



Study Programme : Bachelor of Industrial Studies(Agriculture)
Name of the Examination : Final Examination
Course Code and Title : AGI6232 Groundwater Resources Management +
Academic Year : 2017/18 AEI 6132
Date : 03rd February 2019
Time : 0930-1230hrs
Duration : 3 hours

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

1. (a) Define Evapotranspiration and differentiate between actual and potential evapotranspiration.
(b) Briefly discuss the methods for estimating evapotranspiration indicating their advantages and disadvantages.
2. (a) Briefly discuss the groundwater contamination in Anuradhapura of Sri Lanka with suitable examples and its consequences on Chronic Kidney disease.
(b) Suggest suitable adaptation measures to overcome the problems you identified in (a).
3. Briefly explain the groundwater recharge and its importance on sustainability of the limited groundwater resources.
4. Briefly explain the importance of aquifer system management classification and aquifer contamination susceptibility map in maintaining groundwater quality.
5. (a) Briefly discuss the components of sprinkler irrigation system and the advantages and disadvantages of the sprinkler irrigation method over the conventional irrigation methods.
(b) (i) Determine the required capacity of a sprinkler system to apply water at the rate of 15 mm/hr for the following situation: Two 200 metres long sprinkler lines are required. Fifteen sprinklers are spaced at 10 metre intervals on each line. The spacing between lines is 20 metres. (Indicate the assumptions you make)
(ii) Allowing 1 hour for moving each 200 metre sprinkler line described above, how many hours would be required to apply 50mm irrigation to a 16 hectare field?

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

- (a) Household water purification systems
- (b) Salt water intrusion
- (c) Aquifer Vulnerability
- (d) Class A Evaporation Pan