Date/Day : 26/08/14 , Tuesday   Branch : Civil Engineering

Subject Name & Code : Hydrology & Water Resources(CV504)

Time : 8:30 Am to 10:00 Am   Max. Marks : 30

Instructions: (1) All questions are compulsory
(2) Figures to the right indicate full marks.
(3) Indicate clearly, the options you attempt along with its respective question number.

Q.1 (a) **Define:** (1) Aquiclude   (2) Evaporation   (3) Storage co-efficient   [5]
(4) Safe Yield   (5) Tangible Losses

(b) A well penetrates into an unconfined aquifer having a stratum depth of [5] 15.0 m. The discharge is 8000 m3/s at 6.0 m drawdown. Assuming equilibrium flow conditions & homogenous aquifer. Compute the discharge at 9.0m drawdown, The radius of influence may be taken as equal in both the cases.(Use Dupuit's formula for Unconfined aquifer)

Q.2 (a) Discuss factors consider while selecting suitable site for a reservoir. [5]

(b) Define Precipitation & explain cyclonic and orographic precipitation [5]

OR

Q.2 (a) What is Darcy's Law? Write Dupuit Thiem theory assumptions. [5]

(b) For a drainage basin of 900 km^2, isohyets drawn for a storm gave the following data: Estimate the average depth of precipitation over the basin. [5]

Isohyets (cm)	40	35	30	25	20	15	10
Catchment area enclosed	-	35	90	150	310	430	600

Q.3 (a) Explain Symon's Rain gauge with sketch. [5]

(b) What are the various causes of floods? [5]

OR

Q.3 (a) Explain structural approaches of controlling damage due to floods [5]

(b) Explain with neat sketch storage zones of a reservoir. [5]

**************All THE BEST**************