



**CONCURSO DE ADMISSÃO  
AO  
CURSO DE GRADUAÇÃO**



**INGLÊS**

**CADERNO DE QUESTÕES**

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**LEIA O TEXTO A SEGUIR E RESPONDA ÀS QUESTÕES 1 E 2.**

**BIOFUELS**

(adapted from OECD Observer, May-June 2008)

So far, biofuels have not always lived up to their promise as an alternative, non-polluting low emissions fuel. But there is hope.

As the UN called recently on the world's governments in an "extraordinary emergency appeal" for some \$500 million to avert a food crisis in poor countries, many people were placing some share of the blame squarely on strong demand for grains from the biofuel industry.

The popular view of biofuels as an ecological panacea for everything from depleting oil reserves to global warming, has swung to widely-held scepticism in the past year or two. Do biofuels do more harm than good, environmentally as well as economically?

Biofuels are made from organic material of plant or animal origin and used mainly as a liquid energy source for cars, trucks and buses. They come in two main types: bioethanol, mostly derived from sugar cane, sugar beet and cereal crops, and biodiesel, derived from fatty acids such as soybean, rapeseed, vegetable oils and also animal fats and used frying oils.

If the biofuels market has become strong it is largely because of subsidies, and production and blending quotas. Governments have used a range of policies to promote biofuel production. Incentives to lower the cost to biofuel producers include tax credits, capital grants and subsidised loans.

This backdrop, skyrocketing oil prices, rising demand for energy and the need to tackle climate change have all sparked biofuels into becoming more than just a brand new revenue earner for hard-pressed farmers, but a hot investment for energy and grain producers and traders. Production has been growing quickly in many countries, including Brazil, EU countries, the US, Canada, China and elsewhere in Asia. As well as for their environmental effects, some developing countries look to biofuels as a driver of economic growth, and others see them as a way to improve energy security.

But this is where the picture gets a little muddier. Governments have also put in place import tariffs and other trade restrictions that stimulate domestic biofuel production, while limiting competition from internationally competitive producers overseas. This hardly helps the goal of obtaining cost-effective fuel alternatives.

## CONTINUAÇÃO DO TEXTO: "BIOFUELS"

Farmers in many countries have been able to claim government subsidies for growing crops too, and not always for those best suited to biofuels. OECD countries together spend \$13-15 billion a year in public money to support biofuel production. Brazil is one country that currently produces biofuel from sugar cane crops in an economically viable way. Even so, the Brazilian government supported the industry with \$1 billion in subsidies in 2006. Of course, these subsidies might be worth it if there was a real payback in terms of lower CO2 emissions. But even this ecological case is weak.

For a start, though the amount of carbon dioxide that a particular biofuel releases when burned is generally no more than that captured during the life of the source plant, crops currently used to make biofuel have a very low energy density compared with fossil fuel sources. This means vast amounts of arable land are needed if biofuels were to fully substitute for fossil fuels, rendering the environmental benefits questionable at best. For biofuels to meet just 4% of the world's transport fuel needs in 2030, it would take an area of arable land equal in size to France and Spain combined.

Another problem is that the very process of clearing land to sow crops releases large quantities of greenhouse gases from the soil. However, a more serious political concern now is that land being used to cultivate fuel, rather than food, is pushing up prices of all foodstuffs.

Moreover, the clearing of tropical rain forests to grow biofuels in some regions has attracted particularly harsh criticism over skewed incentives. In Southeast Asia, palm oil plantations are replacing forests and damaging fragile biodiversity. The intensive land use changes for biofuel production also stress water levels, erode soil quality, and poison the ground with ill-controlled pesticides and fertilizers.

Production costs also vary a lot by type of biofuel, and also by country, plant source, and even by soil type and how the plant is grown.

The overall picture for farmers is actually a mixed one. The rise in crop prices may bring some benefits for certain farmers, but those who rely on these crops as animal feed for livestock will suffer from the higher costs.

How can new policies help? The first step is to acknowledge that the environmental and economic benefits of many first-generation biofuels are at least smaller than had been expected, and in many cases the effects are negative. Support for ineffective biofuels should be stopped in favour of better alternatives.

There is no one right policy choice for all countries; policymakers should consider a range of alternatives and not just limit their hunt to biofuels. That said, "second-generation" biofuels, using technology that can produce energy from any plant material and not just food crops, may hold more promise as a lower cost, environmentally-friendly solution.

More research is needed here, and public funding to help R&D would be a sounder, more effective policy than lining the wrong pockets with public funds.

**OBS.: TODAS AS RESPOSTAS DAS QUESTÕES A SEGUIR DEVEM SER TRANSCRITAS PARA OS ESPAÇOS CORRESPONDENTES NO CADERNO DE SOLUÇÕES.**

**1ª QUESTÃO****Valor: 2,5**

Relacione as idéias iniciadas nas frases da primeira coluna com seus respectivos complementos na segunda coluna, de acordo com o conteúdo do texto “Biofuels”.

A. In the first paragraph of the text the writer suggests that ...	1.1. ( ) the governments subsidies production policy.
B. It is believed that the shortage of food in poor countries is due to...	1.2. ( ) the process of managing low cost fuel options.
C. The author of the text states that what has empowered the biofuels market are...	1.3. ( ) the biofuel production, which has been converting food crops once destined for consume.
D. Developing countries rely on biofuels as...	1.4. ( ) the biofuel production pays for.
E. In an attempt to stimulate the national biofuels industry some countries end up by affecting ...	1.5. ( ) the government subsidizes this industry with funds.
F. Although Brazil produces biofuel in an economically viable way, ...	1.6. ( ) a means of bursting their finances.
G. When it comes to the ecological and environmental benefits, it is uncertain that	1.7. ( ) not as intense as the energy produced by fossil fuels.
H. The heat generating capacity produced by biofuels is ...	1.8. ( ) doubts on the support given to the activity.
I. In order to grow biofuel crops, some countries have been observed practicing deforestation, which is lifting ...	1.9. ( ) the initial plans and proposals of biofuels use have not behaved as well as expected.
J. The water levels and the soil quality may be harmed by...	1.10. ( ) the technology used in growing biofuels.

**2ª QUESTÃO****Valor: 1,5**

Marque com um (X) a única alternativa correta em cada uma das assertivas seguintes, de acordo com as informações contidas no texto “Biofuels”.

2.1. In case fossil fuels are completely substituted by biofuels

- a. ( ) France and Spain are supposed to become great croppers of biofuel plants.
- b. ( ) vast amounts of arable land will have to be used for searching for fossil fuels.
- c. ( ) doubts may be posed on the environmental benefits of biofuel production.
- d. ( ) in 2030 biofuels will meet just 4% of the world's transport fuel needs.
- e. ( ) world's transport fuel needs will be in charge of France and Spain.

2.2. The prices of food are rising because

- a. ( ) there is serious political concern about it.
- b. ( ) of the quantities of greenhouse gases released from the soil in the process of clearing land to sow crops.
- c. ( ) the processes of clearing land to sow crops is too expensive.
- d. ( ) the more land croppers use to cultivate biofuel plants, the less land rests to cultivate food.
- e. ( ) biodiversity is being damaged.

**2ª QUESTÃO (CONTINUAÇÃO)****Valor: 1,5**

- 2.3. Farmers who depend on crops to feed their animals may
- a.  be in trouble if crop prices rise.
  - b.  benefit from crop rising prices.
  - c.  have to wear overalls to work in their crops.
  - d.  suffer as much as any other farmers from the higher costs.
  - e.  have to face the benefits of the higher costs.

- 2.4. Oils that have been used for cooking
- a.  may generate bioethanol.
  - b.  may be used to produce biodiesel.
  - c.  are useless.
  - d.  are derived from biodiesel.
  - e.  cannot be made into biofuels once they have been dirtied.

- 2.5. When it comes to the policy of developing new biofuels technology, the text implies that
- a.  all countries need the same policy.
  - b.  it is necessary to produce second generation biofuels from food crops.
  - c.  hunting biofuels is needed.
  - d.  hope is needed.
  - e.  more research is needed.

**3ª QUESTÃO****Valor: 2,0**

Complete as lacunas com a palavra de cada alternativa que se adequa ao sentido geral do texto "Where have all the engineers gone?"

**WHERE HAVE ALL THE ENGINEERS GONE?**

(published in IEEE Spectrum 06.08)

The U.S. culture of abundance and short-term thinking is at fault for the dearth of engineers decried in Robert W. Lucky's column ("U.S. Engineers and the Flat Earth", Reflections, March). U.S. society \_\_\_\_\_ (3.1) \_\_\_\_\_ a tipping point about 20 years \_\_\_\_\_ (3.2) \_\_\_\_\_, when we became so wealthy as a nation that we stopped deferring our gratification to a future \_\_\_\_\_ (3.3) \_\_\_\_\_ and began to believe that we could have it all in our lifetime. Today we lack scientists and engineers who have the persistence to \_\_\_\_\_ (3.4) \_\_\_\_\_ the challenges and frustration of difficult but engaging work, because the societal goals have changed. In the 1960s there was a national purpose – to respond to Soviet challenges, \_\_\_\_\_ (3.5) \_\_\_\_\_ the Cold War, and put a man on the moon before the end of the \_\_\_\_\_ (3.6) \_\_\_\_\_. Now we have no overweening objective to drive us except "consume mass quantities" and the ethos of "the one who dies with the most toys wins."

We need a new Marshall Plan for education that will \_\_\_\_\_ (3.7) \_\_\_\_\_ our youth to strive for \_\_\_\_\_ (3.8) \_\_\_\_\_ beyond portable gadgets and flashy video games. Technology \_\_\_\_\_ (3.9) \_\_\_\_\_ progress, but technology requires a numerate and literate populace, and we are eating our own seed corn \_\_\_\_\_ (3.10) \_\_\_\_\_ we do not plant the love of knowledge and science early on in the hearts and minds of our young people.

**3ª QUESTÃO (CONTINUAÇÃO)****Valor: 2,0**

3.1.	(a) reached	(b) turned	(c) missed	(d) target	(e) aimed
3.2.	(a) old	(b) past	(c) ago	(d) ahead	(e) now
3.3.	(a) evolution	(b) challenge	(c) staff	(d) crew	(e) generation
3.4.	(a) endure	(b) agree with	(c) are	(d) have	(e) lack
3.5.	(a) win	(b) play	(c) engage	(d) lose	(e) loose
3.6.	(a) month	(b) decade	(c) time	(d) spacecraft	(e) astronauts
3.7.	(a) disappoint	(b) understand	(c) inspire	(d) love	(e) prefer
3.8.	(a) players	(b) balls	(c) matches	(d) goals	(e) sports
3.9.	(a) frightens	(b) drives	(c) cars	(d) tires	(e) keys
3.10	(a) and	(b) although	(c) in order to	(d) so	(e) if

**4ª QUESTÃO****Valor: 1,5**

Escolha, dentre as palavras sublinhadas em cada item seguinte, aquela que torna a frase gramaticalmente **incorreta**.

4.1. At work, each of us must contend with office politics, because human beings are political animals, and our form alliances, negotiate deals, demand tribute, and wreak revenge.

4.2. The globe is littered with millions of scrap tires, buried in landfills and discarded in the unsightly stockpiles. This ubiquitous waste pose both a health and an environmental threat.

4.3. Economic activity, technology, population dynamics, globalization and urbanization: understanding the drivers affecting the world's environment and how they interact is important for identifying policy responses that might works.

4.4. For years, European citizens and many policy makers have taken abundant available energy for granted. This is changing: supply security and climate protection have show themselves to be interdependent long-term challenges for policy makers, the energy industry and private consumers around the world.

4.5. A new programme has been launched to test the safety of manufactured nanomaterials. Such programme will measure the physical-chemical properties, environmental degradation and accumulation impact, environmental toxicology and mammalian toxicology of nanomaterials who are already or will be in use.

**5ª QUESTÃO****Valor: 1,5**

Complete cada frase seguinte com uma das palavras apresentadas no quadro.

**CHARGE – SHAPE – WEATHER – CHANGE –  
MONEY – ICY – NOSE – SENSE – SCHEDULE – SNOW**

**5ª QUESTÃO (CONTINUAÇÃO)****Valor: 1,5**

5.1. Imagine a road surface that turns pink when cold. A new road varnish developed by a French firm, Eurovia, promises to do just that. Road surfaces treated with the varnish change color, so drivers would be warned when roads turn \_\_\_\_\_.

5.2. The agenda for next June's ministerial conference on The Future of the Internet Economy is taking \_\_\_\_\_. It will be built around three themes: fuelling creativity, building confidence, and benefiting from convergence.

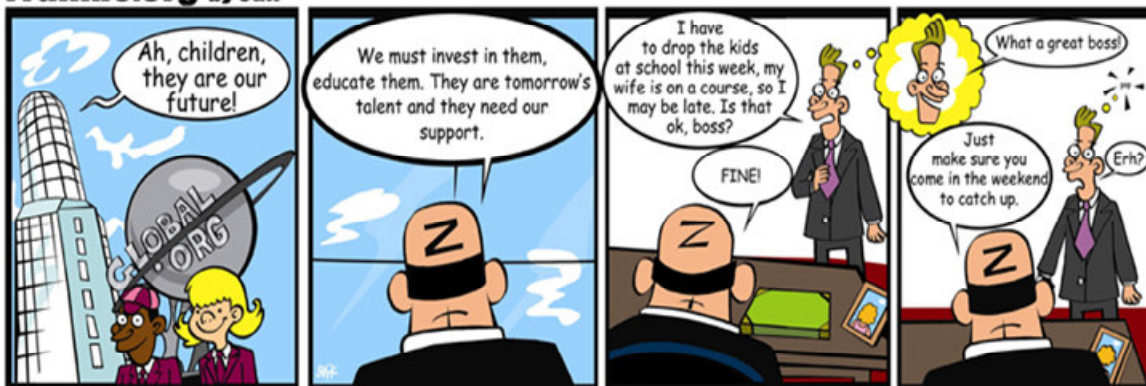
5.3. Open educational resources are expanding on the Internet, with many courses and materials now available free of \_\_\_\_\_. But can knowledge really be given away free?

5.4. Ageing, migration, climate \_\_\_\_\_, healthcare, poverty: these all form part of the lengthening list of pressing public policy challenges for the 21<sup>st</sup> century. But what about infrastructure?

5.5. Salmon use their \_\_\_\_\_ of smell to identify and return to their home-stream waters.

**6ª QUESTÃO****Valor: 1,0**

Leia a tira em quadrinhos e marque entre o parêntese (V) para as idéias que estão de acordo com o diálogo e (F) para as que não estão.

**Frankie.org** by Stik

- 6.1. ( ) The boss contradicts himself.  
 6.2. ( ) The employee brings his boss a personal affair.  
 6.3. ( ) The employee can't come to work because his wife is on a course.  
 6.4. ( ) The boss is very understanding and doesn't demand the employee any further work.  
 6.5. ( ) The boss says the employee will be fined if he is late for work.