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.

III   **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.

IV   **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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