cataloguing dangerous asteroids</td> <td>1. Inability to discover small asteroids</td> </tr> </tbody> </table>	Measures	Obstacles	1.Cataloguing dangerous asteroids	1. Inability to discover small asteroids	02	
Measures	Obstacles						
1.Cataloguing dangerous asteroids	1. Inability to discover small asteroids						

	2.Deflection using nuclear weapons	2. Splitting of big asteroids into smaller dangerous ones.	
	N.B. 0.5 for each answer		
II-A	Ideas and organization		05
II-B	Language and style		03
II-C	Tidiness and legible handwriting		01