

424161

S-4210

M.Sc. (Fourth Semester)

Examination, 2024-25

GEOLOGY

(Geohydrology)

[GEOL-C-016]

Time : Two Hours]

[Maximum Marks : 60

Note : Attempt any *four* questions. All questions carry equal marks.

1. With a sketch or a figure, show the various types of aquifers, confining units, wells, and interfaces in them, and also provide their equivalent terminology(s) -if any.
2. Describe the vertical distribution of groundwater. Add a brief note on the hydrological cycle.
3. Describe and discuss the Darcy Law and its significance for groundwater movement.
4. Differentiate the drainage basin and the Groundwater basin. Please discuss the potential for groundwater in the Himalayan region.

Define porosity and permeability of rocks. How do these properties influence groundwater movement?

6. Describe the Direct-Current Electrical Resistivity Method for groundwater exploration in detail.
7. What are the various groundwater artificial recharge methodologies? Discuss with examples.
8. Write short notes on any *three* :
 - (a) Artesian well.
 - (b) Fluoride contamination in Groundwater.
 - (c) Reynolds number.
 - (d) Permeability and porosity.