25/a/16

Indian Institute of Engineering Science and Technology, Shibpur

Dual Degree 1st Semester Examination, Nov 2016
Professional Communication in English (Hu-1201)
[Branches: ETC, CST, IT, EE]

Time: 2 hours Full Marks: 35

Answer all questions:

1) Make sentences to distinguish between:

Elicit-illicit; wreath-writ; niche-nick
(Please write 6 separate sentences) [6]

2) You have been entrusted with the responsibility of composing a technical report on the reasons for low enrolment of girls in science and technical education in India in 2015-16. Write the index page and the introduction of this report [8+5]

3) Make a tree diagram note from the following passage: [9]

In a matter of years, the term "carbon footprint" has gone from being an obscure phrase used only by academics to being an entry in the Oxford English dictionary. It is defined as "a measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide".

There are two ways in which we consume greenhouse gases. First, we directly use up fossil fuels when we draw on electricity and gas to heat and power our homes; when we fill up our cars with petrol and diesel; and when we fly. Second, we indirectly contribute to greenhouse gas emissions through energy that is "embedded" in the items we buy and the leisure activities we participate in.

The annual carbon footprint of the average Briton is around 10 tonnes, but the figure considered to be a sustainable yearly quota for the world's 6 billion inhabitants is just two tonnes apiece. This means we all need to give some serious thought to reducing our carbon footprint.

The first step towards doing so is to calculate the size of your footprint. Fortunately, as climate change has entered the mainstream, calculators designed to do just this have sprung up on the web. The question is how to choose which one to use.

Carbon calculators vary widely in the aspects of your carbon footprint they work out, and the level of accuracy they offer. For an all-round estimate of your direct greenhouse consumption, the government's Act on CO2 calculator is a good starting point. It uses data and factors verified by government departments to calculate the carbon footprint generated by your household's heating and lighting, use of appliances, plus travel.

A more in-depth general carbon calculator is that offered by Resurgence. This requires you to provide more detailed information, such as your electricity use for each quarter in kilowatts (provided on your bill), and the mileage of different journeys taken by road, rail and air. It also attempts to include some indirect greenhouse contributions in sections such as "fuel-intensive leisure activities". This calculator

was developed by Mukti Mitchell, pioneer of low-carbon living who designed the zero-emission yacht Explorer.

With aviation being the fastest-growing source of greenhouse gas emissions, many offsetting companies have set up dedicated flight emissions calculators. These estimate the footprint of your recent holiday flights, then show you how you how to offset them by contributing to carbon-reducing projects, such as schemes supplying fuel-efficient stoves in Uganda or installing wind turbines in China.

Be warned, though, that there is great variation in the figures provided by flight emissions calculators. One of the better ones enables you to specify the type of ticket, model of plane and occupancy rate. It displays its findings as kilograms of fuel used, kilograms of CO2 generated, and the total warming effect. The latter takes into account other emissions from aviation, such as nitrogen oxides and water vapour, and the fact that CO2 emitted at high altitude has an enhanced warming effect.

Calculators for other types of travel are beginning to become available. CO2balance.com enables you to calculate emissions from some rail and car journeys. Meanwhile, transportdirect.info provides a means to compare the emissions made by a small car, large car, train, coach and plane for a set distance. It is, however, likely to be some time before we can accurately compare travel to a wide range of destinations by train, plane, ferry, car and coach.

All carbon calculators make assumptions. For example, most calculators of household energy consumption use a conversion factor of 0.43 when working out the number of kilograms of CO2 produced per kilowatt of electricity. This figure is provided by Defra and based on the projected fuel mix of the national grid for the years 1998-2000.

Having derived an estimate for your carbon footprint, you'll need to think about how to trim it. The UK government has pledged to cut emissions by 20% before 2012, to around eight tonnes per capita. It further aims to reduce national emissions by 60% before 2050, to around four tonnes each. These are good targets to adopt as personal goals, although ultimately we should all be aiming for the global allocation of two tonnes each.

This may seem like an impossible task. But if enough people begin cutting their carbon footprint now, the CO2 saving will soon stack up, whichever you calculate it.

4) Give one word for the following: [7]

a) careless walking

b) food for the gods

c) article about the life of someone who has died recently

d) warrior aristocracy of Japan

e) another word for list

f) something that is done pretending it to be true

g) disrespect for something sacred