

M.Sc.(Geology) (NEP Pattern) - Semester-III  
**PSCGEOT07 - Paper-I : Hydrogeology and Watershed Management**

P. Pages : 2

Time : Three Hours



**GUG/W/24/16002**

Max. Marks : 80

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- Notes : 1. All questions carry equal marks.  
2. Draw neat sketches wherever necessary.

1. Give an account of Groundwater provinces of India.

**OR**

Describe the following:

- a) Zone of Aeration
  - b) Zone of Saturation
  - c) Water table Contour Maps
  - d) Seepages
2. Describe various causative factors of groundwater level fluctuations and environmental influences.

**OR**

Describe the following:

- a) pH of groundwater
  - b) Sodium Absorption Ratio (SAR)
  - c) Quality of groundwater.
  - d) Water logging problems
3. Give a detail account of applications of remote sensing in groundwater exploration.

**OR**

Write notes on the following:

- a) Methods of well construction
- b) Hydrographs

- c) Site selection for well construction
- d) Aquifer Performance Test (APT)

4. Give an account of role of NGOs and government policies in watershed development.

**OR**

Give an account of the following:

- a) Characters of watershed.
- b) Check dams.
- c) Conjunctive use of groundwater.
- d) Gabbion bandhara.

5. Write brief notes on the following:

- a) Springs
- b) Aquifuse
- c) TDS in groundwater
- d) Radioisotopes in hydrological studies
- e) Dug wells
- f) Wenner's configuration
- g) Percolation tanks
- h) Rainwater harvesting

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