



Concours Mathématiques et Physique, Physique et Chimie,
Biologie et Géologie & Technologie
Epreuve d'Anglais

Date : Jeudi 08 Juin 2006 Heure : 15 H Durée : 2 H Nbre pages : 8

Barème : Part I : 30 ; Part II: 30 ; Part III: 20

IMPORTANT:

1. L'épreuve d'anglais comporte deux séries de feuilles :

- Les énoncés s'étalant sur 4 pages que les candidats sont appelés à garder
- Les feuilles réservées aux réponses (Answer sheets) s'étalant sur 4 pages, lesquelles doivent être rendues à la fin de l'épreuve aux professeurs surveillants

2. Il sera tenu compte de la présentation, (l'écriture au crayon n'étant pas permise)

Reading passage :

1. Much of the used computer equipment sent from the United States to developing countries for use in homes, schools and businesses is often neither usable nor repairable, creating enormous environmental problems in some of the world's poorest places, according to a report to be issued today by an environmental organization.
2. The report, titled "The Digital Dump: Exporting Reuse and Abuse to Africa," says that the unusable equipment is being donated or sold to developing nations by recycling businesses in the United States as a way to dodge the expense of having to recycle it properly. While the report, written by the Basel Action Network, based in Seattle, focuses on Nigeria, in western Africa, it says the situation is similar throughout much of the developing world.
3. "Too often, justifications of 'building bridges over the digital divide' are used as excuses to obscure and ignore the fact that these bridges double as toxic waste pipelines," says the report. As a result, Nigeria and other developing nations are carrying a disproportionate burden of the world's toxic waste from technology products, according to Jim Puckett, coordinator of the group.
4. According to the National Safety Council, more than 63 million computers in the United States will soon become obsolete. An average computer monitor can contain as much as eight pounds of lead, along with plastics laden with flame retardants and cadmium, all of which can be harmful to the environment and to humans.
5. In 2002, the Basel Action Network was co-author of a report that said 50 percent to 80 percent of electronics waste collected for recycling in the United States was being disassembled and recycled under largely unregulated, unhealthy conditions in China, India, Pakistan and other developing countries. The new report contends that Americans may be lulled into thinking their old computers are being put to good use.
6. At the Nigerian port of Lagos, the new report says, an estimated 500 containers of used electronic equipment enter the country each month, each one carrying about 800 computers, for a total of about 400,000 used computers a month. The majority of the equipment arriving in Lagos, the report says, is unusable and neither economically repairable or resalable. "Nigerians are telling us they are getting as much as 75 percent junk that is not repairable," Mr. Puckett said. He said that Nigeria, like most developing countries, could only accommodate functioning used equipment.

7. The environmental group visited Lagos, where it found that despite growing technology industries, the country lacked an infrastructure for electronics recycling. This means that the imported equipment often ends up in landfills, where toxins in the equipment can pollute the groundwater and create unhealthy conditions.
Mr. Puckett said the group had identified 30 recyclers in the United States who had agreed not to export electronic waste to developing countries. "We are trying to get it to be common practice that you have to test what you send and label it," he said.
8. Mr. Puckett also said his group was trying to enforce the Basel Convention, a United Nations treaty intended to limit the trade of hazardous waste. The United States is the only developed country that has not ratified the treaty.
9. Much of the equipment being shipped to Africa and other developing areas is from recyclers in the United States, who typically get the used equipment free from businesses, government agencies and communities and ship it abroad for repair, sale or to be dismantled using low-cost labor.
10. Scrap Computers, a recycler in Phoenix, has eight warehouses across the United States to store collected electronics before they are shipped to foreign destinations, and Graham Wollaston, the company's president, says he is opening new warehouses at the rate of one a month. Mr. Wollaston, who describes his company as a "giant sorting operation," said there was a reuse for virtually every component of old electronic devices: old televisions are turned into fish tanks for Malaysia, and a silicon glass shortage has created huge demand for old monitors, which are turned into new ones. "There's no such thing as a third-world landfill," Mr. Wollaston said. "If you were to put an old computer on the street, it would be taken apart for the parts."
11. Mr. Wollaston said the system was largely working, though he conceded that some recyclers dump useless equipment in various developing nations, most notably China. "One of the problems the industry faces is a lack of certification as to where it's all going," he said. He says his company tests all equipment destined for developing nations.
12. The Environmental Protection Agency concedes that "inappropriate practices" have occurred in the industry, but said it did not think the problem should be addressed by stopping all exports.
"E.P.A. has been working with the Organization for Economic Cooperation and Development countries for the last several years on development of a program that would provide much greater assurance that exports of recyclable materials will be environmentally sound," Tom Dunne, of the agency's Office of Solid Waste and Emergency Response, wrote in an e-mail message.

By LAURIE J. FLYNN, October 25, 2005

PART I: Comprehension Questions (30 marks)

I – Decide which of the following best summarizes the text:

- A- The USA, a generous donor of used electronic equipment.
- B- Poor nations are littered with old electronic equipment
- C- Arguments for and against recycling old PCs.

II – Which of the following ideas is not dealt with in the text?

- A – The toxic waste from technology in developing countries
- B- The improper practices of recycling businesses
- D- Recycling used electronic materials eventually contributes to the protection of the environment.

III – Refer to Paragraph 7 in the text and fill in the table on the answer sheet with the appropriate information.

IV – Indicate whether the following statements are TRUE or FALSE. Justify your answer with details from the text

- a) Most of the old electronic equipment received by Nigeria is likely to be recycled, reused, repaired or resold.
- b) The American people are made to believe that the old electronic equipment they donate to developing countries is actually being profitable to these countries.

V – Why do developed countries such as the USA resort to exporting used electronic equipment to developing countries?

VI – Complete the following statements with information from the text:

- a) Mr. Wollaston claims that, unlike other recyclers, his company Scrap Computers ...
- b) Exporting used electronic equipment to developing nations is often justified as a way to help these countries bridge the technology gap. However, it is actually...

VII – Which toxic pollutants are found in computer monitors?

VIII – Which solutions are suggested in the text to deal with the problem of the exports of recyclable electronic equipment?

IX - What do the following words in the text refer to ?

- a) it (§ 2)
- b) all of which (§ 4)
- c) it (§ 7)
- d) they (§ 10)

X – Find in the text words which have the closest meaning to:

- 1. avoid (§ 2)
- 2. out-of- date (§ 4)
- 3. dangerous (§ 8)
- 4. storerooms (§ 10)

PART II : Language (30 marks)

1. Supply the correct tense and verb form :

Ever since the Czech writer Karel Capek first [1] **(coin)** the term « robot » in 1921, there [2] **(be)** an expectation that robots would some day deliver us from the drudgery of hard work. The word – from the Czech « robota », for hard labor and servitude- [3] **(describe)** intelligent machines [4] **(use)** as slaves in his play R.U.R. (Rossum's Universal Robots). Today, over one million household robots, and a further 1.1 million industrial robots [5] **(operate)** worldwide. Robots [6] **(use)** to perform tasks that [7] **(require)** great levels of precision or are simply repetitive and boring. Many also [8] **(do)** jobs that are hazardous

to people, such as exploring shipwrecks, helping out after disasters, studying other planets and defusing bombs and mines.

Robots [9] (**increasingly march**) into our lives. In the future, robots [10] (**act**) as carers, medics, bionic enhancements, companions, entertainers, security guards, traffic police and even soldiers.

2. Choose the right alternative :

[1] (**Because/ Although/ However,**) nuclear plants emit no carbon, nuclear power is emerging as a way of saving the earth from global warming. [2] (**Because/ Although/ But**) the twin specters of nuclear waste and proliferation cast doubt on whether nuclear power can fulfill [3] (**that/ this/these**) promise. [4] (**Because/ Although/ As a matter of fact,**) when the uranium fuel of a nuclear power plant is « spent,» what is left is a mixture of radioactive substances, [5] (**of whom/of which/of that**) 1 percent is plutonium. [6] (**Because/ Although/ However,**) plutonium stays radioactive for tens of thousands of years, it must be kept in a facility that lasts a long time. [7] (**Meanwhile/ Such/ However,**) nuclear waste keeps piling [8] (**down/ up/ through**). To minimize the waste problem, the nuclear establishment is advocating « reprocessing »- in which plutonium is separated out and recycled as nuclear fuel. Ninety-nine percent of what remains [9] (**might/ need/had better**) be easier to dispose of, but the 1 percent that remains is [10] (**a/ the /Ø**) pure plutonium.

3. Use the right form of the word given between brackets

The choices that society makes in the use of engineering today and in the near future will be [1] (**instrument**) in determining whether we [2] (**succeed**) tackle the problem of global climate change or not. Because so many human activities result in [3] (**emit**) of greenhouse gases, there is a very wide range of possible ways to avoid this problem, namely, change in energy production, [4] (**improve**) in energy [5] (**efficient**) by technical means, etc.

4. Rewrite the following sentences, keeping the same meaning. Begin the sentences as indicated on the answer sheet.

- a) We are not paying enough attention to the damage caused to the environment
- b) They are raising the needed funds to set up a company which builds rockets.
- c) It is technically feasible to use superconductors to increase the speed of computers.
- d) This farming technique not only uses fewer resources but also gives better crops
- e) Although the test was carried out on a small sample, it showed substantial results.

PART III : Translation & Writing (20 marks)

A- Translate the following sentence into English : (5marks)

Bien que des progrès remarquables aient été réalisés dans le domaine de traitement des déchets dangereux, beaucoup reste à faire à la fois sur les plans de la réglementation à mettre en place et de l'infrastructure dont on a besoin pour gérer les déchets polluants.

B- Write about the following topic in about 15 lines. (15 marks)

In what ways have space technology and space scientific research helped science on Earth to advance ?