



The Open University of Sri Lanka
Faculty of Engineering Technology
Bachelor of Industrial Studies Honors (Agriculture)
Final Examination- 2023/2024
AGI4555-Irrigation and Drainage Engineering

Date : 13-02-2025

Time : 0930-1230 hours

SECTION 2: Answer any four (04) questions. All questions carry equal marks.

1. Briefly explain the methods of measuring crop water requirement with suitable diagrams and equations.
(25 arks)
2. (a) Briefly explain the Application efficiency, Conveyance efficiency and Project efficiency.
(10 marks)
(b) If a farm area is 3 ha and the application efficiency is 80%, calculate the total volume of water that should be applied for an application of 80mm.
(08 marks)
(c) A farm turn-out has a delivery capacity of 10 litres /second, when the field canal is at full supply. Each farm turnout irrigates 1 ha. Compute the duration of irrigation to apply a net water requirement (NIR) of 75 mm to a 1 ha farm at an application efficiency of 80%.
(07 marks)
3. Briefly explain the flow measurement structures with suitable diagrams. and compare their advantages and disadvantages.
(25 marks)
4. Briefly describe the historical background of irrigation in Sri Lanka during Anuradhapura period.
(25 marks)

5. Briefly explain the excess of water on
(a) Impaired crop growth and
(b) Impaired farm operations.

(25 marks)

6. Write short notes on any **three (03)** of the following.

- (i) Selection of drainage machine
- (ii) Maintenance of irrigation scheme
- (iii) Decline of Irrigation Civilization
- (iv) Surface irrigation practices

(25 marks)

END OF PAPER