



The Open University of Sri Lanka
 Faculty of Engineering Technology
 Technology (Engineering) Programme of
 Study
Final Examination - 2011/2012
 AEX4232 Soil and Water Conservation

Date : 20.02.2012
 Time : 9.30-12.30
 Duration: Three (03) hours

SECTION II : Answer any four (04) questions. All questions carry equal marks.

- (1) (a) What is rain-splash erosion? Briefly discuss the factors affecting the direction and distance of soil splash.
 (b) Briefly explain the term Erosivity and Erosivity Index (EI).
 (c) Describe the Erosivity estimation methods.
- (2) (a) List each component of the Universal Soil Loss Equation.
 (b) Calculate the soil loss for a field with the following characteristics.
- Rainfall erosivity index = 300
 Soil erodibility factor = 0.5 t/ha/yr
 Field slope = 0.6%
 Length of slope = 200 m
 Conservation practice factor = 0.5
 Crop Management factor = 0.3
- (c) State the importance of modifying the Universal Soil Loss Equation when it is applying for other countries.
- (3) (a) What is runoff co-efficient?
 (b) In an area of 60 ha the rainfall intensity is 6.8 mm/hr. The runoff co-efficient is 0.45. Calculate the peak run off rate in SI units using the rational method.
 (c) Explain three (03) characteristics which affect the runoff rate.
- (4) (a) What are the mechanical soil conservation methods in Sri Lanka?
 (b) Name the important agencies involved in implementing soil conservation practises in Sri Lanka.

- (c) Write an account on soil water conservation policies in Sri Lanka and state the importance of having a national water policy.
- (5) (a) What is a landslide?
(b) Write a brief note on triggers of landslides.
(c) State some examples for the important landslides which occurred in Sri Lanka.
- (6) Write short notes on any three (03) of the following.
(a) Erodibility
(b) Onsite effects of soil erosion
(c) Minimum tillage
(d) The Froude Number (Fr)