



The Open University of Sri Lanka  
Faculty of Engineering Technology  
Industrial Studies (Agriculture) Program  
Final Examination- 2007/2008  
AEI6235 Hydrology and water resources



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

1. (a) Briefly discuss the measures of average in the statistical concepts of Hydrology.  
(b) Describe of determination of aerial rainfall.
2. (a) Write a brief note on Unit Hydrograph.  
(b) Briefly discuss the factors affecting the shape of the hydrograph.
- 3 Briefly explain and compare the aquifer yields in unconsolidated materials, sedimentary rocks and crystalline rocks.
4. (a) Write a brief note on types of wells tube wells.  
(b) Briefly discuss the rotary direct circulation method used for tube well construction.
5. (a) Briefly explain three (03) methods for stream gauging including current meter.  
(b) Compute the discharge of the stream using the current meter data given below

Distance (m)	0	0.6	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6
Depth (d)	0	0.3	1.29	2.16	2.55	2.22	1.68	1.41	1.05	0.63	0.42	0
Velocity (m/sec) at 0.2d	0	0.42	0.57	0.78	0.87	0.81	0.75	0.69	0.63	0.54	0.45	0
Velocity (m/sec) at 0.8d	0	0.21	0.36	0.54	0.60	0.30	0.51	0.45	0.39	0.33	0.30	0

6. Write brief note on any three (03) of the following
  - (a) Sitting of rain gauge
  - (b) Infiltration indices
  - (c) Aquifer particle size analysis
  - (d) Pumping test of wells