

Register Number :

Name of the Candidate :

8910

B.E. DEGREE EXAMINATION, 2011

(CIVIL ENGINEERING)

(SEVENTH SEMESTER)

CLEC - 701 / PCLEC - 401.

GROUNDWATER ENGINEERING

(New Regulations)

*(For the students joined during 2007-08 and
after)*

May]

[Time : 3 Hours

Maximum : 60 Marks

*Answer any ONE FULL question
from each unit.*

All questions carry equal marks.

UNIT - I

1. What are the factors that determine the possibility of occurrence of groundwater ? Explain briefly.

Distinguish between aquifer and aquifuge, aquiclude and aquitard, groundwater and perched groundwater and confined aquifer and water-table aquifer.

UNIT - II

Distinguish between Darcy velocity and actual velocity, specific retention and specific yield, hydraulic conductivity and storage co-efficient and transmissivity and storativity.

(OR)

List the assumptions in the analysis of steady radial flow into well. Write down the Theis equation for the unsteady radial flow into a well in a confined aquifer.

UNIT - III

Enumerate the different methods which are used for drilling tube wells. Discuss any one of these methods in detail.

(OR)

6. Write short notes on :

- (a) Gravel pack slotted pipe tube wells
- (b) Well screens.
- (c) Radial collector wells.

and (d) Infiltration galleries.

UNIT - IV

7. What are the uses of water-table maps in civil engineering ? Describe the methods of groundwater prospecting.

(OR)

8. Write short notes on :

- (a) Seismic and resistivity methods for detailed groundwater prospecting.
- (b) Bore hole loggings.

UNIT - V

9. Explain the term recharging of underground water. Describe briefly the methods of recharge of groundwater.

(OR)

Turn Over

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10. Discuss the following :

- (a) Seawater intrusion.
- (b) Relation between fresh and saline water.