KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Agri .Engg) 2017 Admission
III Semester Final Examination-January-2019

Lwre 2104 **Watershed Hydrology (2+1)** **Marks:50**

Time: 2 hours

I **Fill in the blanks:** **(10x1=10)**

1 Rain gauge readings are taken every day at _____
2 The imaginary lines joining of equal temperatures are called_____
3 The network of rain gauge stations can be done using_____
4 _____is unending water circulation cycle in the atmosphere-earth-continuum.
5 The rational method is applicable to watershed areas less than _____hectares.
6 Low soil permeability favours _____flow.
7 A mass curve is always a _____curve.
8 An automatic stream flow recorder chart gives the record of _____
9 Recurrence interval is also known as _____
10 The hydrologic soil group _____.indicates the high runoff potential soils.

II **Write Short notes on ANY FIVE of the following** **(5x2=10)**

1 Differences between interception loss and interception storage.
2 Various factors affecting runoff.
3 Differences between rainfall and drizzle.
4 Find daily ET of wheat crop for January month, if pan evaporation for the month is 8.5mm. Take the value of coefficient as 0.52.
5 Dimensionless unit hydrograph.
6 Mass curve and its uses.
7 Synthetic hydrograph and its limitations.

II **Answer ANY FIVE of the following** **(5x4=20)**

1 Explain some technical strategies to mitigate the adversities of drought.
2 Define direct runoff and write procedures to compute it.
3 Methods of infiltration measurement **(any two)**
4 Draw a figure showing the elements of a runoff hydrograph and describe the characteristics of the recession limb.
5 Explain with a neat sketch, the hydrologic cycle in the atmosphere.
6 Different velocity measurement methods .Explain any one of them.
7 Steps involved in derivation of unit hydrograph.

V **Answer ANY ONE of the following** **(1x10=10)**

1 a Discuss with the help of a neat sketch any three methods of separation of a base flow from the hydrograph of runoff indicating the situations under which you advocate them.
b Use of unit hydrograph in the construction of the flood hydrograph resulting from two or more periods of rainfall.
2 Various methods to control flood.

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