



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Agrl.Engg.) 2018 Admission
III Semester Final Examination-December-2019

Lwre 2104

Watershed Hydrology (2+1)

Marks:50
Time: 2 hours

I Fill in the blanks:

(10x1=10)

1. Kostiakov's equation is used to estimate _____.
2. Return period is reciprocal of _____.
3. Change in outflow hydrograph over inflow hydrograph is called _____.
4. The shape factor for watershed having equal length -width ratio is taken as _____.
5. The plot of rainfall intensity and time is called _____.
6. Convective precipitation occurs in _____ weather.
7. A complex storm produces _____ type of hydrograph.
8. The probability of exceedance of flood event with return period of 15 years will be _____.
9. The rising limb in the hydrograph is known as _____.
10. Hydrologic routing follows _____ equation.

II Write Short notes on ANY FIVE of the following

(5x2=10)

1. Which of the following will produce more runoff and why?
 - a. Fan shape catchment.
 - b. Fern shape catchment.
2. What is flood proofing?
3. What are the criteria followed in selecting site for a pan evaporimeter?
4. What are the different types of evaporimeters?
5. Write the working principle of USDA class A pan evaporimeter.
6. How do you compute time of concentration?
7. What are the different forms of precipitation?

III Answer ANY FIVE of the following

(5x4=20)

1. Describe in detail Lysimetric technique for determining evapotranspiration.
2. Describe in detail about flood routing.
3. Describe about procedures adopted for computing direct runoff.
4. Explain rational formula for computing peak runoff and its limitations.
5. Write the procedure to compute the rainfall intensity by using Intensity- Duration-frequency Relationship
6. Define unit hydrograph and describe the procedure for development of unit hydrograph
7. Draw a figure showing the elements of a runoff hydrograph and describe the characteristics of the recession limb.

IV Write an essay on ANY ONE of the following

(1x10=10)

1. Discuss the relationship between intensity, duration and return period of rainfall and describe on its characteristics.
2. What is flood routing and where is it used? Discuss the types and advantages of flood routing.
