There are **five tasks** for this exam. It is expected that you do all. The five tasks are weighted as indicated in brackets.

1. **Give a short explanation of the following concepts (15%)**
   
   a. climate
   b. aerosols
   c. fossil fuels

2. **Feedbacks (15%)**
   
   a. Explain how the overall effect of clouds can either be positive or negative related to surface warming.
   b. What is the ice-albedo feedback?

3. **Short questions and short answers (20%)**
   
   a. Carbon dioxide provides the largest single contribution to anthropogenic radiative forcing, but other greenhouse gases contribute too. Mention some other important contributing sources to anthropogenic radiative forcing.
   b. The warming of the Earth’s surface will bring about an increased precipitation. Why?
   c. Why are coastal areas and large river deltas especially vulnerable to the effects of climate change?
   d. Give some examples of the effects climate change may have on health.
4. Explain a schematic illustration (25%)

The figure below is taken from John Hougthon’s book on Global Warming. Use the figure to describe the radiation budget.

5. International agreements (25%)

The 1987 Montreal Protocol on Substances that Deplete the Ozone Layer is regarded by many as the most successful international environmental treaty. As reported by Hulme’s book on ‘Why we disagree about climate change’, the worldwide consumption of ozone-depleting substances fell by over 90 per cent between 1986 and 2004, and the depletion of stratospheric ozone over Antarctica has stabilized.

Write a short essay about why a similar international agreement on reducing greenhouse gases has proved to be much more difficult.