EGE 5392. Lab 6: Hydrogeology

Unit- 1

Identification and demarcation of watershed boundaries, Collection and interpretation of well inventory data, Determination of groundwater flow direction, Preparation of water table contour map.

Unit- 2

Estimation of permeability. Analysis of hydrographs and estimation of infiltration capacity. Pumping test – Time, Drawdown and time recovery tests. Evaluation of aquifer parameters, Study of depth and yield of bore wells.

Unit- 3

Study of Electric resistivity sounding data for delineation of fresh and saline aquifers. Study of geophysical well logs. Exercises on groundwater exploration using remote sensing techniques. Preparation of ground water potential maps.

Graphical representation of water quality data: various diagrammatic representations – interpretation of hydrochemical data – Hill-Piper Trilinear diagram, Durov's diagram and U.S. Salinity diagram.

References

- Bouwer, H. (1978) Groundwater Hydrology. McGraw Hill Education, 480p.
- Davis, S. N. and R. J. M. Dewiest R. J. M. (1966). Hydrogeology. 463p.
- Karanth.K.R.(1987). Groundwater Assessment Development and Management, Tata McGraw Hill, 720p.
- Patric, A.D., Franklin W.S. (1997) Physical and chemical hydrogeology, ohn Wiley & Sons; 2nd edition, 528p.
- Poehis D.J and Gregory J.S. (2011). Encyclopedic dictionary of Hydrogeology, Academic press, 528p.
- Reghunath, H.M. (1992) Groundwater. 2ndEdn.Wiley Eastern Limited, 456p.
- Fetter, C.W. (2007). Applied Hydrogeology. CBS Publishers & Distributors.