AUTUMN MID-SEMESTER EXAMINATION-2016
ENVIORNMENTAL SCIENCE (CH-1005)

Full Marks: 25 **Time: 2 Hours**

Answer any five questions including question No.1 which is compulsory.
The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable and all parts of a question should be answered at one place only.

1. a) State Wein's displacement Law? [1 x 5]
   b) Explain the terms receptor & sink with suitable example.
   c) What is atmospheric radiative window?
   d) What is Lapse rate? Briefly explain the effect of Ozone on lapse rate of the atmosphere.
   e) What do you mean by TLV? Give one example.
2. Briefly describe the various segments of atmosphere? State their respective altitude and temperature ranges. What are the important chemical species present in each region? [5]
3. What do you mean by Environmental Impact Assessment (EIA)? Briefly discuss the basic principles and methodology of Environmental Impact Assessment (EIA). [5]
4. Discuss the construction of lithosphere with reference to its layer structure and chemical composition. [5]
5. Explain a simple radiation balance model that includes the Earth's Albedo. [5]
6. a) Define pollutant & contaminant with suitable examples. What is the difference between primary pollutant & secondary pollutant? [2 x 2.5]

   b) Consider the Sun as a perfect sphere of radius 6.8 X 10^8m. If surface temperature of the Sun is 6000K, then calculate the energy radiated by the Sun per second. (Stefan Boltzman constant = 5.67 X 10^{-8} $Jm^{-2}S^{-2}K^{-4}$)
7. Write short notes on: [2 x 2.5]
   a) Albedo
   b) Black Body radiation