P4053

[5255] - 551

M.E. (Civil) (Water Resources and Environmental Engg.)
HYDROLOGY
(2013 Pattern) (Semester - II) (501087)

Time : 3Hours]   *[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 the Goodrich method of flood routing   **[6]**

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

    b)   Define the terms: **[5]**

       i)   Aquifuge,

       ii)   Aquiclude,

       iii)   Aquitard

       iv)   Confined aquifer

       v)   Perched groundwater.

Q5) a) Explain step by step design of tube well. **[5]**

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

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]**

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