

# CORRIGE

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# ANGLAIS - GROUPE 14

*(BTS Chimiste - BTS Techniques physiques pour l'industrie et le laboratoire)*

## CORRIGÉ

### I - TRADUCTION

**(6 points)**

Cette notion idyllique, réalisable dans un avenir prévisible, de la culture du plastique semble bien plus attrayante que la fabrication du plastique dans les usines pétrochimiques qui brûlent environ 270 millions de tonnes de pétrole et de gaz chaque année dans le monde. Les combustibles fossiles fournissent à la fois l'énergie et les matières premières qui servent à transformer le pétrole brut en plastiques ordinaires tels que le polystyrène, le polyéthylène et le polypropylène. Il est difficile d'imaginer la vie de tous les jours sans plastique - depuis les pichets de lait et les bouteilles d'eau gazeuse minérale jusqu'aux vêtements et aux équipements automobiles - mais l'on s'interroge de plus en plus sur la possibilité de poursuivre l'utilisation de ce procédé de fabrication.

### II - QUESTIONS

**(14 points)**

#### 1) (6 points)

- Fossil fuels, which provide both the power and raw materials for the transformation of crude oil into plastics, are running out and will soon be depleted: oil in 80 years, gas in 70 years and coal in 700 years. Other sources, if possible renewable and inexhaustible, have to be found.
- Long before fossil fuels are completely exhausted, the world economy will suffer the impact of their depletion. New sources of energy and raw materials are urgently required.
- About 270 million tons of oil and gas are used in the manufacture of plastics. Much of this energy could be saved if plants were used to produce the raw material, granules of plastic.
- In the U.S. alone around 80 million tons of crude oil are used for making plastics. A renewable source of plastics - plants, for example - would not only save a lot of energy but also be beneficial to the environment which has been greatly damaged by the widespread use of fossil fuels.

*(168 mots)*

#### 2) (8 points)

##### **Advantages :**

- Plant-derived plastics are renewable and will never run out.
- It would be easier and cheaper to extract plastics from plants, which grow on the surface of the earth than from inorganic crude oil which has to be extracted from great depths.
- Plastics from plants will be biodegradable and therefore easy to dispose of. They will not clutter up rubbish dumps, parks, beaches and even river beds and the ocean floor as traditional plastics do.

##### **Disadvantages :**

- Fossil fuels will still be needed, in quantities greater than had been thought, to power the process of extracting plastics from plants.
- Though biodegradable and therefore easy to dispose of, plant-derived plastics, in breaking down, will release heat-trapping greenhouse gases such as carbon dioxide and methane which the world community wants to reduce.
- Biodegradable plastics could suffer from heat and humidity and deteriorate faster than traditional plastics which only extreme heat and powerful acids can affect. They will be less useful for many purposes and quite unsuitable for containing food and liquids which may be contaminated by these unstable plastics.
- In the first paragraph of the text, the farmer smiles to himself as he contemplates his crops - kernels growing in the ears and granules of plastic in the stalks and leaves. But these strange, monstrous plants have been obtained by genetic modification. This technique is widely accepted in the U.S. but is still a very controversial issue in Europe and especially in Britain where it is considered a danger to health and the environment.

*(256 mots)*