

BSc in Export Agriculture  
Third Year First Semester Examination -- June/July 2017

Hydrology (EAG 348-0)  
Essay Questions



Instructions:

Answer all questions in the given booklet

No. of questions : Two (02)

No. of pages : One (01)

Time : One (01) hour

Total marks allocated : 100%

01. Briefly discuss the followings; (10 marks x 5 = 50 marks)

- (I). Importance of measuring rainfall in Hydrology
- (II). Different methods of measuring rainfall
- (III). Common errors in rainfall measurements
- (IV). Checking consistency of rainfall data
- (V). Estimation of missing rainfall data

02. (I). Discuss the factors affecting for run-off generation in catchments. (10 marks)

- (II). Calculate the peak runoff rate for 10 years return period from a micro watershed area of 10 ha. The watershed is divided into four parts based on its land use and soil texture as shown in the following table. The maximum length of the flow path is 3000 m from the farthest point of the catchment to the outlet. The maximum rainfall intensity of one hour rainfall is 50 mm/hr.

Land Use	Runoff Coefficient	Land Area (ha)	Slope %
Tea	0.30	5 ha	10 %
Chena	0.16	1 ha	07%
Forestry	0.25	3 ha	12%
Short Grass	0.20	1 ha	05%

Stating your assumptions, calculate;

- a) Weighted runoff coefficient (15 marks)
- b) Time of concentration (10 marks)
- c) Peak runoff rate (15 marks)

[End of the paper]