THE OPEN UNIVERSITY OF SRI LANKA
POST GRADUATE DIPLOMA / MASTER OF SCIENCE IN ENVIRONEMNTAL SCIENCE 2010-2011
ENVIRONEMNATL STUDIES UNIT
NEP 2207 CLIMATE CHANGE
FINAL EXAM

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04 JUL 2011
The Open University of Sri Lanka

Date: 23rd February 2011 **Time 13.30 p.m to 16.30 p.m (3 hours)**

Answer any Four (4) Questions

1. (a) Describe the Radiative Energy Budget of the earth-atmosphere system.
   (b) Explain the occurrence of maximum and minimum temperatures of the earth from the above energy budget.
   (c) How the aerosols enhancement affect the energy budget?

2. (a) Explain the natural greenhouse effect which has operated for billion of years.
   (b) What would have been the temperature of the earth without the natural greenhouse gases? Give the reasons for your answer.
   (c) Explain the enhanced greenhouse effect giving the reasons for the enhancement.

3. (a) Explain the main sources of GHG emissions how do you reduce these emissions by introducing certain control measures at these sources?
   (b) Describe measures available for enhancing absorption of carbon dioxide having same effect as mitigating emissions.

4. a) What is the difference between the weather and climate?
   b) Explain briefly the following:
   i) Climatic elements
   ii) Climatic factors
   c) Explain why the night-to-day temperature difference is typically much greater in warm and dry locality than in a warm and humid locality.

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Cont.

5. (a)W hat is the ultimate objective of the United Nations Framework Convention on Climate Change?

(b) In December 1997 Conference of Parties adopted the Kyoto Protocol. Explain the main features of the Protocol.

(c) Explain how the provisions in the Protocol could assist developing countries in achieving sustainable development

6. (a) Why it is necessary to have an inventory of greenhouse gas emissions to estimate the extent of global warming?

(b) Explain how and why the concentration of the three main Green House Gases had increased over the last thousand years?