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Séries : G1-G2-H

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Epreuve du 2<sup>ème</sup> tour  
Durée : 2 heures  
Coefficient : 2

## EPREUVE ECRITE D'ANGLAIS

**Cette épreuve comporte deux (2) pages**

### Environmentally Friendly Packaging

Packaging helps extend a product's shelf-life by acting as a protective barrier, thus slowing the rate of deterioration. It is increasingly required to preserve "natural", untreated and unprocessed foods imported from all parts of the world, so that they can meet consumers' increasing demands for freshness.

Apart from preservation, communication between the manufacturer/seller and the consumer is a third and equally important function of packaging. In supermarkets, where products are normally displayed next to their competitors, packaging performs a marketing function. The packaging should help the product to attract the attention of a prospective customer. It has a fourth function: to provide legal information. Most food, drink and pharmaceutical products are required by law to carry on packaging necessary product information, so that it is easily accessible to customers. Packaging must fulfill other demands made on the parties concerned, including its final disposal in an environmentally compatible way.

The main categories of material used for packaging are: paper and board, glass, steel (mainly tinplate), aluminum, plastics, wood, jute and bamboo.

The main advantages of paper and board are their low cost for a given level of rigidity, and their excellent printability and promotional potential. They also have a good environmental image because they are inherently biodegradable and their raw materials are renewable.

These properties are exploited to the full in the construction of corrugated boards, which give high strength-to-weight ratios and stiffness combined with good burst strength. Paperboard materials are admirably suited for highly decorated and promotional packages, widely used to give an excellent-quality image.

However, paper and board present no barrier to gases and lose their strength and rigidity when wet. They therefore have to be coated and/or laminated with impermeable materials to obtain these properties. As a result, it is technically difficult and costly, though not impossible, to re-pulp and recycle these materials for use in similar applications.

To overcome this deficiency, the packaging industry has developed ways of re-using the waste from, for example laminated beverage packaging made from board, aluminum and polyethylene.

Paper and paperboard are both produced from cellulose fibers, obtained mainly from wood. Raw material sources for paper and paperboard include logs, and by-products of the timber industry such as sawdust, as well as recycled fiber from newsprint, magazines, books and other paperboard sources.

In practice, recycling is not straightforward and presents many technical challenges. The additives, inks and coatings used to improve the functional properties of papers make it difficult to re-pulp them. For example, it is almost impossible to recycle corrugated board that has been waxed or coated with plastic film. Moreover, paper and paperboard products cannot be recycled indefinitely since the fibers tend to deteriorate and shorten in length progressively with each cycle. In addition, adhesives and tapes used in conjunction with these materials can obstruct the recycling equipment.

Adapted from International Trade Forum Issue 2/2011

A. Guided Commentary:

- 1) Give two purposes of packaging mentioned in the text. (2 points).
- 2) Relying on the text, state three benefits of using paper in packaging. (3 points)
- 3) Basing on the text, provide two reasons why paper is environmentally friendly. (3 points)
- 4) Referring to the text, give two disadvantages of paper and board packaging. (3 points)
- 5) Find two obstacles for recycling paper and board mentioned in the text. (3 points)

B. Essay: (6 points)

In about sixty (60) words, suggest solutions to reduce the negative aspects of plastic bags in your country.