**Croydon Buddhist Centre Earth Metta Quiz**

Over the past 150 years, the world’s industrialised nations have changed the balance of the carbon cycle by burning fossil fuels (concentrated carbon, such as coal, oil & gas), as well as breeding methane-producing livestock, and cutting down the forests that naturally absorb carbon dioxide from the air. The extra carbon in the atmosphere has been raising global temperatures, and the speed of change has been faster than any natural process, and faster than many natural systems can adapt to.

1) The only way to prove with 100% certainty that humans are responsible for global warming would be to experiment with two identical Earths – one with human influence and one without. That obviously isn't possible, and so most scientists are careful not to state human influence as an absolute 100% certainty. **Question: The UN climate science panel said with what % certainty that climate change is manmade?**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| a) | 75% |  |  |  |  |  |
| b) | 85% |  |  |  |  |  |
| c) | 95% |  |  |  |  |  |

2) It is impossible to find out exactly how much funding scientists questioning man-made climate change receive, because the largest, most-consistent money flow fuelling the climate denial movement comes from concealed donations, according to a study by Drexel University environmental sociologist Robert Brulle.. **Question: What is the total amount of money Brulle estimates that 140 foundations funnelled to almost 100 climate denial organizations from 2003 to 2010?:**

a. US$ 1.5 million

b. US$ 300 million

c. US$ 558 million (over US$ 0.5 billion)

3) There is overwhelming agreement – from governments, corporations, NGOs, banks, scientists, you name it – that a rise in temperatures of more than **2 Degrees Celsius** by the end of the century would lead to disastrous consequences for any kind of recognised global order. The global **Carbon Budget** is the amount of carbon dioxide (565 gigatons) that scientists estimate that we can pour into the atmosphere by mid-century and still have some reasonable hope of staying below 2C.

**Question – If we use the proven reserves of fossil fuel (the fuel we are planning to extract and use) we will exceed the global Carbon Budget and so risk going above 2C, but by what factor?**

|  |  |  |
| --- | --- | --- |
| a) | 1.2 x the global carbon budget |  |
| b) | 4.95 x the global carbon budget | |
| c) | 5.77 x the global carbon budget | |

4) **From calculations based on current trends, how many years will it take to blow the global carbon budget and lock in more than 2C?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a) | Less than 18 years |  |  |  |
| b) | Less than 25 years |  |  |  |
| c) | Less than 32 years |  |  |  |

5) Forests play an important role in regulating the global climate - they absorb and recycle huge amounts of carbon and water (and are thought to help provide 75% of the world's usable fresh water and prevent soil erosion, and tropical forests are home to 80% of the world’s species). The carbon is absorbed and stored in their trees and soil, but if forests are cleared or disturbed, this carbon is released as carbon dioxide and other greenhouse gases. Up to a fifth of global greenhouse gas emissions come from deforestation and forest degradation.

**Question - An area of forest the size of a football pitch is destroyed every:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a) | 2 seconds |  |  |  |
| b) | 10 seconds |  |  |  |
| c) | 35 seconds |  |  |  |
|  |  |  |  |  |

6) It is likely that every person in the UK uses products made with illegally logged timber. On average, each of us consumes just under a tonne of timber a year (including paper). **Depending on where it comes from, what proportion of this could be illegal?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a) | Anything from 5 to 10% |  |  |  |
| b) | Anything from 10 to 20% |  |  |  |
| c) | Anything from 20 to 30% |  |  |  |

7) Large areas of tropical forests and other ecosystems with high conservation values have been cleared to make room for vast monoculture oil palm plantations. Global production of palm oil has doubled over the last decade. By 2000, palm oil was the most produced and traded vegetable oil, accounting for 40% of all vegetable oils traded internationally. By 2006, the percentage had risen to 65%. The worldwide demand for palm oil is expected to double again by 2050 to 240 million tonnes. **Question: Palm oil is found in which of the following products (choose as many as you think):**

|  |
| --- |
| a) Ice Cream  b) Cakes & biscuits  c) Chocolate  d) Soap & detergents  e) Cosmetics  d) Industrial lubricants  e) Biofuels |

8) **Total emissions from the production of Meat & Dairy products represent about what percentage of global anthropogenic (manmade) greenhouse gas emissions?**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| a) | 3.0% |  |  |  |  |  |
| b) | 8.9% |  |  |  |  |  |
| c) | 14.5% |  |  |  |  |  |

9) We know that we should purchase locally-produced food where possible. But how important is it to buy food in season? **Question: Tomatoes, for example, are in season in the UK July to October. What should we do when buying them out of season if we want to limit greenhouse gas emissions? Rank the following in order of the most efficient in terms of climate change.**

|  |  |
| --- | --- |
| a) | Buy tomatoes trucked from Southern Spain/ Italy (grown without heat). |
| b) | Buy locally grown in glasshouses with heat in UK. |
| c) | Buy tomatoes flown from Southern Spain/ Italy (grown without heat). |
| d) | Try to avoid using fresh tomatoes unless necessary and otherwise rely on tinned or dried. |

10) About 1.3 billion tonnes of the edible parts of food produced for human consumption globally per year are lost or wasted. **Roughly what proportion of global food production does this represent?**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | a) | One eighth | | b) | One quarter | | c) | One third | |

11) **When did Margaret Thatcher first warn in a Royal Institute Society speech about the dangers of global warning?**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| a) | 1981 |  |  |  |  |  |
| b) | 1985 |  |  |  |  |  |
| c) | 1988 |  |  |  |  |  |

12) We can make a difference! Renewable energy is derived from natural processes (e.g. sunlight and wind) that are replenished at a faster rate than they are consumed. Solar, wind, geothermal, hydro, and some forms of biomass are common sources of renewable energy. Production of renewable energy is increasing.

**Question - How much of the world's electricity generation came from renewable sources in 2013?**

|  |  |
| --- | --- |
| a) | 9% |
| b) | 16% |
| c) | 22% |

13) Vancouver has plans to be the greenest city in the world by 2020. These plans include developing neighbourhood-scale renewable energy projects, with resulting increases in green jobs, and plans to eliminate dependence on fossil fuels.

**Question – Which European city reduced its carbon emissions consistently since 2005 despite a growing economy; was described as an ‘innovator in terms of the green economy’ by the European Community; and was named European Green Capital for 2015?**

|  |  |
| --- | --- |
| a) | Bristol |
| b) | Liverpool |
| c) | Barcelona |

14) On to a more personal level: The make-up of average emissions per person in the UK is estimated at 14 tonnes of greenhouse gases per person. This includes 3 tonnes of emissions related to the manufacturing and transporting of goods from abroad to the UK. **Rank the main contributors to this total by placing numbers 1 to 9 in front of each activity** (for example, if you think that driving a car is the biggest contributor, place number 1 in front, followed by water heating, number 2 and so on):

… Lighting

… Use of electric appliances at home

… Driving a car

… Home heating

… Food

… Clothing

… Air transport

… Water heating

… Paper

15) **By how much does reducing your house temperature in winter by 1 degree decrease the fuel needs for your house?**

a. 1%

b. 10%

c. 15%

16) **Which of the following is the largest source of heat loss in a typical uninsulated UK home during winter?**

a. Windows and doors

b. Walls

c. Roof

17) **Aside from giving up your car altogether if your circumstances permit this, which is the best thing you can do to reduce your impact from driving?**

a. Sell your 8-year old car to your neighbour's daughter and replace it with a fancy new fuel-saving hybrid car.

b. Drive the car you already have as little as possible (not just cutting out short journeys) and change the way you drive (no hard accelerating, keep below 70mph, drive to avoid braking as much as possible, keep your tyres inflated and filters clean).

c. Sell your large car and replace with an as small as possible second-hand car with manual transmission.

18) Clothing makes up a bigger part of your greenhouse gas emissions than you would think. **Rank in order of priority the things you can do to reduce your footprint from clothing:**

… Avoid cheap clothing that needs replacing often, instead buy good quality clothing that you can wear for longer.

… Avoid clothing made from wool

… Avoid clothing made from polyester

… Buy as little as you can and when you do, buy second-hand.

… Buy organic cotton

… Avoid tumble-drying your clothes

19) **If all of the world’s population were to become vegan and all cropland currently used to grow animal feed was instead used to grow food exclusively for human consumption, how many more additional people could be fed?**

a. 400,000

b. 4 million (4,000,000)

c. 4 billion (4,000,000,000)

20) Mobile phones and computers: we all need them (or at least we think we do!). **Which of the following actions is by far the most important to reduce your footprint from computer and mobile phone use?:**

a. Switch off when not in use

b. Do not leave overcharging

c. Keep your old mobile phone, laptop or computer as long as you possibly can and buy a second hand laptop when you need to replace your PC.

d. Buy the most energy efficient phone or laptop you can find.

21) The science around the exact impact on the climate caused by flying is complicated and controversial. It's not just the CO2 that plays its role, but there are other gases and the role of water vapour as a blanket keeping the earth warmer. Different online calculators for the impact of flying come up with big variations for the same flight, but even the lowest estimates show the impact is considerable. **Which of the following comparisons (Column A, B or C) do you think is the most correct?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | A. | B. | C. |
| 1 return flight to Madrid | Has an equal impact on the climate as 1 person doing the following: | 1 year home water heating | Nearly twice the amount of energy for 1 year of home lighting | 6 months of using home electric appliances |
| 1 return flight to Athens |  | 3 months of food on a meat eating diet | Driving a car for 8 months | Half of a year's home heating |
| 1 return flight to New York |  | A year's worth of home and water heating combined | Driving a car for nearly 2 years | A little bit less than a whole year's food supply on a meat eating diet |

Answers will be posted at the end of the month, or are available from Tom Crofts ([tom\_crofts@hotmail.com](mailto:tom_crofts@hotmail.com)).