Total No. of Questions : 8]

SEAT No :

P 4506

[Total No. of Pages : 2

[5355]-56
M.E. (Civil)
Water Resources and Environmental Engg.
HYDROLOGY
(2013 Course) (Semester-II) (501087)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***Answer any five questions.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Use of Calculator is allowed.***
5) ***Assume suitable data, if necessary.***

Q1) a) Explain Stanford Watershed Model (SWM). **[6]**

b) Explain construction of Depth Area Duration Curves (DAD Curves) **[4]**

Q2) a) What is Pearson type I, II and III & their uses in hydrology, **[5]**

b) Write a note on Chi-square test. **[5]**

Q3) a) Explain the method of design flood estimation using the rational method. **[4]**

b) Explain flood frequency curve and flood volume curve. **[6]**

Q4) a) Explain how the yield of an open well can be determined using recuperation test. **[5]**

b) Explain the Goodrich method of flood routing. **[5]**

Q5) a) State Dupuit-Forchheimer Assumptions and explain with sketch vertical distribution of ground water. **[5]**

b) What are the advantages of ground water compared to surface water? **[5]**

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Q6) a) State Thiem's equation for study confined flow (No leakage). State assumptions made. **[6]**

b) What is ground water pollution? How the industrial use of water affects on it. **[4]**

Q7) a) Enlist the various methods of artificial recharge of ground water and explain any one in detail. **[5]**

b) What are different pumping equipment used to pump the ground water? Explain one in detail with neat diagram. **[5]**

Q8) a) Explain in detail electric analog model & analog model for ground water modeling. **[6]**

b) Explain digital computer models for ground water modeling. **[4]**