

PART B: INFORMATIONAL TEXT

Value: 12 marks

Suggested Time: 15 minutes

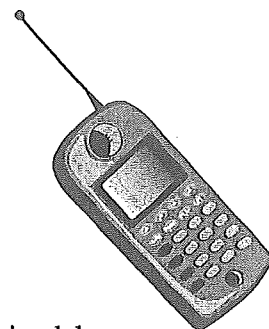
INSTRUCTIONS: Read the following selection and answer the multiple-choice questions. For each question, select the **best** answer and record your choice on the **Answer Sheet** provided.

Have you ever had an electronic device that irritated you?
Read the article to learn one person's solution to this problem.

Gizmo geeks on trial

by Joseph Brean

(adapted)



- 1 It is a fundamental misstep of our technoculture that my cellphone claims to know my “biorhythm”¹ and yet has an alarm clock that is impossible to program.
- 2 This is no joke. On the screen, under the “special” menu (where else?), clicking on the biorhythm option delivers up a bar graph, five numbers and three letters. Today, I have an overall score of 37 890, the letters PEI, and no idea what it all means.
- 3 On any other device, this utterly useless feature might be tolerable, if a bit flaky. On this shiny gray wafer of a telephone, though, the very fact that the “biorhythm” meter seems to function properly makes me resent it. Why? Because the alarm clock—a function I have use for—cannot be programmed to go off at the time of my choosing, since it will only let me adjust the hour, not the minutes.
- 4 Kim Vicente, a University of Toronto engineer, sees my phone, with its incomprehensible and useless functions, as more than a mere annoyance. Rather, he believes it is a symptom of a vast epidemic of poorly designed technology that is costing billions of dollars and millions of lives.
- 5 Cooped up in high-tech design labs, surrounded by the latest in computing gadgets and soft drink machines, the men and women who design the world’s most important devices—from medical equipment, airplane cockpits and nuclear plant control rooms to more mundane gizmos like cellphones and VCRs—give little thought to the people who will use their creations, Vicente says.
- 6 As long as the technology is sound, their teachers tell them, users will find a way to muddle through. What other choice do we have?
- 7 In the case of my phone, the wizards who cooked up the biorhythm readings did not realize I would far prefer a working alarm. In the book, *The Human Factor*, Vicente shows how a similar design flaw helped bring about the Chernobyl nuclear disaster.
- 8 Chernobyl’s safety alarms and pressure gauges functioned perfectly until the end, giving staff endless data (numbers, letters, etc.) about the coming disaster, but very little useful information about what they could do. The control room was so poorly designed, Vicente says, that the technicians who watched the dials run out of control were bewildered.

¹ biorhythm: *body rhythms (e.g., daily cycle of sleeping and waking)*

(continued on next page)

- 9 To fix technology, Vicente says we first have to get rid of the outdated concept of “human error.” The expression usually means that the human using the technology accidentally did something the technology was not intended to do, such as crash the plane. But if the same human errors keep happening in the same way with the same technology, which human is really at fault, the user or the designer?
- 10 Vicente’s book spends a great deal of time describing design flaws as evidence of the need for a change in how designers of technology are taught.
- 11 For example, a certain type of airplane was involved in several near-crashes because two levers in the cockpit felt the same to pilots, who repeatedly confused them while their eyes were on the sky. One can never change the human tendency to make simple mistakes, the book argues, but changing the shape of the knobs eliminated these near-accidents completely.
- 12 There is hope for progress. Consider the Fender Stratocaster, the Corvette of electric guitars. When Leo Fender designed it in the 1950s, he undertook an extensive consultation

process, asking guitarists what they liked and disliked about their instruments—learning, for instance, that the square edges on most guitars irritated the ribcage. Then, he stayed in contact after he sold his early models so he could improve later ones.

- 13 The result was a guitar that was so comfortable and user-friendly that it led to an artistic revolution, influencing rock from Buddy Holly to Jimi Hendrix, and culminating in Eric Clapton’s blistering solo on *Layla*, played on a 1956 Strat he called “Brownie.”
- 14 Still, most design engineers are not Leo Fender and most companies are unlikely to start a similar consultation process before launching a new generation of cellphones. Instead, engineers must become more sensitive to human nature.
- 15 This, says Vicente, will require nothing short of a “conceptual revolution,” similar to the Copernican revolution, in which scientists realized the Earth is not the centre of the universe. “We need to change engineering education so that people get exposed to these sorts of human and social issues as a part of engineering,” he says.

9. For what purpose does the writer describe his cellphone at the beginning of the article?
- to show how advanced technology has become
 - to warn consumers about the flaws in cellphones
 - to demonstrate his expertise on the subject of the article
 - to give a specific example to introduce the main idea of the article
10. Which kind of language is found in “the wizards who cooked up the biorhythm readings” (paragraph 7)?
- literal
 - formal
 - sarcastic
 - exaggerated

11. According to the article, what was needed to prevent the Chernobyl nuclear disaster (paragraphs 7-8)?
- A. better trained staff
 - B. more accurate dials
 - C. earlier warning signs
 - D. information on action to be taken
12. According to the article, what is the correct answer to the question, "which human is really at fault..." (paragraph 9)?
- A. The user is at fault.
 - B. The designer is at fault.
 - C. No one is at fault for an accident.
 - D. The user and the designer are equally at fault.
13. Which of the following seems ironic to the writer about the near-crashes referred to in paragraph 11?
- A. that human mistakes appear to be unavoidable
 - B. that pilots could be inattentive while flying planes
 - C. that a simple change can prevent a serious accident
 - D. that pilots kept repeating their mistake of using the wrong lever
14. According to the article, in what way was Leo Fender's approach superior to that of other designers?
- A. He specialized in musical instruments.
 - B. He consulted consumers before and after sales.
 - C. He created designs for rich and famous people.
 - D. He had more hope for progress than the other designers.
15. Whose behaviour would Vicente, author of *The Human Factor*, most wish to change?
- A. the behaviour of airplane pilots
 - B. the behaviour of cellphone users
 - C. the behaviour of design engineers
 - D. the behaviour of nuclear scientists

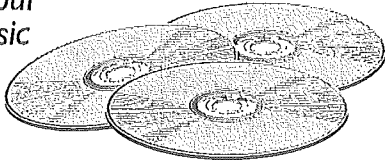
Use the following advertisement to answer question 16.

NEW! oPal eLive '06
Computer Software

AWARD-WINNING DESIGN
ADVANCED TECHNOLOGY

Create your own music

Make your own DVDs



Edit your photographs

EASIER to use than previous versions
BUY NOW for the LOWEST PRICE ever!

16. Apply what you have learned from the article to the advertisement above. Which claim about the oPal software would Vicente consider to be the **most** important?
- A. It has won an award.
 - B. It has been made easier to use.
 - C. It is technologically advanced.
 - D. It is offered at the lowest price.

You have **Examination Booklet Form A**. In the box above #1 on your **Answer Sheet**, ensure you filled in the bubble as follows.

Exam Booklet Form/ Cahier d'examen	A	B	C	D	E	F	G	H
	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PART B: INFORMATIONAL TEXT

WRITTEN RESPONSE

Value: 12 marks

Suggested Time: 15 minutes

INSTRUCTIONS: In paragraph form and in approximately 125 words, answer question 1 in the **Response Booklet**. Write in **ink**. Use the **Organization and Planning** page to plan your work. The mark for your answer will be based on the appropriateness of the examples you use as well as the adequacy of your explanation and the quality of your written expression.

1. Refer to the article **Gizmo geeks on trial** on pages 5 and 6.

According to Vicente, what changes need to be made by designers, and why? Support your answer with references to the article.

ANSWERS
WILL NOT
BE MARKED

Name: _____

Date: _____

Title of your Paragraph Here

Introduction

Hook: write a catchy phrase

Title and Author: Give the title and author of what you are writing about.

Background Information: Give some background info about the short story, poem, novel etc.

Topic Sentence: This is the main idea of your entire paragraph. What will your paragraph prove: Make active voice.

Supporting Details: Give examples/quotes, support to prove your topic sentence

Closing Sentence: Sum up and state how you have proven your topic sentence

