Total No. of Questions : 6]

SEAT No. :

PC-15

[Total No. of Pages : 2

[6360]-15
T.E. (Civil)
HYDROLOGY AND WATER RESOURCES ENGINEERING
(2019 Pattern) (Semester - I) (301001) (Insem)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates:

1) ***Solve Q.No.1 or 2, 3 or 4, 5 or 6.***
2) ***Figures to the right indicate full marks.***
3) ***Draw neat diagram wherever necessary.***
4) ***Use of logarithmic table, slide rule and electronic pocket calculator are allowed.***
5) ***Assume suitable data if necessary, stating it clearly.***

Q1) a) Explain applications of hydrology. **[5]**

b) Explain National Institute of Hydrology (NIH). **[5]**

OR

Q2) a) Explain drizzle form and rain form of precipitation. **[4]**

b) What is infiltration capacity; explain any two factors affecting infiltration capacity. **[3]**

c) What are the different methods of measuring evaporation and draw sketch of class A evaporation pan. **[3]**

Q3) a) Explain working of symphonic rainguage with neat sketch. **[5]**

b) Explain frontal and orographic precipitation. **[5]**

OR

Q4) a) Explain BINNI'S method & BARLOW Tables for runoff estimation. **[6]**

b) State and explain factors affecting runoff. **[4]**

P.T.O.

Q5) a) State the assumptions made in Unit Hydrograph theory. **[3]**

b) Given below are ordinates 6-h unit hydrograph for a catchment. Calculate the ordinates of the DRH due to a rainfall of 3.5 cm occurring in 6 hours. **[7]**

Time (h)	0	3	6	9	12	15	18	24
UH Ordinates m^3/s	0	25	50	85	125	160	185	160
Time (h)	30	36	42	48	54	60	69	
UH Ordinates m^3/s	110	60	36	25	16	8	0	

OR

Q6) a) Explain velocity area method for stream gauging. Draw neat sketch. **[7]**

b) Explain components of typical hydrograph. **[3]**