

## M.Sc. Sem.-4 Examination

507

Geology

April-2025

Time : 2-30 Hours]

[Max. Marks : 70

- Instructions:** (i) Draw neat diagrams whenever necessary.  
(ii) Write proper answer number.

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Q-1 Describe the role of radio isotopes in hydrogeological studies. (14)

OR

Q-1 (a) Origin, types and composition of groundwater. (07)

(b) Geological methods of groundwater exploration. (07)

Q-2 Discuss the artificial recharge of groundwater in details. (14)

OR

Q-2 (a) Causative factors of water level fluctuations. (07)

(b) Design and construction of water well. (07)

Q-3 Explain the occurrences of groundwater in sedimentary rocks. (14)

OR

Q-3 (a) Conjunctive use of groundwater. (07)

(b) Consumptive use of groundwater. (07)

Q-4 Write a note on gravitational and seismic methods of geophysical exploration. (14)

OR

Q-4 (a) Abney level surveying method. (07)

(b) Geophysical anomalies. (07)

Q-5 **Attempt any seven questions out of twelve.** (14)

- (i) Define unconfined aquifer and isohyets.
- (ii) How artesian system developed along a fault?
- (iii) State the hydrogeology of Nalsarovar.
- (iv) Write about specific conductance hydrograph.
- (v) Define transmissivity and storage coefficient.
- (vi) State the types of pumping test.
- (vii) Why surface drainage system is lacking in Hawaii islands?
- (viii) Give full form of GWSSB and GPCB.
- (ix) State the functions of water resources management.
- (x) What is oriented sample? Give its characters.
- (xi) Name the parameters used in geological prospecting.
- (xii) Define leveling and contouring.