



The Open University of Sri Lanka
Faculty of Engineering Technology
Industrial Studies (Agriculture) Program of Study
Final Examination – 2014/2015
AEI6137 Impact of Climate Change on Water Resources

Date : 04/09/2015
 Time : 09.30 a.m. – 12.30 p.m.
 Duration : Three (03) hours

Registration number:

Section 02 – Answer any four (04) out of the six (06) questions. You may use answer books and/or sheets to answer this section.

- 1) a) What is “Inter Tropical Convergence Zone”?
 b) Write a short note on the types of monsoons observed in Sri Lanka.
- 2) a) The total heat flow from sun into the earth is $1.74 \times 10^{14} \text{ kWm}^{-2}$. If the radius of the earth is 6370 km and Stefan-Boltzmann constant is $5.67 \times 10^{-8} \text{ Wm}^{-2}\text{K}^{-4}$, calculate the average surface temperature on earth. (Assume that the earth absorbs 100% of the total heat flow from the sun, and radiates the absorbed energy as heat at 100% efficiency.)
 b) Discuss the radiative processes that assist the earth in maintaining its surface temperature.
- 3) Certain chemical compounds cause stratospheric ozone depletion. Give examples for these compounds and state how they are originated. Explain how each of these compounds causes ozone depletion.
- 4) Discuss the management practices that should be followed in order to overcome the challenges arising from climate change in crop and livestock farming.
- 5) Discuss the practices that control the impacts of sea level rise in the coastal area.
- 6) a) Discuss the importance of having a global water partnership.
 b) Discuss the impacts of climate change on water resources.