

B.Tech. Civil (Construction Management)

00593 **Term-End Examination**

June, 2018

ET-535(A) : ELEMENTARY HYDROLOGY

Time : 3 hours

Maximum Marks : 70

*Note : Attempt any **five** questions. Give neat sketches wherever necessary.*

1. (a) Discuss the use and importance of hydrometeorology in daily life. 4
- (b) Write short notes on any *two* of the following : 10
 - (i) Flow Duration Curve
 - (ii) Storm Hyetograph
 - (iii) Area Concentration Curve

2. (a) How will you estimate interception losses ?
Explain. 7
- (b) Discuss the construction and working of a
recording type rain gauge. 7
3. (a) List and explain the various forms of
precipitation. 10
- (b) Describe the characteristics of precipitation
in India. 4
4. (a) Describe the procedure for measurement
of infiltration using a double-ring
infiltrometer. 10
- (b) Explain indirect determination of discharge. 4
5. (a) List the different factors responsible for
atmospheric circulation. How are monsoons
formed ? 10
- (b) Define Unit Hydrograph in brief. 4
6. (a) Differentiate between evaporation and
evapotranspiration. Also explain various
factors affecting evaporation. 10
- (b) Define the base flow and time of
concentration. 4

7. (a) Discuss how urbanization will affect the water balances and pollutant transport. 7

(b) The evaporation from a lake is to be calculated by the water balance method. Inflow to the lake occurs through three small rivers A, B, and C. The outflow occurs through river D. Calculate the evaporation from the lake surface during summer (May-August) if the water level was at + 571.04 m on May 1 and + 571.10 m on August 31. The lake surface area is 100 km². The precipitation P, during the period was 100 mm. Average inflows and outflow are as given below : 7

River	Catchment (km ²)	Q. average (m ³ /s)
A	150	15
B	120	20
C	130	17
D	-	45