

EASTERN UNIVERSITY, SRI LANKA

SECOND YEAR FIRST SEMESTER EXAMINATION IN AGRICULTURE – 2010/2011

AE 2101 ENVIRONMENTAL COSERVATION ENGINEERING

Answer **all** questions

Allowed time: Two hours

01. (a) Write a brief account on the structure of atmosphere.
(b) Differentiate renewable and non renewable energy sources with examples.
(c) What are the major environmental problems associated with land and water resources in Sri Lanka?
02. (a) List and define the types of pollution.
(b) Briefly describe the classification of air pollutants causing environmental pollution.
(c) List out the environmental threats created by open dumping of solid wastes.
03. (a) Briefly describe the wastewater treatment process.
(b) Discuss 'thermal treatment' of solid waste in solid waste management.
04. (a) Briefly discuss the process of soil erosion.
(b) Calculate the EI₃₀ and KE > 25 indices of rainfall erosivity for the storm data given below.

Time from the start of storm (min)	Rainfall (mm)
01-10	0.6
11-20	4.5
21-30	5.2
31-40	1.8

(Note: $KE = 11.9 + 8.7 \log I$, $I_{30} = 23 \text{ mm / hr}$ when kinetic energy of rainfall in $J/m^2/mm$)